



THE AFRICA ACADEMY OF MANAGEMENT

Management Praxis in the African Context:
Sustainability, Responsibility and Ethics

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of Management**

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**Edited By:
Dorothy Mpabanga
University of Botswana**



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Foreword

On behalf of the Africa Academy of Management (AFAM), I share with you some of the best papers of our 6th Biennial Conference held at German University in Cairo (GUC), Cairo, Egypt. The theme of the 2023 Biennial Conference, *Management Praxis in the African Context: Sustainability, Responsibility, and Ethics*, is right from a kairologic time perspective. It is therefore opportune, moral, fitting, and consistent with our mission of advancing management scholarship and practice in Africa. Our discourse which is reflected in these proceedings indicate the exchange ideas on sustainability, responsible management and ethical practices in both organizations and research.

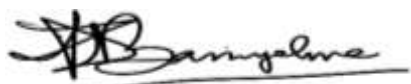
The theme also aligns with Maat philosophy, the ancient Egyptian worldview of the political, social, personal, and religious domains. It was a philosophy that indicated not only the worthiness of people but also worthiness of nature. “Maat is an interrelated order of rightness which requires and is the result of right relations with and right behavior towards the Divine, nature, and other humans” (Karenga, 2004: 10). Just as Maat enjoined the ancient Egyptians to be ethical and responsible toward each other as well as sustain nature for future generations.

Through ethical, responsible, and sustainable practices, African organizations are likely to flourish. As I indicated at the 2020 Biennial conference in Lagos, Nigeria, flourishing of Africa (individuals, organizations, and societies) are envisaged in the African Union Agenda 2063: The Africa We Want, and manifested in the AfCFTA. One major aspiration of the Agenda is “*A prosperous Africa based on inclusive growth and sustainable development.*” This aspiration is likely to be realized through harnessing of ideas on ethicality, responsibility, and sustainability from Africans across the globe through scholarly activities such as our biennial conferences. We hope that our efforts will continue to inspire actions and practices of business that transform African societies to reflect positively on the world. In this era of “historical turn”, “positive turn”, “practice turn” and “impact turn” we can leverage the worthy historical practices of Africa to make a difference by improving not only African business climate but also the natural environment which rapidly being deteriorated.

I know the papers that are presented at the conference and those selected for the proceedings address various aspects of the theme from the many sub-disciplines – human resources, organizational behavior, international business/management, entrepreneurship, operations, public policy, strategy, social issues – of management. As always, we are very delighted to have participants from several countries around the globe particularly in this post-pandemic era.

In conclusion, let me express my profound gratitude to the proceedings’ editor, Professor Dorothy Mpabanga of University of Botswana, Botswana for the tremendous effort in the publication of these proceedings. I also thank our longest continuing conference sponsor, Emerald Group Publishing, Ltd. for its continued support for our activities, and Taylor & Francis for our journal, *Africa Journal of Management*.

Sincerely,



Baniyelme D. Zoogah, PhD
President, Africa Academy of Management

The Africa Academy Of Management (AFAM)

The Africa Academy of Management (AFAM) is a professional membership organization that was formed in 2011. AFAM believes that management knowledge can make a significant contribution to the productivity and prosperity of a nation. Yet, there is a dearth of knowledge about management in Africa and several studies have identified the inadequate state of management research and scholarship about Africa relative to other regions of the world. AFAM's mission is to help close this gap by promoting research and education about management and organizations in Africa. Specifically, the objectives of AFAM are two-fold: (1) foster the general advancement of knowledge and scholarship in the theory and practice of management among African scholars and/or academics interested in management and organization issues in Africa. Africa is defined broadly to include all of Africa and individuals of African descent in the Diaspora (i.e., The Caribbean, South America, Europe, Asia, Oceania, Middle East, and North America); and (2) perform and support educational activities that contribute to intellectual and operational leadership in the field of management within the African context.

AFAM focuses on building and strengthening research capacity and education about management in Africa. This includes the mentoring of doctoral students, guiding and developing junior faculty, building collaborative networks among scholars, and advancing research about management in Africa. We launched our Africa Faculty Development (AFD) Workshop initiative, which is week-long intensive residential research training, in 2011 in partnership with the Academy of Management. Since 2011, we have held five (5) AFD Workshops for doctoral students and junior faculty from African Businesses Schools in Ghana (at Ghana Institute of Management and Public Administration (GIMPA); and Kwame Nkrumah University of Science and Technology (KUNUST)), Rwanda (at University of Rwanda), and South Africa (at Gordon Institute of Business Science (GIBS); and the Faculty of Economic and Management Sciences, both at the University of Pretoria). The recent AFD workshop that was held at KNUST in Ghana was partly sponsored by the ECOWAS Bank for Investment and Development (EBID). The organization works closely with other academic associations and our sponsors in executing our mission. With a membership base of about 400 academics and practitioners from around the world, we work closely with other academic associations and our sponsors in executing our mission. Visit our website at www.africaacademyofmanagement.org to learn more about the organization's current activities.

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Tracks and Chairs

Track	Chair & Affiliation
Entrepreneurship and Small Business	Brett Anitra Gilbert, American University, USA
Organizational Behavior and Human Resource Management	Bella Galperin, University of Tampa, USA
Public Policy, Administration of Government, and Non-Governmental Organizations	Jean Kabongo, University of South Florida, USA
Strategy and International Management	Tahiru Liedong, University of Bath, UK
Social Issues in Management in the Context of Africa	Ragda Mohamed El-Ebrahim, German University in Cairo, Egypt
Sustainable and Green Management:	Samuel Aryee, University of Surrey, UK, Lilian Otaye-Ebede, University of Liverpool, UK
Management Practice:	Sherwat Elwan Ibrahim, German University in Cairo, Egypt
PDW/Caucus/Symposia:	Mohamad Saad, German University in Cairo, Egypt.
Doctoral & Junior Faculty Consortium:	Hermann Ndofor, Indiana University, USA, Amanuel Tekleab, Wayne State University, USA

Introduction

AFAM has over the years grown tremendously since its inception and has made great strides in promoting management research and sharing of knowledge about Africa and her aspirations. AFAM has designed a strategy and developed strategic goals and objectives that promote AFAM to act as an organization that function's as a source to create and disseminate management knowledge. It is important to note that these strategic objectives also speak to AFAM's mission and vision statements. The African Journal of Management (AJOM) is one of the professional and publication platforms that are used by AFAM to promote scholarly research and findings. These are some of the research outlets that are used by AFAM to disseminate findings in the continent and to develop young, upcoming and aspiring scholars. The theme of this conference focuses on management praxis in the African context: sustainability, responsibility and ethics. The focus is mainly on sustaining research endeavors and rigor to ensure that research is conducted responsibly and ethically. To ensure that findings address issues affecting the continent, and results are used responsibly and ethically to influence public policy and help resolve problems and challenges facing the continent. Hence this theme speaks to the management praxis in the context of Africa. Responsible and ethical research would ensure that research is conducted according to the principles of transparency, fairness, equity, honesty and accountability where there is participatory democracy and ethical conduct by researchers. Action-oriented research is important as the findings could be used to influence public policy making and implementation. It is equally important that knowledge is shared through scholarly research, for example findings on how indigenous knowledge could be used to help address issues affecting the continent including influencing public policy making and enhance managing organizations in the context of Africa.

The conference plays an important role in meeting the theme of management praxis in the Africa context, sustainability and responsibility and ethics in sharing management research techniques and findings. Achieving the 2023 conference objectives and theme will be through the presentation of various papers, discussion forums, symposiums, meeting of editors and dissemination of research output through AJOM. Track chairs will do a spectacular job to help achieve conference objectives through papers presented, conference proceedings as well through the sharing of research ideas and techniques, research findings presented by scholars from diverse backgrounds. The conference proceedings were selected from about 40 scholarly papers, out of which 29 were selected for publication as they address the theme of the 2023 conference. Papers in the proceedings cover 7 tracks that cover; Entrepreneurship and Small Businesses; Organizational Behavior and Human Resource Management; Public Policy, Administration of Government and Non-Governmental Organizations; Strategy and International Management; Social Issues in Management in the Context of Africa; Sustainability and Green management and Management Practice. These papers demonstrate collaborative research by global scholars' as they are multi-disciplinary representing diverse institutions and universities across the globe. This is an illustration of excellent methodological underpinnings across continents.

We are proud as AFAM to have many of the authors in the proceedings representing seasoned and young scholars. Academics and practitioners have come together to share a wealth of knowledge in their respective fields of study and research. Thank you to all those who have contributed to the 2023 conference proceedings by investing their valuable time and effort in producing the papers, and applying the best research methods and collaborating across institutions. All your efforts are highly appreciated by AFAM. AFAM will continue giving you the platform to share your scholarly work and research findings, make an impact particularly in contributing to providing scholarly management research and findings that could be used to guide policy directives to address challenges facing the continent. As AFAM we hope the 2023 conference experience will bring you greater experience and joy in sharing your scholarly research in Cairo, Egypt. Continue striving to be your best as you conduct research in diverse areas of interest, as the theme emphasizes sustainability, responsibility and ethics. We hope your research endeavors and findings will have a sustained impact on management research that enhances management practices in Africa, and provide responsible solutions and ethical approach to address challenges researchers in Africa. We hope that AJOM will be the modum of publishing your research ideas and findings.

Dorothy Mpabanga, University of Botswana, Editor, Conference Proceedings

Part 1: Entrepreneurship and Small Business

RETURNEE ENTREPRENEURIAL ENTRY DECISIONS AMONG FORCED AND VOLUNTARY RETURNEES IN ETHIOPIA: A COMPARATIVE STUDY

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ABSTRACT

Returnee entrepreneurship has become an important topic of interest due both to the increasing number of return migrants and to the peculiar nature of their entrepreneurial activities. In some cases such as Taiwan, China, and Israel, voluntary returnees have made a significant impact on their home country's economic development. However, some expatriates are forced to return due to rapid changes in the political and economic situations of their host countries. We compare and examine these two different cohorts in Ethiopia to understand what attributes are transportable and facilitate entrepreneurship, as well as barriers for the two different groups. Scholarly understanding of what drives returnee entrepreneurial entry decisions remains limited, even more so regarding Sub-Saharan Africa. Using the mixed embeddedness perspective, this paper aims to unveil the multi-level drivers of the returnee entrepreneurial entry decisions by comparing forced and voluntary returnees in Ethiopia. Based on in-depth interviews with 25 returnees, abductively, the findings indicate the interactive influence of personal and interpersonal components, simultaneous engagement, and opportunity promise on returnee entrepreneurial entry decisions. For the voluntary returnees, childhood aspirations, altruistic desire, simultaneous engagement, nostalgia coupled with migration capital, and opportunity promise influence their business entry decisions. For the forced returnees, lack of options, regrets about migration, preconception, tacit capital, and government support drive their entry decisions. We discuss how these factors are contingent on migrants' pre, post, and during migration conditions in facilitating returnee entrepreneurship. We also illuminate the distinctive differences between forced and voluntary returnees. Implications for theory and practice are indicated.

Keywords: Returnee entrepreneurship, Entrepreneurial entry, voluntary returnee, forced returnee, Ethiopia

INTRODUCTION

According to the United Nations (UN) recent report, the estimated number of international migrants stands at around 281 million (UN, 2020). The dislocation caused by war, environmental change, and political upheaval forced many individuals to leave their accustomed employment. Simultaneously, many economic migrants depart their home countries in search of better opportunities. Increasing numbers of these migrants return to their home countries, either willingly or through compulsion, carrying important knowledge and experience that can diffuse into new markets through their tacit experience (Polyani, 1966). Entrepreneurship promises opportunities for some of these individuals, and indeed, return migrants to countries such as Taiwan, China, Israel, and Korea have been

cited as stimulating significant economic development (Saxenian, 2002; 2005). Examining how different patterns of return migrant mobility, either voluntary or coerced, impact entrepreneurial activities, represents an important and overlooked area of study.

This is particularly important given that numerous European programs now seek to coerce illegal immigrants from Africa and Latin America to return to their home countries, with promises of small loans and incentives to start businesses (European Commission, 2021). In this study, we contrast the entrepreneurial activities of voluntary return migrants in Ethiopia with coerced return migrants to discern to what extent preparation and aspiration impact the success or failure of individuals to capitalize on their overseas human capital experiences. While many countries now seek to take advantage of return migrants through entrepreneurship programs (Kenney, Breznitz, and Murphree, 2013), little is known regarding the impact of various programs on the different characteristics of heterogeneous return migrants. Our research question is as follows: How do institutional factors and support initiatives differentially impact the success or failure of return migrant entrepreneurship based on their motivation and preparation regarding their return home?

As countries aim to take advantage of returnees, opportunities for returnee entrepreneurship are presumably tremendous to former emigrants. Returnees offer a chance of giving back knowledge and experiences acquired in advanced countries. If the situation in the local context does not allow them to take advantage of opportunities, their attempts may remain futile. Despite the myth about the returnee potential, the reality regarding this has been subject to debate. The literature often considers returnees' international capital (experience, skills, and network) automatically transferable to the local situation (Akeson, 2015) but they often face serious challenges in venture startups (Mreji and Barnard, 2021).

Returnee entrepreneurial potential is shaped by a mix of factors from home and host countries (Filatotchev, Liu, Buck, & Wright, 2009; Lin, Zheng, Lu, Liu, & Wright, 2019). The literature has offered two main explanations regarding drivers of returnee entrepreneurship. The first theorizing the impact of international experience, foreign knowledge, and cross-border social ties (Wang, 2020; Dai and Liu, 2009; Filatotchev et al., 2009; Wright, Liu, Buck, & Filatotchev, 2008; Liu, Lu, Filatotchev, Buck, & Wright, 2010; Mayer, Harima, & Freiling, 2015) but there is limited evidence on how resources from the host country work in tandem with local context to inspire returnee entry decisions. For example, Wang (2020) found that maintaining international networks increase the propensity to establish a returnee venture, but the institutional distance between the home country and the host country reduces the positive role of social ties.

A second explanation attempts to illuminate the role of the home country context in enabling returnee entrepreneurship (Filatotchev et al., 2009; Saxenian, 2005; Gruenhagen, 2020) but the question of what influences returnee business engagement remains. In this paper, we aim to contribute to both streams by studying the drivers of returnee entrepreneurial entry decisions among forced and voluntary returnees in Ethiopia.

The literature recognizes the peculiarity of returnee entrepreneurs (Akeson, 2015; Liu et al., 2010; McCormick & Wahba, 2001; Wahba & Zenou, 2012; Qin, Wright, and Gao, 2017) in terms of what drives their entry decisions (Qin et al., 2017) and performance (Li, Zhang, Li, Zhou, & Zhang, 2012). Most such studies consider returnees as homogenous. However, returnees are heterogeneous, inherently due to differences in their cause of migration and return, but a few attempts have been made to understand returnee differences (Cassarino, 2004).

Returnees also vary considerably in their international experience, returning condition, acquisition of migration capital, and pre-migration elements like social contact, experience, and family (Cassarino, 2004; Ruben, Van Houte, and Davids, 2009). Returnees may differ in the support they expect and the outcome, what made them migrate as well as what drove their return. These factors can influence the business entry decision of returnees, but the literature made limited effort to provide anecdotes in this regard.

Generally, our understanding of what contributes to entrepreneurial entry decisions has remained limited (Shepherd, *et al.*, 2015) particularly regarding returnees, partly because these entrepreneurs are presumably unique in terms of their character and experience. For example, to be able to start a business, returnees need to be re-embedded which highly depends on the conditions experienced while in the host country and the assistance provided to them after the return (Ruben et al., 2009; Gruenhagen and Davidsson, 2018).

International experience is assumed to shape returnees' entrepreneurial entry decisions (Bai, Johanson, & Martín, 2017; Naudé, Siegel, & Marchand, 2017; Levie, 2007) because it endows migrants with widespread business ideas and lessons. For example, returnee business survival rates are higher compared to indigenous businesses (Marchetta, 2012). However, the impact of returnees' international experience has generated mixed results. Returnees' speed of business entry is found to be lower compared to locals (Qin *et al.*, 2017) but mobility, in general, is found to positively affect the entry decision of individuals (Démurger & Xu, 2011). Most of these studies mainly focused on the post establishment of the returnee businesses. However, this study addresses the onset of returnee entrepreneurship by investigating what matters in returnee business entry.

Emerging economies often wish to support returnee businesses (Van Houte, & Davids, 2008; Olesen, 2002) which may arouse and/or constrain the entrepreneurial potential of returnees (Naudé *et al.*, 2017; Gruenhagen 2020). Returnees are driven to entrepreneurship by the institutional characteristics of the home (Lin *et al.*, 2019; Gruenhagen, 2020) and destination countries (Debnath, 2016). Perhaps, peculiarly, home institutions are not always attractive to the returnees but still, returnees are found to play role in the local economy of their home countries. Sometimes, returnees strive with limited information, lack of access to networks, and lack of support, and opt to engage in imitative businesses instead of innovative ones (Akesson, 2015). Even though they know that they would operate in a limited capacity or may not get enough reward, returnees still interested in home business (Mreji and Barnard, 2021) and therefore hailing returnee business only to migration related factors need scholarly attention.

The Ethiopian government tries to support return migrants in the belief that they can transfer skills and contribute to the local economic transformation. However, whether those support programs have achieved their target might have been affected by the heterogeneity of returnees. Sometimes, such programs consider returning as a separate post-return activity without sufficiently recognizing the interactive effects of the premigration, during migration and post-migration returnee conditions. Nevertheless, the entrepreneurial entry decision of returnees is likely to be heavily influenced by these factors. Therefore, tackling this would help us to expound our understanding of the phenomenon of returnee entrepreneurship.

This study focuses on Ethiopia, one of the largest recipients of voluntary returnees due to local changes and forced returnees due to a large exodus of youth to Saudi Arabia and other Middle East countries. Voluntary returnees are migrants who left the host country with their willingness and decisions and forced returnees are migrants who were either deported or made to choose repatriation against their plan and interests. As compare entrepreneurial entry decisions of the forced and voluntary returnees we approach the phenomenon with a qualitative technique.

Returnees are exposed to at least two worlds but choose to do business in their country of origin. This means, there should be available local opportunities to attract and allow them to take advantage of migration resources (i.e network, experience, skills). We attempt to understand how returnees play between both worlds in the entrepreneurial entry decision process. Entrepreneurial entry decision is a process where those who can become entrepreneurs are distinguished from those who cannot be (Shepherd and Williams, 2015). Returnees heterogeneity cannot be discerned by their international experience per se but their aspirations, choices, attitudes toward risk, as well as how they perceive local opportunities. These tend to make returnee entry decisions the outcome a mix of factors that are idiosyncratic and exogenous.

We employed mixed embeddedness theory to explain the immigrant business in the host countries (Kloosterman, 2010), but given the resemblance of the entrepreneurial activities of returnees, we have opted to use the theory. Drawing on this approach, we aim to develop a tentative model of returnee entrepreneurial entry decisions. The study identifies three key elements influencing returnee business entry decisions. The three elements are contingent upon the migrants' conditions before, after, and during migration.

The remaining part of the paper is organized as follows. The next section discusses the theoretical lens utilized in the study. Then we move on to explain the methodology used, findings, discussion, and conclusion.

CONCEPTUAL BACKGROUND

Migration and return migration are interrelated practices involving the embeddedness and re-embeddedness of migrants. Embeddedness is a multi-layered concept and an agent needs to be anchored in a larger structure for the benefit to accrue from embedding activities (Johannisson, Ramírez-Pasillas, & Karlsson, 2002). Returnee re-embeddedness and reintegration are dependent not only on the resources accumulated or preparedness for the return (Cassarino, 2004) but also on the native institutions, family context, and opportunities in the local economies (Hagan & Wassink, 2020).

In the destination countries, migrants work to embed themselves by learning new practices and systems, and upon return, they seek to re-embed in institutions, locality, and reintegrate, in addition to experiences and networks from abroad, and thus mixed embeddedness. Attempts to embed in the host country and home country might not necessarily be mutually exclusive, but at times mutually reinforcing. We study drivers of returnee entrepreneurial entry decisions in the home country, Ethiopia, where returnees had lived, stayed, and/or studied before migrating and live in at the time of running the current business, and the host/destination/ residence country is where returnees had worked and/or studied.

The mixed embeddedness theory

Embeddedness has multifaceted dimensions that reinforce each other (Van Houte & Davids, 2008). Economic actions are embedded in individuals' social relations (Granovetter, 1985) but migrants (including returnees) may have to go beyond and embed in institutional structures to operate a business (Kloosterman, 2010). Mixed embeddedness extends the opportunity structure model by Aldrich and Waldinger (1990) to multi-level (macro, meso, and micro) dimensions by Kloosterman (2010). It incorporates the complex and mysterious nature of the interaction between markets, social structures, and the environment to shape opportunities available to and exploited by migrant entrepreneurs (Kloosterman, Van Der Leun, & Rath, 1999).

Mixed embeddedness considers migrants' business as a replica of both worlds'; i.e the home country and the host country (Kloosterman, et al., 1999; Kloosterman, 2010). Migrant-owned enterprises should not only be seen from the lens of the personal resources of the business owners, but also the structural context encompassing the political, social, institutional, market, and regulatory environments in which they operate (Kloosterman & Rath, 2001). In the context of returnee business, we could extend this to the influence of the home and host countries in their entrepreneurial entry decisions. Returnees are products of two worlds and so are their businesses, but often in the study of returnee entrepreneurship, too much emphasis is given to what migrants acquired from the host country or the readiness of the home country in accommodating returnee needs. Mixed embeddedness must help us to concurrently consider the role of an individual's social relation, host acquired resources and home country institution.

The influence of the host country on returnee business entry

Migrants need to integrate into the local economies of the host country (Aliaga-Isla & Rialp, 2013; Kloosterman, 2010) and so do returnees in their home country. Embeddedness in local institutions, structures, and social relations helps migrants in guiding their economic actions (Kloosterman and Rath, 2001, Lin et al., 2019). (Re)-embeddedness requires migrants to learn to fit into the new system that gives them chances to acquire important capital to pursue economic activities (Kloosterman, 2010).

In the host countries, migrants face opportunities and challenges. The challenge of fitting into the culture and the labor market are considerable, particularly for those leaving less developed countries for wealthier environments. For example, unemployment is higher for immigrants who opt to engage in informal economic activities (Kloosterman et al., 1999). Migrants are often considered under-resourced, segregated, and vulnerable to structural limitations in the host country making them resort to self-employment, also called necessity entrepreneurship (Kloosterman and Rath, 2001; O'Donnell, O'Gorman, & Clinton, 2020).

Immigrants may suffer from racism, marginalization, exclusion, and an unwelcoming business environment in advanced economies (Jones et al., 2014; Kloosterman et al., 1999). However, they also enjoy the opportunity to acquire valuable capital and become business owners (Jones et al., 2014). Due to the limited employment opportunity, problems like marginalization, or perhaps personal reasons,

migrants may establish a transnational business in the host country, boosting their chances of becoming returnee business owners.

Migration capital (all sorts of resources including skills, experiences, and networks) helps returnees seize entrepreneurial opportunities in the home country, particularly where policy directions are encouraging (Saxenian, 2005). Returnees are thought to hold valuable experiences, skills, and knowledge (tacit and explicit) (Sternberg and Muller, 2010) and thus understood as having a better position in mobilizing resources. Migration capital makes returnees unique and different from homegrown entrepreneurs but may not necessarily be a guarantee for business success because not all migration capital can be directly consumable for local business practices upon their return, (Akesson, 2016). However, often the role of resources from migration is inflated in helping returnees, and other factors like marginalization and personal factors are left behind in understanding the entrepreneurial entry decision of returnees. Therefore, it is not only the positive experiences, and resources from the host country that plays a part, but we need to go beyond and understand what drives returnees to go back and do business.

The influence of home country on returnee business entry

Under her proposition of redirecting brain drain to brain circulation, Saxenian holds that developing countries' hope and aspiration to transform to a knowledge-based economy could be backed by return migrants who are technically exposed to environments of high-tech regions and have strong professional networks (Saxenian 2002; Saxenian 2005). Much of her work applies to migrants returning to Asia from the Silicon Valley and there is a dearth of evidence about how that works in other parts of the world, particularly Sub Sahara Africa.

Brain circulation is contingent upon the home country's context and institutional arrangements because social, cultural, and institutional changes affect the success and/or failure of a business (Li et al., 2012). Accordingly, the success of returnees depends on how well they fit into the socio-political and institutional arrangement of the home country, i.e., (re)-embeddedness in the local context (Granovetter, 1985) and how they manage to benefit from their migration capital in the local context.

Entrepreneurial opportunities in the home country may influence returning decisions. Opportunity structures determine the nature and type of business openings in a certain context. Kloosterman and Rath (2001) developed a three-level approach to study immigrants' opportunity structure; the national, regional/urban, and neighborhood which seems to work for returnees entrepreneurs as well. They state that "national institutions are not just state-related phenomena, they are generally speaking more durable practices and can thus also refer to attitudes toward business" (Kloosterman & Rath, 2001; 195). Regions and neighborhoods also vary in their economic providences and thus opportunities they offer. In studying returnee business, we try to see it from a wider perspective in a way that opportunities per se may not justify returnee investment, but individual interests and motives also guide their business entry decision. For example returnee may just want to give back and contribute to the home country, without necessarily calculating economic returns as would be expected.

Embeddedness in social relations in the host has been found to help migrants escape the requirement of formal economic activities such as formal qualifications and other criteria for making their business legitimate (Kloosterman and Rath, 2018). In the same manner, embedding t in social relations at home can help returnees to overcome local institutional limitations in the process of becoming entrepreneurs. In addition to fitting into the institutional framework, opportunity structure, and individual motives, embeddedness supports returnees in avoiding systematic discrimination and overcoming structural barriers in the host country but could also help in making successful reintegration into the local politico-economic conditions after the return (Kloosterman, 2010).

Embeddedness in social structure may contribute to minimizing the burdens of returnee alienation. For example, social capital saved vulnerable and endangered immigrant businesses from failure in the case of Turkish immigrants operating in Amsterdam (Kloosterman, 2010). Other than acknowledging the role of social capital, utilizing the mixed embeddedness framework helps in broadening our understanding of migrant entrepreneurship, and it could help us in understanding returnees' cases. Local embeddedness helps returnees to understand the policy and institutional framework of their country.

Therefore, apart from the various resources acquired during migration, the home country also plays an essential role in influencing returnee business entry decisions. In emerging economies, often,

economic activities are fragmented, and entrepreneurial opportunities are available in different segments and mixed patterns (Kloosterman and Rath, 2001).

EMPIRICAL CONTEXT

Given the significance of context in the study of entrepreneurship (Welter, 2011) we focus on Ethiopia's return migrants, one of the poorest nations in the world, with a population of more than 110 Million. The Ethiopian economy is mainly agrarian with more than 80% of the population living in largely unconnected rural areas. Historically, the country has suffered from poverty, starvation, civil war, political unrest, and other catastrophic disasters (Fransen, & Kuschminder, 2009). Ethiopia has also experienced a variety of government systems, from monarchy and communism to disputable democracy. Under the different regimes, political instability, and lack of freedom of expression have caused dissidents to flee the country. Uneven socio-economic and political conditions, poverty, sluggish economy, have made millions flee the country to Western countries and the Middle East. Even today, thousands start their journey to cross the Djibouti desert to make it illegally to Saudi Arabia and other Middle Eastern Countries (BBC News Africa, 2021). The Horn of Africa, particularly Ethiopia and Somalia are the well-known origin of migrants. Ethiopia has a high share of emigration rate among Sub-Saharan African countries (UN, 2020; Fransen, & Kuschminder, 2009), but also paradoxically hosts refugees from neighboring countries.

The total number of Ethiopians living abroad accounts for more than three million in the North, South, and the Middle East (Kuschminder, Andersson, and Seigel, 2018). A notable number of migrants are also returning to Ethiopia either through voluntary decisions or forced deportations (Kuschminder et al., 2018). The post-return scenario provides alternatives ranging from venture creation, unemployment, re-migration, or employment in the labor market. The fates of the returnees are often mediated by several pre-and post-return factors which hinder or enable their successful reintegration into the local socio-economic circumstances. Among others, we rely on the interviews from the forced and voluntary returnees to understand what drives entrepreneurial entry decisions among these groups.

Research Design

The interest of the current study is to understand entry decisions among the forced and voluntary returnees in Ethiopia. Although notable intergroup differences were observed among respondents (for example in the number of years they spent abroad), we thought that their mode of return is crucial, and thus interested in learning how government programs and other exogenous forces affected their entrepreneurial entry decisions when migrants return willingly or coerced. Previous studies on returnee entrepreneurs' mainly utilized quantitative techniques and focused on technology firms in Asian countries (See Liu et al., 2010, Dai and Liu, 2009, Filatotchev et al, 2009). In this study, we employed a qualitative case study design (Stake, 1995) in response to recent calls for more qualitative studies to theorize the phenomenon. For example, the need for contextualized and comparative qualitative research in returnee entrepreneurship (Gruenhagen and Davidsson, 2018; Gruenhagen et al., 2020) and acknowledging the heterogeneity among the returnees has been emphasized (Cassarino, 2004).

Management scholars have also suggested the need for an abductive method, a data-driven approach that offers researchers a chance to find the best explanation to the unfolding puzzles in the research (Bamberger, 2018; Saetre and Van De Ven, 2021). Abduction helps in maximizing chances of gaining new insights and minimizes the risk of theoretical obsolescence (Bamberger, 2018). In response to this, we used an abductive approach as we went to the field with insights from the literature and alternative theories that have been used in the study of returnee entrepreneurship. After the fieldwork and going through the data, we selected mixed embeddedness approach to support our observations. Our study compares the forced and voluntary returnees, utilizing in-depth face-to-face interviews to collect data. To contact the respondents, we used a snowball sampling technique, because of the difficulty in identifying suitable respondents (Weiss, 1995).

An interview gives a chance to learn about the life of the people, what they perceive and how they interpret their perceptions (Weiss, 1995). Qualitative interviewing helps the interviewer in developing fuller information about events, memories, joys, griefs, private lives, and general human conditions (Weiss, 1995). The interview questions were segmented into three parts covering premigration issues (for example, what the migrant did, how they made it to the host countries, and so

forth), during migration issues (for example, how they spent their life in the host country, their experience and networking efforts, how they kept in touch with the home country), and post-return issues (for example, how the returning decision was made, the process involved and whether a business was intended and related issues have been raised), including but not limited to startup journeys. We employed a semi-structured interview because it allows asking follow-up questions with flexibility. During the interview, the respondents could talk as much as they can on issues related to their life experiences, but within the frame of the research. Probing for more explanations was important during the interview as attention was given to local ways of understanding.

As we interviewed 11 voluntary returnees and 14 forced returnees, the data started to saturate almost after the first five interviews for the voluntary returnees and the first eight interviews for the forced returnees. After continuing for a few more, we decided to stop interviewing because the marginal benefit of conducting more interviews would not add much value to what we already had. Interviews were mainly held in Amharic, but additionally, Afaan Oromo and English languages were also used. One of the researchers is fluent in all three languages, making the translation work easier. The interviews were recorded for later transcription and translation. The interviews were administered and translated by one of the researchers, giving the chance to make careful interpretations right from the beginning. The transcripts were also shared with two people; another researcher, and a friend who could also read and code so that inter-coder reliability could be checked.

The interview transcripts were repeatedly read before coding. We used open coding supported by Nvivo software to generate first-order concepts. Then we used axial coding as we sought patterns and conceptual relatedness to reach the second-order categories. Finally, through selective coding, the theoretical dimensions were developed iteratively from the second-order categories to crystallize the ongoing communication with the data. For example, the first order coding resulted in 234 codes for the voluntary returnees and 223 for the voluntary returnees. From here, we were able to generate 16 concepts in the second-order category that are related to entrepreneurial entry decisions. After going through the second-order categories, we were able to gain a clue to reach aggregate dimensions and able to identify the similarities and differences between voluntary returnees and forced returnees.

Attention has been paid to maintain rigor and transparency and to present the empirical data as it was heard from the research participants. Respondents were promised anonymity during the writing of the research, and pseudonyms have been used to report the findings. After the pseudonyms, we have added letters F and V for the forced and voluntary returnees respectively for identification purpose. Table 1 and table 2 show profile of the voluntary returnees and forced returnees that were included in the study, respectively.

Table 1: Profile of the voluntary returnee respondents

Pseudonym	Age	Education	Host	Years Away	Return	Business
SOFI-V	46	Masters	USA	17	2011	Export
EBRO-V	35	Bachelor	Norway	16	2018	Poultry+
TUFA-V	45	Masters	USA	10	2009	Poultry
BIFE-V	48	Masters	USA	28	2016	Poultry
FUFA-V	61	College	USA	33	2012	Real Estate+
WAKO-V	55	College	USA	33	2017	Sanitary Pads
MALA-V	41	10+1	Saudi	14	2011	Import
MISHE-V	29	Masters	China	3	2018	Import
YONI-V	41		12 USA	11	2017	Import
DESU-V	40		12 Saudi	14	2015	Import
TOLA-V	39	Bachelor	USA	6	2016	Import

Table 2: Profile of the forced returnee respondents

ID	Age	Education	Host	Years away	Returned in	Business

BETI-F	37	8	Saudi+	20	2018	Costumes
ASKU-F	27	10	UAE +	7	2018	Costumes
WERKE-F	32	8	UAE	1	2014	Costumes
FIKRU-F	41	12	Saudi	5	2016	Trading
MESKI-F	45	12	Saudi	11	2014	Trading
WATE-F	43	12	Saudi	15	2014	Trading
BULLO-F	30	College	Saudi	3	2014	Trading
DORI-F	46	3	Saudi	9	2016	Trading
NAMO-F	39	4	Saudi+	12	2016	Trading
MENGE-F	30	10	Saudi	5	2017	Trading
MESI-F	38	Diploma	UAE+	5	2012	Leather pr
KORE-F	38	8	Saudi	3	2012	Urban far
NASU-F	39	8	Saudi	10	2012	Trading
MURE-F	44	Diploma	Saudi	9	2014	Trading+

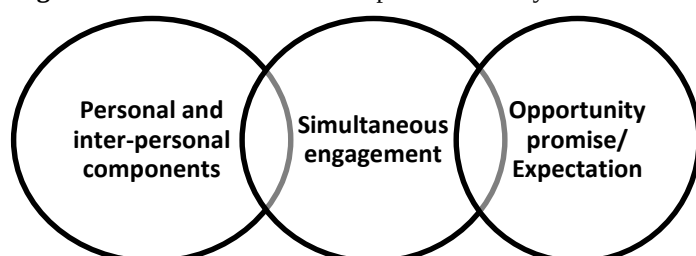
From Table 1, characteristically, most of the respondents have completed college but three of them. Nearly 70% of the voluntary returnees had been in the US while the remaining 30% had been to China, Norway, and Saudi Arabia. Except for the two of them, most of them have stayed away at least ten or more years. Most of the voluntary returnees are involved in import and export, and others in poultry farming, real estate, and producing sanitary pads. Two of them are involved in more than one business.

From table 2, age-wise forced returnees seem to be younger, but as far as their educational level is concerned, only three of them completed college. They mainly returned from Saudi Arabia, but some have returned from the UAE and Yemen. Most of them have stayed abroad for five or more years. However, unlike the business nature of the voluntary returnees, they mainly run micro-businesses and focus on trading in the local market.

FINDINGS

The interview with Ethiopian returnee entrepreneurs was abductively analyzed and produced important insights regarding their entrepreneurial entry decisions and the difference between forced and voluntary returnees. Our goal was to engage in conversation regarding their journey towards the business. We interviewed 11 voluntary returnees and 14 forced returnees to develop a model of returnee entrepreneurial entry decision. From the data, we came across interactive themes comprising; personal and interpersonal factors, simultaneous engagement, and opportunity promise. We show a model of these themes in figure 1.

Figure 1: Model of returnee entrepreneurial entry decisions



General findings

While forced returnees tended to be survivalist entrepreneurs, voluntary returnees tended to be opportunity entrepreneurs. Their current status is not only the outcome after the return per se, but their premigration conditions, mode of migration and whether they were able to achieve their migration goal might have enormously contributed to this.

“Ethiopia is an opportunity country; you can do many things. If I start a business in the US and wish to succeed, it is tough, because it is a saturated market unless you create something special. However, here the market is fertile and untouched.” (Voluntary returnee, TOLA-V)

“Upon my return, I knew that I cannot go to school and find an employment job. So, doing a business was something choiceless for me” (Forced returnee, WATE-F)

We found evidence for the interactive influence of personal and interpersonal factors, simultaneous engagement, and opportunity structure to influence returnee entrepreneurial entry decisions in the Ethiopian context. We compare forced and voluntary returnees across the themes. Figure 2 below shows the data structure for the voluntary returnees.

Figure 2: The data structure for the voluntary returnees

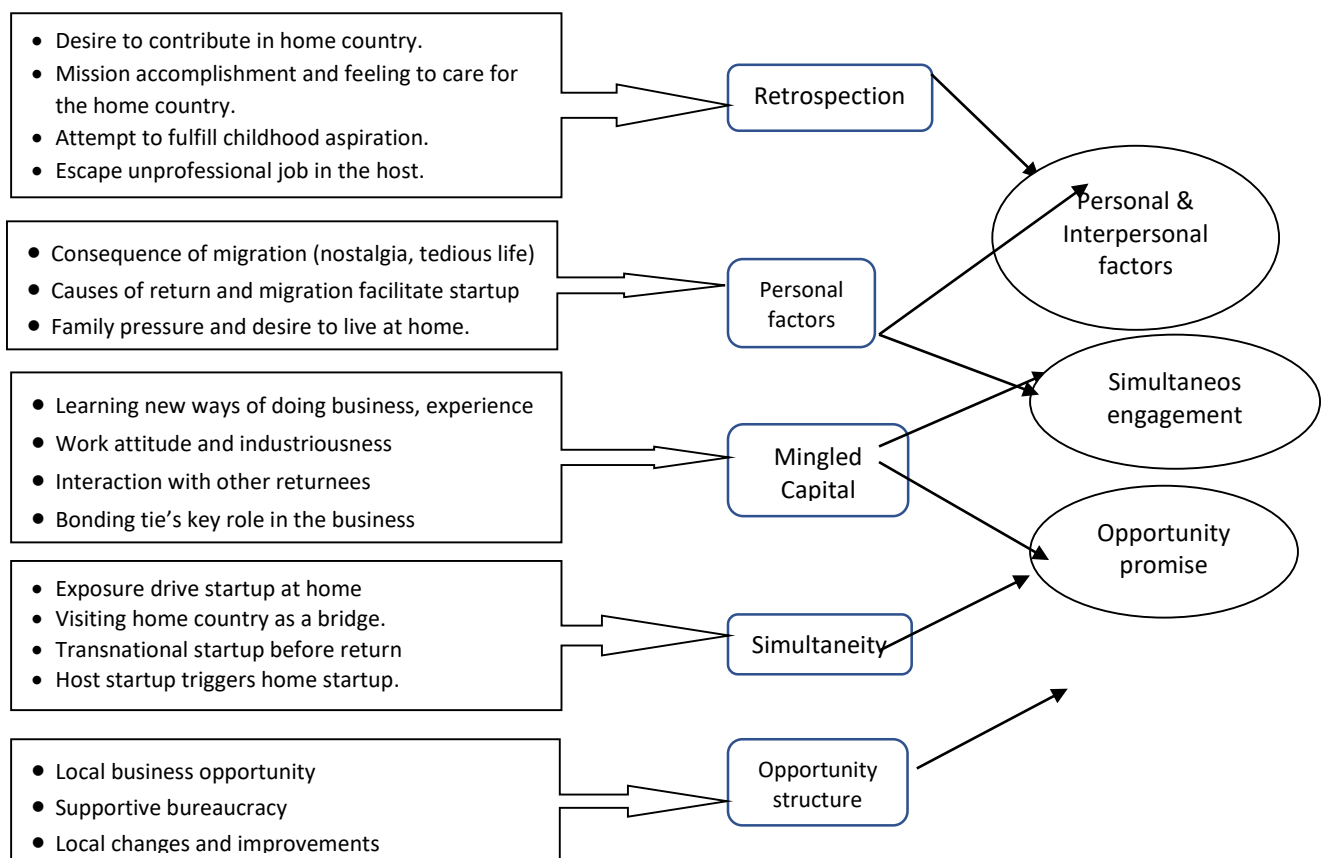
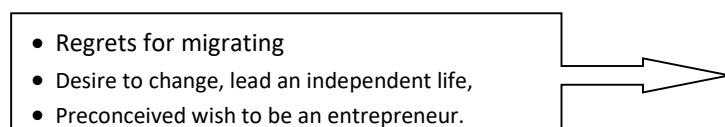
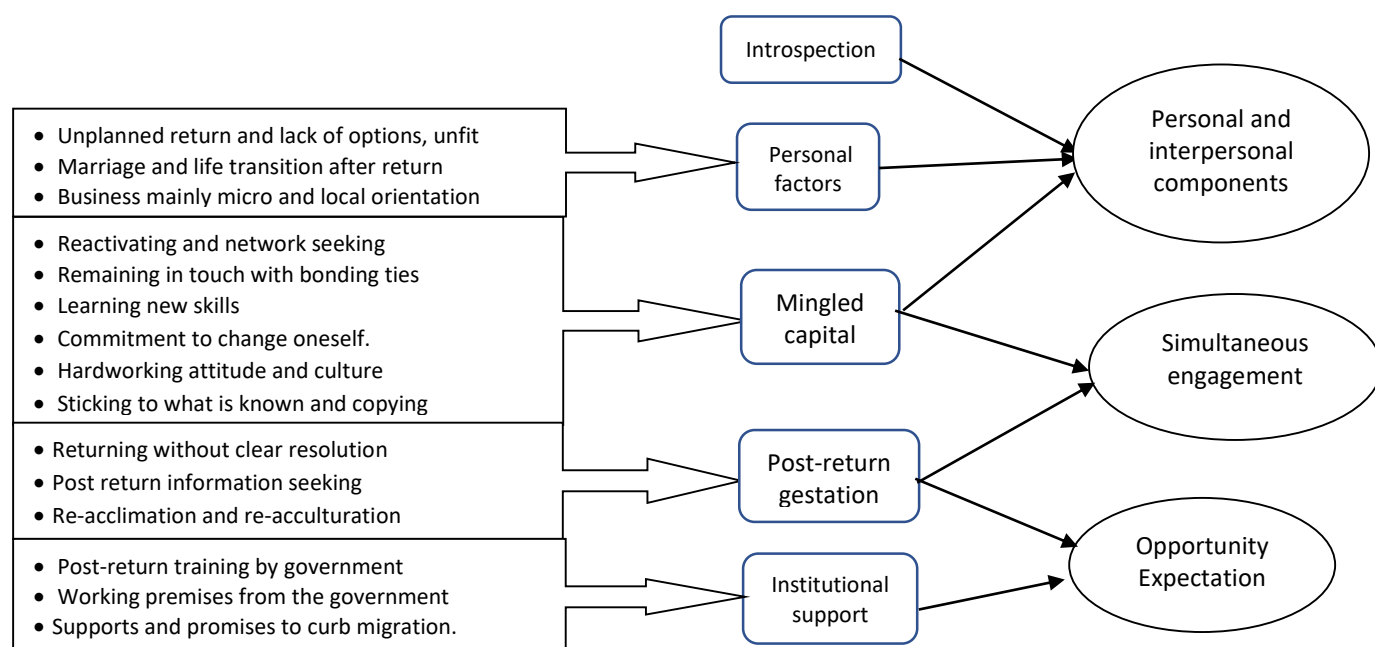


Figure 3: The Data Structure for the forced returnees





Next, we explore factors that made Ethiopian returnee migrants start their businesses and whether there is a difference between forced and voluntary returnees. We begin with aggregate dimensions and continue our discussion case by case.

Personal and Interpersonal antecedents and Returnee entrepreneurship

One key dimension that emerged as an important driver for returnee entrepreneurial entry is personal and interpersonal factors. Personal factors constitute experience, skills, and cognition (including self-image) that actual or potential entrepreneurs exhibit (Baron and Shane, 2007) and interpersonal factors involve a relationship with others (Mreji, & Barnard, 2021). For example, entrepreneurs' motivation to solve social problems can emanate from compassion – a wish to avoid the suffering of others based on their own experience (Yitshaki, Kropp, & Honig, 2021). Our evidence helps us to explore this.

Case I: Voluntary Returnees and Personal and Interpersonal factors

Eight out of 11 voluntary returnees we interviewed in Addis Ababa said they started a business, just because they wanted to play a part and contribute to the advancement of their country. They explained that retrospection makes them feel like custodians and stewards for their country. They wish to introduce new business practices, reach out to the vulnerable, employ others, and change the image of the country. WAKO-V who is engaged in the production of sanitary pads explained:

“While in the US, I had a good life, I had things I needed, however, I wanted to bring change in my country” WAKO-V.

“A business does not always mean harvesting profit; you learn how to better serve your country on the way too. You should ensure that whatever you do is good for the people of Ethiopia. I have learned this from Americans, they love their country”. TOLA-V

“I came not because the payoff is better here, even the forgone opportunity was better. We [With two other brothers] just came to do something good for our country” BIFE-V.

Voluntary returnees use migration as a springboard to materialize their childhood aspiration. Five of the voluntary returnees explained the role of migration in reinstating their childhood aspiration. SOFI-V who exports enjera to the US said:

“Amazingly, from my childhood, I liked baking enjera very much. I remember when I was at the age of 12, I already had started baking it. I think what impacted me well for the business is my childhood experience to the most” SOFI-V.

In previous studies, migration has been considered to obtain multiple and ready-to-use capital (Akesson, 2016). However, in this study, we find that migration also helps in nurturing childhood aspirations. As Kloosterman argues, migrants' desires are important catalysts, but they should match

with other meso and macro-level factors to influence the economic activities of individuals (Kloosterman, 2010).

Further, voluntary returnees seem to be pushed to entrepreneurship due to the consequences of migration such as cultural shock, difficulty to secure citizenship in the host, lack of time to socialize and isolation, nostalgia, doing unskilled jobs, language barrier, failure to achieve the intended goal, and difficulty to find a life partner. Therefore, migrants may wish to live or retire at home and escape exploitation, and overworking and pressure to return may come from a family or friends. For example, Sofi explained:

“The bad thing about migration is that when you do unskilled jobs, it is exploitative and tiresome. Because sometimes you should work without rest. Life is not about the material, but when you go there, you live just for materials. You work, pay, and it makes to live for the bill. There is a culture clash, some people, after arriving in the US are depressed, because their expectations and the reality of life that they face there are different.” SOFI-V.

Literature shows few investigations of push factors to returnee entrepreneurship and too much focus on pull factors. We did observe the importance of push factors in driving returnee business. Returnees must find ways of settling their life at home, and relatively enjoy freedom from working too much in the host country. Therefore, entrepreneurship is often a viable option, especially for the voluntary returnees.

“To support myself, I had already started doing business during my studies in China” MISHE-V

“After returning home, I started the business of exporting enjera, with which I was familiar” SOFI-V.

Further, much literature points to returnees as scientists with explicit knowledge, like returnees from Silicon Valley (Saxenian, 2005) and frequently focusing on the spillover effect in areas of technology (See, for example, Dai and Liu, 2009; Liu et al., 2015). Migration helps to acquire tacit competencies (Baláž, Williams, Moravčíková, & Chrančoková, 2021; Akesson, 2015). We extend this claim and found that returnees gain competencies like time management, hard work which influence business entry decisions after the return. For example, Mala, one of the voluntary returnees thinks that it is possible to earn the same amount if you manage your time and work hard as you do in the host country.

“The fact is, if you work hard and put the same effort in Ethiopia as you do in host countries, you could get the same or more money. So, that is what made me return too. The life condition in Ethiopia now is changing fast, at an unprecedented pace and I was always wishing to live in Ethiopia” MALA-V. In the

Ethiopian context, competencies and attitudes are what returnees think they lack at home including better work attitudes, improve working cultures, self-discipline, and learning to adopt new work ethics which helps them in their entrepreneurial entry decisions. Furthermore, social competencies, communication, and marketing skills are among the take aways for the returnees. As SOFI-V and others explain below they try to mix host acquired skills with home acquired competencies.

“.... what matters is understanding both worlds. Knowing how to use what you acquired in the US in Ethiopia is different” SOFI-V.

“I am giving what I know and acquiring what I want from here. I had been pooling, but now pushing and acquiring lessons from Ethiopia” BIFE-V.

“I believe, more than someone who has a degree or doctorate in Ethiopia, someone who migrated to a foreign country is better in terms of life experiences” EBRO-V.

“Working in the US, not only make you strong, not only make you happy, not only make you get good money, but it also gives you a sense of discipline and works ethics, a sense of the value of that, you know” TUFA-V.

This implies the importance of mixing competencies from the host country with the local context to be able to establish a functioning venture. This helps us to heed the literature that puts too much emphasis on the international knowledge, experience, and networks in returnee business.

Similarly, voluntary returnees’ business entry decision is also dependent on their ability to reposition themselves in social relations. Reactivating networks and initiating new ones help them to overcome the risk of alienation. The role of social and human capital in predicting entrepreneurial entry is less evident and somewhat divergent (Davidsson and Honig, 2003). Qin and Estrin (2015) have found that returnee

entrepreneurship is the outcome of social influence. We found that sometimes returnees engage in extensive and targeted networking activities after the return. For instance, BIFE-V went to the US during her childhood and grew up in the US, she had little chance to hold local connections, so, she had to establish all the contacts she has today after the return.

“Much of the connections I have now are established after returning. I wouldn’t have succeeded if I were not able to meet friends like XX (a friend who is a partner now) because when you arrive from abroad, you are green, you don’t know anything about the business situation in the country. Since the American system does not have much good influence on the business operation in Ethiopia, I prefer to talk and share with local people on matters I should do” BIFE-V.

Nevertheless, international connections of returnees are often overrated for returnee business success. In the Ethiopian context, we found that it is not always the case unless the business aims to go international, primacy to local connections and sometimes international connections were found to be less important, social networking in the host country was difficult due to the lack of time, routine, and engagement in monotonous tasks on the side of the migrants. In such cases, returnees’ business entry was facilitated by their post-return networking deliberations like engagement in associations, local politics, attending social events, and taking part in traditional saving institutions like IQQUB. For example, Mishe explained:

“It is my mother who suggested starting IQQUB, just before starting this business, even while in China. There are many people from different backgrounds, and it gives chances to interact with people, including old friends” MISHE-V.

“Life is routine, you go to work and come home, and there is a rare chance to meet with people” SOFI-V.

Moreover, eight of the 11 participants said they have returnee friends with whom they discuss local things, share information and disappointments. Voluntary returnees tend to hold friendships with returnee compatriots because they better understand each other.

“I have both local and returnee friends” DESU-V.

Instead of the international networks, Ethiopian returnees interact primarily with bonding ties defined as close friends or a returnee friend, family, siblings, and/or partner. We found evidence that during the initial stage of founding the business, bonding ties play a significant role for voluntary returnees. DESU-V explained:

“This business had been owned by my friend. He is the one who had been giving me all information I needed. If you change this to money, it means a lot” DESU-V.

Case II: Forced returnees and Personal and interpersonal factors

Contrary to the assumption of the mainstream literature, for the forced returnees, we found that migration is often a source of regret, which ultimately drives them to business. Among the 14 interviewed forced returnees, nine explained that migration did more harm than good to their endeavor. Because of migration, they perceive that they are tremendously disadvantaged, left behind, unable to compete in the local market, and missed important local lessons. For example, Mesi explained:

“When I evaluate, I say it would have been better if I had not migrated and my life would have been better if I had avoided migration” MESI-F.

“When I compare myself with people who never migrated, I think I have missed many things too. Detaching yourself from home for seven years is difficult” ASKU-F

“Generally, locals are better than us. They have been trying to find their place in the system, grew with the system” WATE-F

Forced returnees make an unplanned return and do not carry fully conceptualized business ideas. Since they get little chance to improve their educational status in the host, it is arduous for them to think about getting employed after their return. Therefore, the plausible option for them is to establish a business, making them survivalist or necessity entrepreneurs, unlike most of the voluntary returnees. From a previous study in Ethiopia, migration experience predicts post-return conditions (Bilgili, Kuschminder, and Siegel, 2018). However, different from voluntary returnees, in our study,

migration offered little chance to acquire important lessons for the forced returnees and they resort to what they knew before migration or tend to copy a business idea from friends or family members. Therefore, retrofitting and imprinting are common ways for the forced returnees to set foot in the business. Sticking to what is known could help them to reduce the cost of searching for information and minimize the risks of staying idle. 50% of the participants said that they had pre-migration experiences that helped them to start a business after the return.

“Before returning, I was thinking that if there is no other option, I would go into the business that I have known before. It was not only the business that I know but also people in the business” DORI-F.

“I started the business because I saw it from my older sisters. They have been in the same business for a long and their suppliers and/or customers are huge. I buy from their suppliers” NASU-F.

We found that forced returnees migrate temporarily and delay life events like marriage but may marry someone who has never left the country after the return, facilitating their entry decisions. However, at the same time, it can also hinder the speed of entrepreneurial entry decisions.

“My husband used to do a business. He had a grocery and has been operating a taxi. When our shop suppliers offer poor-quality products, I suggest we could buy because of the low price; however, my husband knows the quality and he saves us” WATE-F

Forced returnees often temporarily migrate to overcome financial limitations to start a business. Eight out of the 14 forced returnees said they had a wish to become entrepreneurs after their return. This preconception helps in guiding their decision to become an entrepreneur after the return.

“I had a wish to run some business right after returning, however, it was only after my return that I searched for information I needed. I already knew what being unemployed would give me. I used to think like someone who could be an employer” WATE-F.

Unlike the voluntary returnees who succeeded in gaining both tacit and explicit capital, forced returnees seem to succeed in acquiring tacit qualities like work culture, recognizing opportunities, widening the scope of thinking, time management, courage, and endurance to fight under difficult circumstances, better than locals.

“After my return, things were all the same, but I started selling whatever I get, including vegetables from my compound, chicken, and everything I thought could bring income.” KORE-F

“The challenges that I faced have taught me how to lead my life. It has changed my perspectives and attitude towards work. I can work whatever I think is good to earn money. If I had the money, there are lots of ideas in my mind that I could do. I can do anything now.” FIKRU-F.

Forced returnees mainly remain in touch with close ties from abroad and wish to triumph the networking gap after return with initiations like Iqqub. Due to the strong disconnection, post-return connections are valuable for forced returnees. This probably delays their entrepreneurial entry. They have formed an association (RASAI) where they network, save, borrow, and get to know other returnee friends. It helps them for their business.

“The things that I brought home are social relationships and communication skills” MENGE-F

“I try being a member of Iqqub. It helps you to operate. That is how we are working. It is also a way of supporting each other, with friends. We discuss problems beyond business sometimes too.” DORI-F

“Some of my high school friends work in Kebele (the smallest administrative structure) and they helped me a lot in the process of getting a working premise and starting this business. I have another friend with whom I talk about business problems” ASKU-F

Forced returnees are often unhappy about the support they get from their network but mention that close ties are their saviors in times of difficulty.

Simultaneous engagement and returnee entrepreneurship

The second theoretical foundation we examine is simultaneous engagement, an essential enabler of returnee entrepreneurship. Simultaneous engagement opens a way for the mixed embedding process

(Kloosterman, 2010). Simultaneous engagement enhances migrants' ability to identify, act upon, and utilize business opportunities in the home and host country (Kloosterman, 2010; Kloosterman and Rath, 2001). Simultaneity has helped returnees to initiate business establishment from abroad. We found the significance of simultaneous engagement in enabling returnee business and thus mixed embeddedness. In this regard, forced returnees are disadvantaged and have little chance to sustain double embeddedness.

Case I: Voluntary returnees and Simultaneous Engagement

Returnees may embark on a new business after returning for good or probably start while working and/or studying in the host country. We found evidence that starting a business from overseas, due to simultaneous engagement enables returnees to modify and expand on the business. One of the enabling factors for migrant simultaneous engagement is government support programs. Efforts by the Ethiopian government to attract investment has made it easier for returnees to start business while they still stay overseas. Additionally, exposure to a different environment endows migrants with different types and nature of business, and skills to identify and seize business opportunities. Through simultaneous engagement, migrants oscillate between the host country and opportunities at home (Ram, Theodorakopoulos, & Jones, 2008). It makes migrants envious and wishes to adopt moving business ideas to their home country.

“...while I was in the US, there was a Mexican restaurant and I went out to dine with my cousin, they had something called a tortilla, a kind of dry pancake (that looks like our enjera) they served, then the idea of importing Enjera to the US came to my mind and I shared the idea with my friends. We later started with a friend”. SOFI-V

Exposure helps migrants to set the ground, open opportunities, and facilitate business startups before they return. This provides a chance to concomitantly remain updated about local conditions, develop guts to deal with post-return conundrums, and discover local business gaps. This is further accelerated by frequent home visits while abroad. In understanding returnee entrepreneurship, previous studies try to conform to the definition of the returnee, that returnee business is established after the return (Saxenian, 2005). We indicate that through simultaneous engagement, returnee business could be an extension of transnational business.

Simultaneous engagement eases the process of grappling with local changes by reducing the chance of detachment and resulting estrangement (Gruenhagen, 2020) but restoring and sustaining social relations. This is echoed by seven out of 11 interviewees who explained the benefits of home visits.

“When I visited Ethiopia, I used to explore possible types of business that could be done, including things that could be imported to Ethiopia from Saudi. I wished to bring everything that was not in Ethiopia”. MALA-V

We found that, in addition to capital, visiting home from the host helps migrants to transport the passion and learnings for immediate evaluation and act upon them. This must be important for returnee entrepreneurs who make it to countries where institutions are weaker, like in Sub-Saharan Africa. Visiting home helps migrants to be vigilant about embeddedness in local institutions (Kloosterman and Rath, 2001) and social relations (Granovetter, 1985). We compliment the claim by Bagwell (2018), that when migrants lead interactive life and succeed to establish business they increase their chance of remaining embedded transnationally, and thus mixed embeddedness.

Further to visiting the home country, migrants may operate a business in the host country. This helps migrants acclimatize, integrate, and acquire important experiences (Solano, 2020). Sometimes it paves the way to do the same business after the return. Four of the returnees we interviewed explained that after returning, they continued the same business they had been doing in the host country. For example, SOFI-V had been importing Enjera to the US before her return, and later she continued exporting it from Ethiopia.

“I started this business (exporting Enjera) with a friend while in the US. I continued the same business after returning because I was familiar with it. I had been doing it for seven years while in the US, now I am exporting Enjera from Ethiopia to the US for the last seven years” SOFI-V.

“I started the poultry business before 11 years while I was in Norway” EBRO-V.

While the literature agrees that returnee firms have a high potential for internationalization (Bai, Johanson, & Martín, 2017; Filatotchev et al., 2009), from the Ethiopian context, we enrich the argument that host country startups can potentially increase chances of going international. Once the business is proved to be promising and has the potential to go international it could become a reason for the return and thus business expansion (Bai et al., 2016; Bai et al., 2017).

Simultaneous engagement requires institutions in both home and host countries to be responsive. When the institutional structures allow, migrants tend to exploit the import and export opportunities (Kloosterman and Rath, 2001) which helps in facilitating economic transformations in the home and host countries. If the host country's business is related to the home country, like the way YONI-V and DESU-V did, it may give the chance to work with the local bureaucracy and understand what it means to do business at home. It could serve as an eye-opener in what to expect after the return, possibly reducing disappointments and unnecessary frustrations.

Literature mainly discusses why returnee owned firms perform higher or lower compared to their local counterparts (Dai and Liu, 2009) or why returnees are slow business entrants (Qin, et al., 2017, Liu et al., 2015), relying on the mixed embeddedness approach, we provide evidence that voluntary returnees from Ethiopia tried to engage in entrepreneurship before returning. Therefore, simultaneous engagement helps as a mechanism to ameliorate returnees' business conundrums by reducing the chances of estrangement.

Case II: Forced returnees and Simultaneous Engagement

Different from the voluntary returnees, we found that forced returnees' engagement in their home country is hindered by their migration status and ensuing inability to visit their home country. This poses a threat to their engagement with the home country. Often, forced returnees take the irregular route to migrate, and stay in the host country until they return for good, or are deported. Unlike voluntary returnees who may engage in business from the host country, forced returnees do not often even identify their business ideas before the return, nor do they engage in any startup efforts while in the host country. Six of the 14 participants mentioned that they had no business idea while in the host country, and those who had one said they could only think about a business they had been doing before migration, retrospectively. Therefore, compared to the voluntary returnees, forced returnees are slower in starting a business.

"I am not sure if I had a business idea while abroad. I do not think that I had a plan to return even" NASU-F.

"I had no idea about what I must do after return, but returning home was the most important" WERKE-F.

Contrary to what migration literature says, forced returnees we talked to, irrespective of the number of years spent abroad suffer from the lack of the widely accepted capital that migration offers. Other than the capital accumulation, menial works, mistreatment, and sufferings derail their chances of pondering about business. Their primary goal might be returning home as KORE-F explained. She said that though she planned to start a business after accumulating savings, the condition in the host country did not give her time to think about business. Therefore, forced returnees' startups may suffer from spontaneity, rush, and lack of proper plan. In such circumstances, the retrospective experience before migration is the ultimate source of relief. Forced returnees' business mainly relies on their premigration capital and some tacit elements they acquire during migration. This reinforces our claim about the importance of simultaneous engagement in enabling returnee business.

Opportunity promises/Expectation and Returnee Entrepreneurship

The third dimension we found to influence returnee business is opportunity promise. Local institutions and opportunities are often critical in shaping the perception of returning home by attracting returnees and influencing their entrepreneurial intentions (Gruenhagen, 2020). A return could be caused by structural changes in the home country (Cassarino, 2004). Local business opportunities and bureaucracy could facilitate returnee business entry decisions. However, the nature of support expected

may vary depending on the type of return. We found that forced returnees expect more rudimentary support, but voluntary returnees expect more systemic support.

Case I: Voluntary Returnees and Opportunity Promise

Voluntary returnees sometimes are attracted by opportunity promises at home. TOLA-V and BIFE-V explained that business opportunities and local changes and improvement played fundamental roles in their returnee business. Eight of the 11 participants hold the impression that the business opportunity in Ethiopia compared to the host countries is fertile. Among others, institutional supports and demand for the product make them believe that Ethiopia has untapped business potential that facilitated conditions for return. For instance, BIFE-V who returned from the US to engage in a poultry farm sees the potential for her business.

“[...] especially the poultry farm is an untapped area, and it is a good opportunity that people here are not used to poultry products unlike the other parts of the world” BIFE-V.

YONI-V and DESU-V also asserted that it is relatively easier to operate the business in their country of origin than the host. For example, YONI-V who is engaged in import business stated that running the same kind of business in the US is difficult. Further, due to the abundant opportunities, DESU-V expresses Ethiopia as a virgin country in terms of business. For instance, FUFA-V is found engaging in serial business because of the market availability and support from the Ethiopian government. As four of the respondents mention, attention and support that returnees get from public offices, the time it takes to get their problems solved, and being listened to have motivated them in their returnee venturing.

“I am in the business because of the government support. I have gotten bank loans, exemptions from the tax for five years, and incentives like duty-free stuff, including cars” TUFA-V.

Case II: Forced returnees and Opportunity Promise

Unlike the voluntary returnees who either identify business opportunity before they return, or search for such opportunities after the return, forced returnees tend to expect opportunities to be created for them by a third party. They need fundamental and hands-on support like a working premise, psychological support, and finance. Sometimes, failing to secure those supports for the forced returnees means no entry to business or reconsidering migration. Therefore, their entrepreneurial entry decisions are highly influenced by support expected than available opportunities.

Forced returnees generally worry about startup capital. So, the availability of support in this area directly affects their entrepreneurial entry decision. Often such supports are offered to curb irregular migration. Eight of the 14 forced returnees we talked to have received working premises from the government. However, limited access to the market and inflexibility in what they could do in the premises are found to be challenging for the forced returnees.

“I started this business because of support from the government, they gave us this working premise. However, this area is only for traditional clothes, and we have no option to do whatever business we want. I did not have the know-how on traditional clothes before, but since they gave me the working premise from here, I had to go for it” BETI-F.

It seems that the supports forced returnees expect is not different from specila supports for any Ethiopian small business. Forced returnees seem to be not satisfied by the current state of support due to delays, and inaccessibility of the working premises for marketing. They seem to arrive with different expectations. The premises given are often designated to some type of services or products making it difficult for the forced returnees to do businesses of their choice. For example, MENGE-F a returnee from Saudi Arabia said that though he has secured a working premise on the fourth floor to sell consumer goods, he is not happy with the location.

Due to the prolonged period of detachment and inability to visit the home country, forced returnees expect public training to help them familiarize themselves with the environment. Post-return training helped forced returnees to fill skill gaps by influencing their thinking and entrepreneurial behavior. As mentioned by almost all forced returnees, the training offered by the government and NGOs enabled them to improve their communications, marketing, business, and life skills, build their

confidence, gave them hopes they have lost, and made them think about possibilities and feeling good about themselves. To start a successful business, understanding the local business environment through re-embeddedness is important. This is achievable only by post-return supports for the forced returnees.

“The training we took at RASAIID (a local NGO) was designed to upgrade our way of thinking. One thing that I will not forget about the training is how a person can develop communication skills to interact with people. I was timid because when a guest comes to visit us, children are not allowed to talk at all. I remember this well. However, after attending the training, I have started to develop confidence and I can express my feelings. I do not refrain from expressing my views. During our childhood, even if we have a good idea, we feel ashamed and shy to share it with the people around us. Therefore, the training helped me to drop all the behaviors that I lived with for a long and I have developed good communication skills and have good interaction with people” MENGE-F.

The training contributed to enhancing forced returnees’ self-efficacy and reinvigorated them for the startup. From how they value the training it could be said that forced returnees were desperately disconnected and highly detached from the local context. Forced returnees expect support and opportunities, so they are relatively slower in business entry. Seven out of 14 interviewees explained attempts they made to update themselves on the local business environment before starting a business. DORI-F, who returned from Saudi Arabia explained:

“I have stayed for a year after return before starting this business. I have been taking training and looking for business opportunities. The year after the return was spent not on holiday, nor on taking a breath with family, but a busy year, thinking about what I should do” DORI-F.

DISCUSSION AND IMPLICATIONS

This study contributes to the gap in the literature regarding the entrepreneurial entry decision of returnees. From a comparative case study, using a mixed embeddedness approach, we observed that the entrepreneurial entry decision of returnees is a process affected by the interaction of personal and interpersonal antecedents, returnees’ simultaneous engagement, and opportunity promises at the local level. We discuss the importance of each factor and its interaction in the facilitation of returnees’ entrepreneurial entry decisions. The multidimensional embeddedness of returnees is affected by personal factors, the migration cycle, and the support provided by the NGOs and the government (Ruben et al., 2009). We highlight how the forced and voluntary returnees are different and compliment the heterogeneity of returnees. While voluntary returnees are influenced by opportunities available, forced returnees are motivated by the necessity to enter the business.

We add a new dimension to the extant literature that highly emphasizes the relevance of international networks (Wang, 2020; Lin et al., 2019), skills, and experience (Liu et al., 2010; Dai and Liu, 2009) in the happening of returnee entrepreneurship. While brain gain and brain circulation emphasize the prime importance of host acquired skills and knowledge as well as improvements in the local institutions, we found though there are fewer such improvements, returnees still opt for home business due to varied reasons like sympathy and fulfillment. Therefore, such personal factors make them engage with their home country (simultaneous engagement) and that can further be capitalized when there is a promising opportunity. Conversely, forced returnees mainly go to business due to lack of choice, and are often supported by their premigration experience and support from a third party. We provide details on this below.

Personal and Interpersonal Components and Returnee Entrepreneurship

Though the literature on the antecedents of entrepreneurship considers personal factors as an essential element in entrepreneurship (Shepherd et al., 2015), studies about returnee business tend to incline to international knowledge and networks as essential factors, mainly in technology firms (For example, Dai and Liu, 2009; Lin et al., 2016, Pruthi, 2014). Employing a mixed embeddedness perspective, we observed returnees engaging in different businesses in a different context, focusing our attention on the significant role of personal factors in influencing returnee entrepreneurial entry decisions. For the voluntary returnees, achievements during migration, childhood aspirations, and tacit

experiences help them to embark on entrepreneurial activities. Furthermore, consequences of migration like nostalgia, isolation, exploitation, and family pressure also contribute to returnee startups. Differently, forced returnees tend to regret their migration decision, and often feel failed to satisfy migration goals, and after the return, business seems to be the only viable way to make their living. This helps us to introduce an alternate perspective to returnee homogeneity and how their contribution could vary depending on capital and hope they bring home.

A successful return is a contingent upon the ability to accumulate resources from the destination country and readiness to return (Cassarino, 2004). Returnee's duration of residence and demography influence returnee business (Thomas and Inkpen, 2013). From comparing the forced and voluntary returnees, we found that duration of residence alone contributes somewhat little but should be supplemented by visiting the home country in-between- in what we refer to as simultaneous engagement. However, unlike for the voluntary returnees, this is found to be arduous for the forced returnees.

Consistent with a study from Ghana by Mayer et al., (2015), we found that, unlike technology-based firms, returnees rely highly on local networks rather than the international networks, and specifically in the Ethiopian context, bonding ties are found to play vital roles for returnee entrepreneurial entry decisions. Establishing oneself in an extended family helps returnees to succeed (Dahles, 2013). In our context, both groups of returnees tend to remain in contact with their bonding ties while overseas. This is supported by an insight from the World Bank that social ties are stronger in Africa (Russell, Jacobsen, and Stanley, 1990) and returnees mainly rely on family and kinship relations to develop business ideas at home and overcome local business challenges (Nyame-Asiamah et al., 2020).

Migration offers an opportunity to acquire multiple capitals (Akesson, 2016), and capital acquired during migration influences the nature of returnee business (e.g., Thomas and Inkpen, 2013). However, we found that this is not always true but for the voluntary returnees. Contrary to other accounts (Pruthi, 2014; Dai and Liu, 2009; Filatotchev et al., 2009), forced returnees feel that migration made them feel alien in their country upon their return. Therefore, in compliment with Dahles (2013), due to the nature of migration and host country conditions, not all returnees are endowed with multiple migration capital. However, we found that both categories of the Ethiopian returnees gained tacit capital like new skills, practices, work attitudes, and time management skills which have helped them in the entrepreneurial entry. The outcome of migration highly depends on contexts before migration, during migration and after return, thus mixed embeddedness.

Simultaneous Engagement and Returnee Entrepreneurship

The mixed embeddedness theory advocates the mix of home and host country resources for enabling migrant entrepreneurship (Kloosterman, 2010). Our findings extend the claim that not all returnees are slower in their business entry decision, because returnee business is not necessarily a separate post-return activity, but an ongoing process that requires returnees to be ambidextrous. Returnees need to be active and consider being transnational to exploit the advantage of being in both worlds (Ren and Liu, 2015). We highlight that returnee business is not a mutually exclusive process that begins separately after the return. Our findings strengthen the importance of maintaining local networks and remaining embedded in the home country (Lin, et al., 2019). In this regard, compared to the voluntary returnees, forced returnees were found to delay their business entry decisions. Since forced returnees return without preparation, abruptly, they delay in starting a venture and suffer from the lack of clarity of thoughts. Unlike the voluntary returnees, forced returnees tend to stick to what they knew before migration or copy business ideas from friends, family, or relatives.

Transnationalism facilitates returning decisions (Carling and Erdal, 2014). In line with this, from the voluntary returnees' case, we found that simultaneous engagement helped them in launching businesses before returning. Compared to the forced returnees, voluntary returnees remain engaged with their home country through frequent visits. While voluntary returnees startups benefit from transformation, modification, and home visits, conversely, forced returnees are detached from the locality, making the post-return startup attempts challenging. Therefore, the result of the comparison

indicates that simultaneous engagement is the most important ingredient in the making of returnee entrepreneurial entry decisions.

Moreover, at the meso level, through simultaneous engagement, migrants retain social relations and reduce the risk of estrangement, therefore, ease their social re-embeddedness. When migrants remain connected to their native country, the speed of their business entry may improve. Compared to the voluntary returnees, forced returnees are less engaged in transnational activities and we found no forced returnees who started a business before the return. We supplement findings by Dahles (2013) that returnees differ in their efforts to re-embed and depending on the host country. We found that for both categories, returnees interact more easily with their returnee counterparts because they easily understand each other than with locals.

Comparing the forced and voluntary returnees, for the mixed embedding process to fulfill, we indicate the importance of simultaneously engaging in both countries, perhaps in a meaningful way like home visit. By simultaneous engagement, we mean the task that an individual migrant must engage in to remain active in both worlds through a range of activities. This activity may involve interpersonal engagement and opens the way for seeking a business opportunity in the locality.

Opportunity Promise and Returnee Entrepreneurship

At the macro level, available opportunities and institutions matter for returnee business (Gruenhagen, 2019; Gruenhagen et al., 2020; Ojo, 2017). Fertile business opportunities, improved bureaucracy, and local changes facilitate returnee business. We found that irrespective of the years spent abroad, government support such as training and working premises are found to be important factors for forced returnees. Forced returnees need more hands-on support, and the voluntary returnees need more systematic support that helps them run a business. For instance, while forced returnees need a small working premise where they can run small shops, voluntary returnees are more likely to develop factories. More than 75% of the interviewed forced returnees believe that they would not have started the business without support from the government, which seems to ensure their re-embeddedness. However, voluntary returnees were more independent, and even most of them had already started operating a business before their return.

Our findings strengthen the observation by Ruben et al., (2009) that post-return supports are critical to helping returnees' re-embedded, but in our context, the re-embeddedness of voluntary returnees is facilitated by their simultaneous engagement. We found that government support and assistance are important elements for returnee startups, but the degree and nature of supports needed vary among returnees. For example, forced returnees need support such as work premises, credit, follow up and market linkages, but voluntary returnees expect functioning and responsive institutions. According to Ruben *et al.*, (2009), returnees need psychological embeddedness, to aid this, we found that forced returnees feel disadvantaged and expect support like training to overcome the burden of alienation.

IMPLICATIONS

Practical Implications

Though returnees' contribution to development is becoming a common belief, we found it largely depends on returnees' ability to make the best out of both worlds as well as opportunities at home. We provide evidence on the role of personal and interpersonal factors at the micro level, and simultaneous engagement at the meso level, as well as the opportunity promise in the host country in driving returnees to entrepreneurial activities. To facilitate returnee contribution, the primary role of simultaneous engagement should be encouraged for the migrants. In addition, the way local institutions respond to and accommodate the need of returnees matters. In the African context, it seems that there are gaps between how the government understands returnees and what returnees want. Therefore, taking advantage of the returnee diaspora requires the governments to understand returnees' interests and close collaboration between responsible agencies. Understanding returnees' motivation and offering desired supports pave the ways for Africa to benefit from its diaspora population.

Theoretical Implications

Previous returnee definition and characterization primarily assumed educated scientists and skilled people (Drori et al., 2009). However, in this study, by engaging with forced returnees who do not fit the previous definition, but still fulfill the criteria for returnee migrants, we redirect the attention to the heterogeneity of returnees. For example, forced returnees have gained tacit skills, developed entrepreneurial intentions, and improved their work attitude among others. We add that other than the international knowledge and networks, returnees' idiosyncratic conditions are important in understanding returnee entrepreneurship. The importance of simultaneous engagement has been highlighted in the findings to underline returnee business as an ongoing process that begins before returning, and perhaps sometimes before migration as in the case of forced returnees. The mixed embedding process explains sustainable returning, but the role of pre-and post-return assistance provided by different agencies also matters (Davids and Van Houte, 2008). We found that both the process and when to mix different interventions is important in promoting returnee entrepreneurship.

CONCLUSION

In this paper, relying on interviews with 11 voluntary returnees and 14 forced returnees who are engaged in various businesses in Addis Ababa, Ethiopia, we present evidence that returnee entrepreneurial entry is influenced by the interplay of conditions before, during, and after migration, manifested in personal and interpersonal factors, simultaneous engagement and opportunity promise.

We explored factors that play role in the entrepreneurial entry decision of forced and voluntary returnee entrepreneurs. Drawing on the mixed embeddedness approach, we observed that personal and interpersonal factors, simultaneous engagement, and opportunity promise interact to influence returnee business entry. The findings document evidence on the heterogeneity of returnees. Returnee entrepreneurship has been depicted as a phenomenon primarily subject to migration capital and home institutions. Returnees have been depicted as facilitators of economic growth in emerging economies (Saxenian, 2002; 2005). Nevertheless, in the process of returnees' economic benefit, personal factors like achievement during migration, and childhood aspiration and interpersonal factors like simultaneous engagement were found to be important.

Returnees' simultaneous engagement determines their propensity to become entrepreneurs. In the African context, we found that, compared to forced returnees, voluntary returnees are relatively better posited in engaging in entrepreneurial activities. We bring forward the returnee entrepreneurship literature by explaining the model for returnee entrepreneurial entry by comparing the forced and voluntary returnees.

Limitations and Future Research

We suggest future research pay particular attention to returnee heterogeneity. The result of this study should be viewed with caution for three reasons; First, we included forced returnees that have been returned mainly from the Middle Eastern Countries. Characteristically, these returnees are economic migrants who temporarily migrate to earn money. Second, we selected respondents using snowball sampling, and perhaps a large and representative sample could provide further arenas for strengthening the claims and extending our understanding. Third, the factors identified as influencing returnee entrepreneurial entry decisions are based on an abductive case study. Further conformity of the finding is required using a casual quantitative model to identify which factors indeed influence the returnee entrepreneurial entry decisions.

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GENDER STEREOTYPING, SELF-EFFICACY, AND THE INSTITUTIONAL SETTING OF FEMALE DIGITAL ENTREPRENEURIAL INTENTIONS IN THE ARAB WORLD

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ABSTRACT

This conceptual paper aims to present the role of gender stereotypes embedded in the three institutional dimensions; regulative, normative and cognitive, higher educational support, together with self-efficacy in shaping female digital entrepreneurial intentions. The main proposition of the paper is to suggest that

the three institutional dimensions and higher education support influence the self-efficacy of females, and thus has an impact on their digital entrepreneurship intentions. Secondary research was done on the case of the Arab World, which suffers from low representation of female entrepreneurs; let alone digital female entrepreneurship.

Keywords: Female Entrepreneurship, Entrepreneurial Intentions, Self-Efficacy, Gender Stereotypes, Digital Entrepreneurship.

INTRODUCTION

Entrepreneurial ventures are crucial for creating employment opportunities, providing wider solutions for consumers' problems, and increasing competitiveness and overall well-being of the economy (Kuschel et al., 2020; Buseintz et al., 2000; Zahra, 1999). Furthermore, new ways of collaboration, new ways of deploying resources, new designs for products and services, and the development of open standards and shared technologies are all results of new digital technologies; social media, big data and cloud solutions (Markus & Loebecke, 2013). The opportunities that come with digital technologies have massive potential to create ventures with substantial business value and dramatic reduction in the costs associated with new businesses (Zhao et al., 2015).

Digital technologies have reduced the costs of doing business, increased market opportunities and eased the problems associated with business creation, which enabled more entrepreneurial opportunities (Nambisan, 2017). However, there is a consistent gender gap in the field of entrepreneurship, as the number of male entrepreneurs exceeds the number of female entrepreneurs especially in the fields of technology entrepreneurship (Kuschel et al., 2020). The literature on entrepreneurship and the practice of entrepreneurship is overwhelmingly masculine, where it is consistently described as a man's domain, and historical descriptions of an entrepreneur have been quite masculine too (Bird & Brush, 2002). Schumpeter (1934) has described the entrepreneur as "captain of industry", Herbert & Link (1988) also referred to the entrepreneur as the "Key Man", and even practitioner literature continuously refers to Bill Gates and Donald Trump as examples of successful entrepreneurs (Bird & Brush, 2002). According to Schumpeter (1934), innovation is what drives an economy forward into economic growth, thus, this gender gap has a negative effect on the economy, productivity and overall well-being (Kuschel et al., 2020). Characteristics of power, prestige and authority, that are linked to entrepreneurship, are roles perceived to be more appropriate for the masculine stereotype (Heilman, 2012).

Moreover, previous research has stated that a major factor in the decision to start a business is the individual's perceived self-efficacy (Wilson et al., 2007; Shane et al., 2003; Chen et al., 1998). Research demonstrated that females have low self-efficacy if compared to male counterparts (Wilson et al., 2007; Clement, 1987), in occupations that are traditionally believed to be more appropriate for males according to occupational typing (Hackett & Betz, 1981).

The role of institutions in fostering or discouraging entrepreneurship, and female entrepreneurship in specific, have been discussed widely in the literature (c.f. Bosma et al., 2018; Busenitz et al., 2000; Baumol, 1990). In countries where property rights are weak, women have a more difficult time accessing financial resources and capital (Brush, 2006). Furthermore, in other developing countries; specifically the Arab world, women entrepreneurs secure capital for their ventures using their own savings because they are constrained by stereotypical views of women in business roles that inhibit them from venture capital funding (Goby & Erogul, 2011). Moreover, it was found that in the Arab world, the countries with the biggest differences between men and women in digital skills, are also the countries with the highest levels of gender inequality. On average, women are 10% less likely to own a mobile phone than men, which is almost 184 million women that don't have a mobile phone or have access to technology (Aminova, 2019). Moreover, women do not have the same opportunities in accessing education as men in Africa, for example, in Somalia, only 13% of women are literate. In Yemen and Mauritania, some women are prohibited from seeking higher education in campuses far from them home without their families because it is a traditional taboo (Aminova, 2019).

This paper aims to suggest a framework to explain why women may opt out of seeking digital entrepreneurial careers. This is done through secondary research that found that gender stereotypes embedded in societal institutions could affect females' entrepreneurial self-efficacy and discourage

them from pursuing entrepreneurial careers. The paper is structured as follows. First, entrepreneurial intentions are discussed; with special focus on the concept of self-efficacy. The concept of female entrepreneurship is thoroughly discussed, and linked to the concept of gender stereotyping in entrepreneurship. An institutional perspective to gender stereotyping is discussed, followed by exemplifying these institutions in the Arab World. A conceptual model follows, ending with a conclusion and future research.

ENTREPRENEURIAL INTENTIONS

Personality traits and attitudes used to be typically thought of as predictors of behavior (Kautonen et al., 2013). However, research has stated that intentions are much better predictors of behaviors than attitudes (Ajzen, 1987). The Theory of Planned Behavior (TPB) posits that intentions show how much effort individuals are willing to exert to perform a specific behavior, and has been defined as a person's readiness to perform a given behavior (Ajzen, 1991). These intentions remain as a behavioral disposition until the right time and opportunity arise to transform this intention into an action (Ngugi et al., 2012). Furthermore, intention is viewed as the immediate antecedent of actual behavior (Ajzen, 1987). It is evident that entrepreneurial activity represents planned or intentional behavior (Krueger et al., 2000), and thus, intentionality is a major characteristic of newly founded organizations (Krueger & Carsrud, 1993).

The Theory of Planned Behavior suggests that individual's beliefs about their attitudes, behavioral control, and social norms influence intentions, which then impact behavior (Ajzen, 1991). *Attitudes* can be defined as learned predispositions to behave in a consistent way favorably or unfavorably toward a certain object (Ostrom, 1969). According to Schiffman & Kanuk (2015), attitudes are influenced by three factors; the first factor is the expected value or outcome from this action, which may include wealth, exercising own authority, and others. The second factor is situational variables, which are exogenous or outside influences, such as employment status or informational cues from the environment. The third one is demographic or personal characteristics, including education, age, marital status, family background, and others.

Moreover, it is widely agreed upon that the social environment can heavily influence people's intentions and actions (Kautonen et al., 2013; Krueger & Carsrud, 1993). This can be especially captured in the concept of social norms. *Social norms* refer to what is considered as acceptable behavior within a certain group or in a given society (Fishbein & Ajzen, 2011). Subjective norms in the TPB are defined as the opinions of the individual's social groups regarding the person's engagement with a particular behavior. Accordingly, the individual's intent is affected by his/her desirability to comply with these norms (Kautonen et al., 2013). This indicates that norms are viewed as the perceived social pressure on the individual to perform (or not perform) the given behavior (Fishbein & Ajzen, 2011).

Lastly, *perceived behavioral control* is the person's perception of how easy or difficult it is to perform the behavior (Krueger et al., 2000), which coincides with Bandura's self-efficacy theory (Bandura, 2001). Self-efficacy is an individual's belief in their own abilities to perform a certain task, and the perception of one's competence to handle certain situations (Bandura, 1991). Thus, self-efficacy is a direct contributor to people's motivations to carry out certain tasks and behaviors (Bandura, 2001). In the same wavelength, perceived behavioral control is defined as how much individuals have faith in themselves that they have the capability to perform a specific behavior (Chen et al., 1998). It takes into account that information is available, as well as the skills and opportunities needed to perform the behavior (Fishbein & Ajzen, 2011), in addition to the feasibility of carrying out the behavior (Shapero & Sokol, 1982). It is worth to mention that perceived behavioral control can directly predict behaviors (Ajzen, 1991).

SOCIAL COGNITIVE THEORY & SELF-EFFICACY

As mentioned earlier, perceived behavioral control is a core determinant in predicting behaviors in general (Ajzen, 1991) and achievement (Schunk, 1989), and entrepreneurial behavior in specific (Ben

Youssef et al., 2021; Chen et al., 1998). We also mentioned that the concept of self-efficacy is similar to perceived behavior control in shaping people's motivations to carry out certain tasks and behaviors (Bandura, 2001). The concept of self-efficacy has been cited widely in the entrepreneurship literature as a central contributor to entrepreneurship behavior (c.f. Sanchez et al., 2011; Shane et al., 2003; Chen et al., 1998). Self-efficacy is built on the social cognitive theory, which adopts an agentic perspective; meaning that individuals can intentionally influence their behavior and the circumstances around them (Bandura, 2005). Social cognitive theory suggests that learning occurs in a social context, which provides a psychological framework for the studying of entrepreneurship and entrepreneurial intentions (Hmieleski & Baron, 2009). According to social cognitive theory, individuals have their own beliefs about their own abilities to accomplish specific goals (Wilson et al., 2007) using their own set of skills; despite having to overcome obstacles and troubles at times (Bandura, 1999). It also states that individuals have the power to turn their goals into action as a reflection of a sense of personal agency, which is the foundation of human agency (Bandura, 1989). Social cognitive theory also analyzes the relationship individuals have with their environment, which includes culture, role models, work experience and education, as either supportive or obstructive to their goals and undertakings (Bandura, 1991; Bandura, 1989).

In a situation with a business opportunity, entrepreneurs with a high self-efficacy perceive the situation as a profitable business opportunity and initiate action more than those with low self-efficacy, who will perceive the same situation as costly and risky (Sanchez et al, 2011; Vecchio, 2003). We can then deduce that self-efficacy explains why some individuals choose to become entrepreneurs, while other individuals actually avoid becoming entrepreneurs; not because the later do not possess the required skills or abilities, but because they do not believe they possess those abilities (Sanchez et al, 2011). According to Bandura (1991), self-efficacy is affected and shaped by four factors; namely: mastery experiences, vicarious experiences or modeling, social persuasion, and the individual's own judgement of their physiological state. Entrepreneurial education may contribute to the formation of the previously mentioned factors (Turker & Selcuk, 2009; Wilson et al, 2007), coupled with the integration of digital technologies for entrepreneurial learning (Ben Youssef et al, 2021).

Entrepreneurship education help in the formation of mastery experiences or enactive mastery experiences (Wilson et al, 2007), which are considered by Bandura (1997) to be the most influential source of self-efficacy, as it represents the individual's own authentic success to deal with a specific situation or task and (Palmer, 2006). Mastery experiences can also be simply put as "learning by doing", where an individual's level of self-efficacy increases if they believe they have past experiences in performing a certain task (Cox et al., 2002). Studies have shown that students learn a great deal from mastery experiences, where students have higher belief in their capabilities when they learn and practice the material studies (Hutchison et al., 2006; Zhao et al., 2005). In the context of entrepreneurial education, teaching students how to write feasibility studies or business plans can prepare them to have their own firm in the future, and thus shape their mastery experience (Shinnar et al., 2014; Wilson et al, 2007) and hence affect their self-efficacy positively (Hutchison et al, 2006).

In addition, vicarious experiences or modeling could be created through entrepreneurial education (Wilson et al., 2007), which are the situations in which individuals assess their capabilities relative to others that have modeled the desired behavior (Palmer, 2006; Bandura, 1997). Entrepreneurial education can utilize modeling through inviting guest speakers and analyzing case studies, which can lead to higher levels of self-efficacy (Shinnar et al., 2014; Cox et al, 2002). In some studies, students have reported that they learned through behavioral modeling when they seek help and when they work in teams (Hutchison et al, 2006).

Lastly, self-efficacy can be enhanced by social persuasion (Bandura, 1991), which can be in the form of positive encouragement and feedback given by instructors and professors in academic settings, where individuals are told by others that they have the necessary capabilities to perform the task successfully (Palmer, 2006). In addition to the verbal judgment of others that can have influences on self-efficacy, students also view grades as forms of social persuasion as they believe that grades and feedback on in-class discussions are the personal judgment of their instructors and professors on their abilities (Shinnar et al., 2014; Hutchison et al, 2006). Thus, it has been stated that career related

education can enhance the person's willingness to pursue a certain career through the role of self-efficacy (Wilson et al, 2007).

Female Entrepreneurial Intentions

Historical descriptions of entrepreneurs and the ideal forms of new organizations, even though they are accepted as generic, they are decidedly masculine. Entrepreneurship has been described as a “man's” domain, where Schumpeter described the entrepreneur as the “captain of the industry” (Schumpeter, 1934), while Herbert & Link (1988) described them as the “key man”. McClelland (1961) defined the entrepreneur as the *man* that organizes the firm. Entrepreneurship in particular has been defined as a “man's” domain (Bird & Brush, 2002). Practitioner literature also refers to male examples of successful entrepreneurs such as Bill Gates and Henry Ford (Bird & Brush, 2002). On the other hand, women entrepreneurship is a phenomenon that is gaining growing interest around the world, and thus has attracted the interest of researchers who have developed massive literature on the phenomenon (c.f. Austin & Nauta, 2015; Bird & Brush, 2002; Brush, 1991). Female entrepreneurship contributes significantly to the creation of jobs and the growth and development of every economy (Bird & Brush, 2002), and it has also been regarded as a source of entrepreneurial diversity (Yunis et al., 2019).

However, women express fewer intentions to start a business than men, which is mirrored in their low rates of participation in the workforce (Loscocco & Bird, 2012; Minniti, 2010). For example, according to Austin & Nauta (2015), 20% of men in the US reported having an intention to start a business in the upcoming three years, while less than 8% of women reported an intention. This likelihood is not due to inadequate entrepreneurial training, but because women reported lower entrepreneurial self-efficacy, and they less likely know entrepreneurs or consider them as role models (Krueger et al, 2000).

Females perceive lower self-efficacy in areas of business ownership and entrepreneurship, which are historically considered - in their view- to be more fitted for male incumbents (Wilson et al., 2009; Wilson et al, 2007). Studies concluded that women have lower perceptions of self-efficacy that deters them from pursuing entrepreneurial careers while men see themselves in a more optimistic light (Langowitz & Minniti, 2007; Zhao et al., 2005; Chen et al, 1998; Scherer et al., 1990). Moreover, several authors have argued that women simply do not act on the opportunities for entrepreneurship that come their way due to their lower self confidence in comparison to men (Wilson et al., 2007; Austin & Nauta, 2015). Similarly, research on adult male and female entrepreneurs has concluded that women are more likely than men to choose careers that limit their potential due to lacking self-confidence in their skills, knowledge, and experiences (Rocha & Van Praag, 2020; Bandura, 1991), while multiple studies have found that men do have higher entrepreneurial intentions than women (Wilson et al., 2007; Zhao et al., 2005).

An Institutional Perspective to Gender Stereotyping in Entrepreneurship

The intention to be an entrepreneur is highly influenced by the environment in which entrepreneurial activity takes place. Institutional support can either motivate or hinder individuals from pursuing entrepreneurship (Ben Youssef et al, 2021; Busenitz et al., 2000). Multiple institutional theorists have argued that some of the incentives that motivate entrepreneurs to start their own businesses are embedded in institutional arrangements (Hwang & Powell, 2005). Institutional theory helps explain how societal institutions have a role in shaping what behaviors are allowed and pursued (Bruton et al, 2010; Bruton & Ahlstorm, 2002).

Institutions refer to the formal set of rules, agreements, informal shared interactions and accepted assumptions that should be followed by organizations and individuals alike (Bruton et al, 2010). They are derived from societal and cultural practices and rules that have conformance powers and pressures, such as; regulatory structures, governmental agencies, laws, courts, certain professions and scripts (DiMaggio & Powell, 1983). Furthermore, the patterns of beliefs, practices, values, assumptions and rules that determine what is meaningful and legitimate in a given field are defined as institutional logics, which are the subsystems of institutions within a society (Thornton & Ocasio, 2008). Seven ideal types of institutional logics were identified; namely: the family, religion, the state, the market, the profession, corporations and the community (Su et al, 2017). According to Scott (2013), institutions are composed

of three pillars; regulative, normative and cultural-cognitive pillars. Those three pillars along with their resources and activities are what provide stability and meaning to social life. Scott (2013) argues that institutions are durable through their ability to predict behavior. However, institutional power is what gives institutions their authority, not the behaviors they enact.

Normative Institutions and Female Entrepreneurship

According to Scott (2013), the normative pillar focuses on normative rules that prescribe, evaluate and are obligatory in social life, which include values and norms. The normative systems define the goals and objectives as well as the ways to pursue or achieve them. Defining roles in the society is the origin of the appropriate goals and activities, where the violation of these norms and roles lead to feelings of shame or disgrace; unlike the violation of rules and regulations associated with the regulative pillar that leads to serious repercussions. When it comes to gender roles, women grew up disadvantaged in comparison to men due to the prejudices that are targeted towards them throughout history, especially in leadership positions (Eagly, 2007; Phelps, 1972). The majority of societies celebrate certain characteristics that have been perceived as masculine and shame other characteristics that are perceived as feminine (Ahl, 2006; Connell & Messerschmidt, 2005).

The general expectations held regarding members of specific social groups are part of the norms and values of a specific society (Ellemers, 2018). Gender stereotypes – as part of normative systems (Ahl, 2006) - are general expectations and shared beliefs regarding the attributes and characteristics of men and women (Heilman, 2012; Gupta et al., 2009). Anticipatory socialization (Macionis, 2011) is a normative belief system that caring for the family is feminine while going out to work and making money is masculine (Potuchek, 1992). This normative institution prevails through socialization and enforcement from parents, schools, peers, and even through mass media (Gupta et al, 2009). Females develop the feminine identity by observing their mothers, and males develop the masculine identity by observing their fathers (Franke et al., 1997; Chodrow, 1978).

Social role theory assumes that differences between the two genders in social behavior is mainly due to the tendency of people to behave in ways that are consistent with their social roles (Eagly & Wood, 1991). These social roles are constrained by the socioeconomic development and ecological forces in the society (Eagly & Wood, 2016), as well as the physical or biological attributes of men and women (Ellemers, 2018). Historically, men were assigned tasks that required speed, strength and the ability to stay away from home for a long period of time, while women were responsible for child bearing and taking care of the home and the family (Harrison & Lynch, 2005). Based on these social role expectations, men are expected to fulfill masculine roles that reflect agentic qualities, while women are expected to fulfill feminine roles that reflect communal qualities (Eagly & Steffen, 1984). Communal attributes expected of women include; friendliness, selflessness, concern for others and emotional expression, while agentic qualities for men include; independence, mastery, being assertive and instrumentally competent (Eagly & Wood, 1991).

The experiences an individual go through their lifetime due to those gender differences shape the person's skills and attitudes (Cheryan, 2012; Eagly & Wood, 1991). Those stereotypical characteristics associated with men and women not only influence their behavior on a day-to-day basis, but also influence their choice of occupation, as some occupations are labeled masculine and others are labeled feminine (Gupta et al, 2009). This tends to affect people's intentions and aspirations towards seeking a certain job (Barth et al., 2015). When certain jobs are labeled as masculine or feminine, these are considered gender role stereotyping (Gupta et al, 2009). According to Liben, Bigler & Krogh (2001), women are segregated in certain sectors of employment that are called Pink Collar jobs, which come with lower prestige and lower pay relative to male counterparts. A study done on college students has reported that students tend to rate occupations that are viewed as masculine and is dominated by males (e.g. physician, lawyer, architect) as higher in education requirements while they rated occupations that are dominated by females (e.g. teacher, model, flight attendant) as lower in educational requirements (Crawley, 2014). Moreover, another study conducted concluded that female-dominated jobs have lower wages than male-dominated jobs. Meaning that jobs with higher occupational prestige, if positions are filled by women, they will receive lower wages than men (Kleinjans et al., 2017).

The normative pillar highly influences who can or cannot become an entrepreneur (Sine & David, 2010), and prescribes what roles and careers are considered appropriate for males vs. females (Baughn et al, 2006). The business world is considered hostile and predatory, and thus business is perceived to be no place for women (Gupta et al, 2009; Gupta et al., 2008). Entrepreneurs are described to be bold, aggressive and risk takers, which are all traits often given to males not females (Ahl, 2003). Even when women do become business leaders and managers, they are seen as inferior and less competent than men (Marlow, 2002), and they are not able to raise and develop the needed financial and human capital to start their businesses (Coleman et al., 2019; Gatewood et al., 2002). These factors in turn have an impact on the nature of the venture owned by female entrepreneurs. For Example, the manufacturing industry is heavily dominated by male owners while female owners are concentrated in the service and retail sectors perceived as less complex (Loscocco & Robinson, 1991). Another study stated that women tend to aim for labor-intensive sectors such as trade and services rather than capital-intensive sectors such as manufacturing (Pinkovetskaia et al., 2019).

The masculine stereotyping of entrepreneurship can actually deter women from pursuing the career of entrepreneurship (Wang et al, 2019; Ahl & Marlow, 2012; Kyro, 2009; Bird & Brush, 2002). Studies have shown that gender-specific problems, such as the complexity of balancing family and business, gender stereotypes, discrimination, and lack of trust from clients and business partners, hinder female entrepreneurship (Bui et al, 2018; Santos et al., 2016; Hamilton, 2013). In addition, females believe that there is lack of other female role models in the entrepreneurship scene, which make them unable to pursue career opportunities in entrepreneurship (Almobaireek & Manolova, 2012). It is evident that women are still underrepresented in elite leadership positions; due to the inability of female workers to stay for long hours as their male counterparts (Thebaud, 2015).

Cognitive Institutions and Female Entrepreneurship

It is argued that when individuals believe there is a lack of fit between their skills and the stereotypes associated with a certain task, they tend to negatively evaluate their ability to perform that task (Gupta et al., 2009). Naturally, those negative evaluations might make the likelihood of performing this task slim (Heilman, 1983). The cultural - cognitive aspect of institutions refers to the shared meanings that makeup social reality and the frames through which people within the society make sense of it. In simpler terms, what people do is a product of their understanding of their environment (Li et al. 2019). The cultural - cognitive pillar emphasizes the internal interpretive processes that are shaped according to external cultural frameworks (Scott, 2013). This dimension also refers to the embedded ideologies, logics or cognitive frames in social settings and are treated as taken-for-granted assumptions on how things are done (Sine & David, 2010). The cultural - cognitive pillar of institutions is powerful as it has an impact on the habits and preferences of customers and affects investor's evaluation of risk (Sine & David, 2010; Busenitz et al. 2000). Because of the inherit stereotypes regarding female entrepreneurs (Brush et al. 2019, Edelman et al. 2017), investors and customers perceive ventures owned by female entrepreneurs as risky and prone to failure (Balachandra et al. 2019).

While the main pillar of in the entrepreneurial process is opportunity identification (Stroila, 2020; Krueger, 2000), opportunity perception has a different effect on women than men (Wilson et al, 2007). Wu, Li and Zhang (2019) argue that women are unable to recognize and exploit opportunities due to the negative perceptions they have about themselves as a result of gender roles and stereotypes embedded within societies. Women are perceived to be at a disadvantage due to the entrepreneurial role being masculinized, which makes it easier for men to gain access to funding in comparison to women (Alsos & Ljunggren, 2017; Bird and Brush, 2002). Moreover, societal and patriarchal norms have a large effect on women's business and managerial skills (Bui et al., 2018). Recent studies showed that due to the low representation of females in top management positions in patriarchal societies and the expectation that women belong at home not at the workplace, females usually lack the necessary business and managerial skills to run their own business (Bui et al, 2018). In addition, women have reported to feel deficiencies in adequate financial and managerial skills that are necessary for the startup of a business (Hentschel et al., 2019).

One may assume that women lacking the necessary skills is actually due to their inability to access formal education. In fact, some studies found evidence that the percentage of female entrepreneurs receiving higher formal education is higher compared to men (c.f. Despotovic` et al, 2018; Taylor &

Newcomer, 2005). However, the lack of skills stem from the segregation of females to fill nontechnical and non-managerial jobs (Meyer et al, 2020). Women are concentrated in lower managerial levels, with hurdles to reach middle and upper management positions (Remington & Kitterlin-Lynch, 2018; Loscocco & Robinson, 1991). More studies found that female entrepreneurs have less experience in employee management, industry navigation and overall less start-up experience (Ali, 2018; Bird, 2015).

Regulative Institutions and Female Entrepreneurship

We have established that institutions have the ability to constrain and regularize behavior (Busenitz et al., 2000). In addition to normative and cognitive institutions, regulatory institutions have the capacity to enforce rules, monitor if others conform to those rules and create the necessary sanctions, rewards and punishments to influence future behavior (Scott, 2013). The regulative dimension includes the laws and administrative guidelines that makeup the rules governing market transactions (Ben Youssef et al., 2021). Certain regulatory regimes may have the ability to make entrepreneurship easier or more difficult (Busenitz et al., 2000; Sine & David, 2010). Sine, Haveman and Tolbert (2005) found that support from courts, regulatory bodies, and governmental laws increase the entry rates of firms. It is also reported that support from powerful actors in the environment support the formation of new organizations (Sine & David, 2010).

The government has a role in fostering entrepreneurship by facilitating entrepreneurial efforts to acquire the resources necessary for start-up formation (Busenitz et al., 2000). Government sponsored programs allow entrepreneurs to leverage resources and gain privilege from governmental policies that are in favor of entrepreneurs (Rodinelli & Kasarada, 1992). For example, the US government assists new enterprises that are employing new technologies (Keller & Block, 2013). Moreover, European governments aid small businesses in the export and trade development industry by offering grants and financial assistance (Reynolds, 1997).

However, women face gender-specific restrictions on venture formation (Giménez & Calabrò, 2018). For example, women in some countries face mobility restrictions which can negatively affect venture creation and venture performance (Estrin & Mickiewicz, 2011). Therefore, governments should assist women in their venture creation process by creating policies and programs that could enhance the venture creation process for women (Yousafzai et al., 2015). Moreover, if the government does assist females in raising financial capital through business incubators, they are usually channeled to necessity-based entrepreneurship not opportunity-based entrepreneurship (Bui et al, 2018).

Female digital Entrepreneurship in the Arab World

The representation of women in startup businesses remains extremely low, and this is the case in industrialized nations as well as developing nations (Thebaud, 2015; Ali, 2018). Females face greater challenges in the fields of science and technology entrepreneurship (Ughetto et al, 2020; Dy et al., 2018). Empirical evidence suggests that females are more likely to have lower expectations of themselves in comparison with males in occupations related to science, engineering and applied mathematics (Barth et al., 2015; Eccles, 1994). It is perceived that jobs associated with science, math and engineering are considered masculine and jobs associated with art, nursing and serving are considered feminine (Nosek, Banaji & Greenwald, 2002 & Heilman, 2012). For example, in the UK, female undergraduates in the fields of engineering, technology and computer science were only 18% in 2015-2016 and only 11% of professional engineers in 2017 (Strachan et al, 2018). There are misconceptions regarding women not having the necessary capabilities to succeed as engineers or as scientists (Shen, 2013; Reskin & McBrier, 2000). These perceptions are rooted deep in females themselves through cultural and institutional beliefs, which negatively affect their self-confidence in their belief in their mathematical abilities (Beilock et al, 2017).

There is an inherit stereotype throughout children's learning journey - including parents' and teachers' perception, and mass media – that a scientist is a male figure, much more than as a female figure, which contributes to their association that science is a masculine domain (Miller et al., 2018). Even though this image might change over time, the fact is that females are still underrepresented in science and technology related professions (Barth et al., 2015). A study conducted in Africa showed

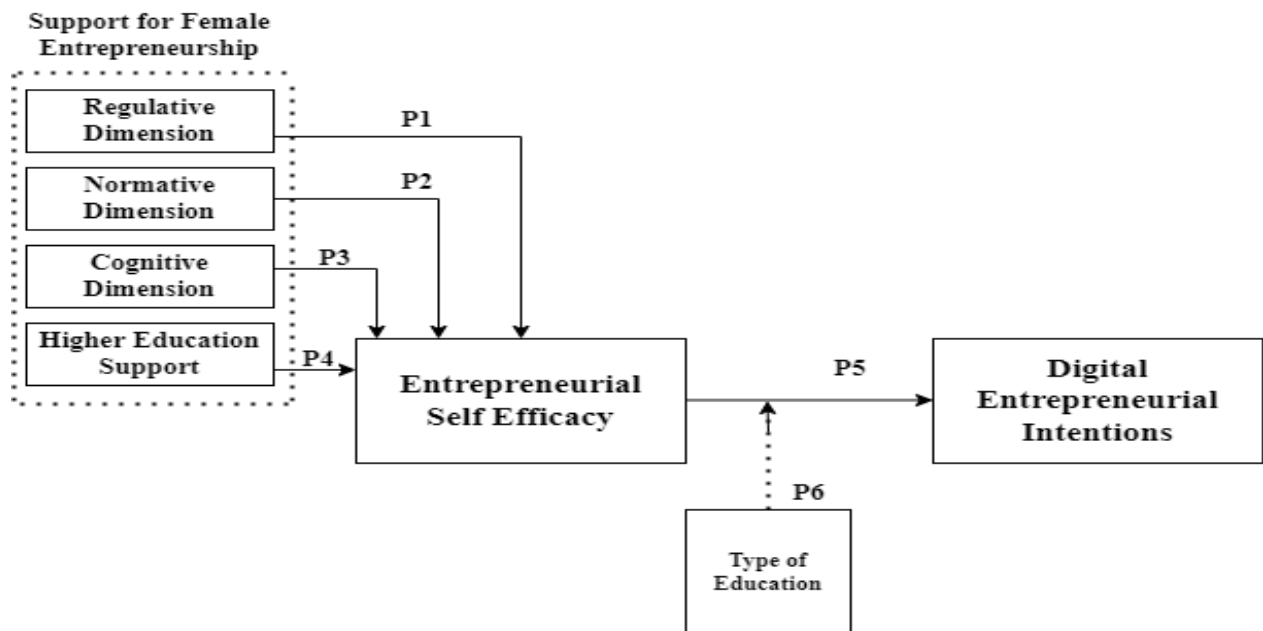
that children drew a man when asked to draw a scientist, which showed that students associate being a scientist with being a male (Meyer et al, 2018).

The normative and cognitive institutions in the Arab World hinder female entrepreneurship; especially female digital or technology entrepreneurship. According to the World Bank report (2018), women choose to opt out of employment in the Arab World because of their perception, as well as the males in their life, that work decreases chances of marriage. Thus, either they look for less demanding jobs, or they exit the entire workforce. Women entrepreneurs feel obligated by social norms to commit to their family and home responsibilities, as well as the cultural beliefs that diminish the economic role of women (ILO, 2016). According to Hattab (2012), Egypt actually has the highest gender gap between the sexes in entrepreneurship in the MENA region. Additionally, women in Egypt deal with a multitude of gender stereotypes due to the social norms and traditional masculine values that are prevalent in Egypt (World Bank, 2018). Family approval and social media influence the perception of females in the Arab World regarding entrepreneurial opportunities (GEM MENA, 2017), and acquisition of digital skills (Ben Youssef et al, 2021).

As for the regulative pillar, the MENA region scores 3.3 on the GEM bureaucracy scale which has the potential to deter many potential entrepreneurs from pursuing an entrepreneurial career (GEM MENA, 2017). For example, Egypt scored 3.27 in the taxes and bureaucracy category that measures the affordability of taxes and fees for the establishment of new businesses as well as the ease of managing the rules and regulations put on the new business (GEM, 2020). Many entrepreneurs have stated that some of the key factors constraining entrepreneurship in Egypt include bureaucracy, redundancy and inefficiency as well as corruption (GEM Egypt, 2018). Even though some MENA governments has initiated multiple initiatives to support innovation-led enterprises through national strategies and expanding technology infrastructure, there are few specific policies or initiatives created to integrate into female-owned technology or digital enterprises or enhance the digital skills of women entrepreneurs in these countries (ILO, 2016).

According to World Bank report (2018), for example, Egypt has scored 2 on the labor laws and regulations that enable the advancement of women entrepreneurs in Egypt. Egypt has also received a score of 3 in the business registration and licensing regulations and procedures for women entrepreneurs. It's also evident that women entrepreneurship development as a national policy is not a priority where it received a low score of 2. According to ILO report (2016), males in Egypt reported that the business registration process is bureaucratic; however, female entrepreneurs; especially in rural areas, mentioned that the registration process is a bigger burden for them due to mobility issues (ILO, 2016). According to GEM Egypt (2018), the MENA region as a whole has one of the widest gender gaps in early-stage entrepreneurship in the world. For example, in Egypt, women's participation in entrepreneurship is low. Women's participation in early stage entrepreneurship was 7.5% in 2017 compared to 18.8% for males. As for established businesses, women owned businesses are 2.1% compared to 9.1% men.

Figure 1: Proposed conceptual Framework:



This research suggests that gender stereotypes have a significant role in fostering (or hindering) the self-efficacy of females regarding their digital entrepreneurial intentions. This research has identified gender stereotypes to have a significant influence on females' self-efficacy in order to shape their entrepreneurial intentions, and potentially digital entrepreneurship as well. Referring back to the literature, self-efficacy is the individual's belief in their ability to perform certain tasks (Bandura, 2001). It has been reported that women perceive themselves to have lower self-efficacy regarding tasks that are socially perceived to be more fit for men and for masculine traits (Wilson et al, 2007; Eccles, 1994; Heilman, 1983). Thus, self-efficacy beliefs are influenced by the gender socialization process that individuals go through throughout their lives (Bandura et al, 2001). Moreover, according to Li, Wang & Long (2019), institutions can act as barriers to entrepreneurial intentions according to the cognitive processes of the entrepreneur. If the entrepreneur perceived the environment to be supportive (or obstructive) to entrepreneurship, they will act accordingly.

Therefore, this paper proposes the following propositions:

Since the regulative dimension of institutions includes the laws and administrative guidelines that makeup the rules governing market transactions, certain regulatory regimes may have the ability to make entrepreneurship easier or more difficult (Sine & David, 2010). However, when it comes to the Arab world, the MENA region scores 3.3 on the GEM bureaucracy scale which has the potential to deter many potential entrepreneurs from pursuing an entrepreneurial career (GEM MENA, 2017). Even though some MENA governments has initiated multiple initiatives to support innovation-led enterprises through national strategies and expanding technology infrastructure, there are few specific policies or initiatives created to integrate female-owned technology or digital enterprises or enhance the digital skills of women entrepreneurs in these countries (ILO, 2016). Based on this; the first proposition is as follows.

P1: The regulative dimension negatively influences entrepreneurial self-efficacy of females.

Moreover, normative systems define the goals and objectives as well as the ways to pursue or achieve them. Some of those values and norms are applicable to specific members of the society (Scott, 2013). In the context of entrepreneurship, the success of entrepreneurial ventures is highly influenced by the widely held norms and values of a certain society. The normative pillar also highly influences who can or cannot become an entrepreneur (Sine & David, 2010). In the Arab world, it has been reported that women face more difficulties in the pursuit of entrepreneurship in comparison to men (Goby & Eroglu, 2011). Some of those difficulties are: the high levels of domestic responsibilities, the low levels

of education, the low representation of female role models in the business sector, few business oriented network in their social circles, lack of availability of capital and resources, low status in society, and a culture that is dominated by men which affects their belief in female abilities (GEM MENA, 2017). This indicates that the social and cultural environment in the MENA region is not highly sufficient for the pursuit of entrepreneurship. Therefore, the second proposition is as follows:

P2: The normative dimension negatively influences entrepreneurial self-efficacy of females.

The cognitive dimension of institutions states that what people do is a by-product of their understanding of the environment around them, and that their interpretive processes are shaped according the frameworks of their external culture (Sine & David, 2010). However, in developing economies, many women resort to self-employment as a last resort after not being able to find suitable employment opportunities in the public and private sector (Minniti, 2010). This leads many women to resort to necessity-based entrepreneurship rather than opportunity based entrepreneurship. Women view entrepreneurial roles as an inappropriate job or they view that they do not have the necessary skills to successfully run a business. Some females still worry about the lack of social and cultural support that they may face even if they believe in their skills and qualifications (Almobaireek & Manolova, 2012; Gupta et al., 2009). Therefore the third proposition is as follows:

P3: The cognitive dimension negatively influences entrepreneurial self-efficacy of females.

Education has been known to be a source of enhancing self-efficacy (Bandura, 1992). Self-efficacy can be enhanced through four different techniques that can be used in the education process (Wilson et al, 2007). Those techniques are: mastery experiences, behavioral modelling or vicarious experiences, social persuasion and physiological cues (Bandura, 1997). Entrepreneurial education may contribute to the formation of the previously mentioned factors (Wilson et al, 2007; Turker & Selcuk, 2009), coupled with the integration of digital technologies for entrepreneurial learning in higher education institutes (Ben Youssef et al, 2021). Therefore, this paper suggests the following proposition:

P4: Higher education support positively influences entrepreneurial self-efficacy.

Moreover, self-efficacy has shown to be a direct contributor to people's motivations to carry out certain tasks (Bandura, 2001). Self-efficacy beliefs are major contributors to an individual's entrepreneurial intentions (Shane et al, 2003). When a situation with a business opportunity arises, entrepreneurs with a high self-efficacy perceive the situation as a profitable business opportunity and initiate action more than those with low entrepreneurial self-efficacy who perceive the same situation as a situation with high costs and great risks (Vecchio, 2003). Therefore, this research assumes that when individuals perceive themselves to be capable of carrying out entrepreneurial tasks, their entrepreneurial intention would be higher. Therefore, this research has the assumption that individuals with high self-efficacy will have higher digital entrepreneurial intentions.

P5: High self-efficacy positively influences digital entrepreneurial intentions

Given that research has shown that there's a positive relationship between self-efficacy and entrepreneurial intentions (Zhao et al, 2005), as well as the evidence of the positive influence of education on self-efficacy (Hutchison et al, 2006; Cox et al., 2002), this research deduces that the relationship between self-efficacy and digital entrepreneurial intentions is positively moderated by type of education.

P6: Type of education positively moderates the relationship between entrepreneurial self-efficacy and digital entrepreneurial intentions.

CONCLUSION

This paper has attempted to present the case of digital female entrepreneurship in the context of institutional theory and social cognitive theory. It is evident that female entrepreneurship is negatively affected by regulative, normative, and cognitive institutions, coupled with education support. This is more obvious in Arab countries with already low scores in entrepreneurship support; let alone female entrepreneurship support. While regulative institutions act as hurdles for female entrepreneurship in some countries, gender stereotyping – embedded in cognitive and normative institutions – are more problematic and negatively affect self-efficacy of female entrepreneurs. Together with the lack of digital skills and gender stereotyping of females in science and technology fields, this paper has shown the challenges females face pursuing opportunities in digital and technology entrepreneurship. Further empirical research is needed to test the conceptual model; especially in the Arab World with lesser contributions in the field of female entrepreneurship in general, and technology and digital female entrepreneurship in specific.

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TOP MANAGER GENDER AND FIRM INVOLVEMENT IN CORRUPTION: THE MEDIATING ROLE OF BRIBERY REQUEST

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ABSTRACT

This article examines whether a firm's involvement in corruption is associated with the gender of the firm's top manager. Using the World Bank Enterprise Survey data from 99 developing and emerging countries over the years 2007-2018, we show that firms with a woman top manager are less likely to get involved in corruption. We also find that bribery request from bribery recipients mediates the relationship. Our results are robust to sensitivity analysis, alternative estimation techniques, and sub-sample analyses. The findings suggest that policy measures aimed at promoting women to managerial positions in firms have an effect beyond creating equality across gender, and combat corruption at the firm level.

Keywords: Firm level corruption, Top manager gender, Developing countries, Social-role theory

INTRODUCTION

The issue of corruption and its impact on economic development has received a lot of attention from researchers and policy makers (Chaudhuri, 2012) showing contradictory results. In what is called the 'grease the wheel' perspective (Mendoza, Lim, & Lopez, 2015; Leff, 1964), corruption is argued to be useful in alleviating distortions caused by institutions that are not functioning properly, thereby reduce firms' operating and transaction costs (Iriyama, Kishore, & Talukdar, 2016) and improve their efficiency (Méon & Weill, 2010). Alternatively, the 'sand the wheel' perspective hypothesizes that corruption is detrimental to economic development and has a negative effect on firms (Mendoza et al., 2015). This is because it forces firms to make some form of payment as a bribery tax (Waldemar, 2012) and allocate the resources they could have used for investment and expansion (Mendoza et al., 2015; Van Vu et al., 2018) for corruption.

In both arguments, we contend, those firms who pay a bribe or engage in corruption will get "their things done" by incurring extra costs as a result of the bribes they pay, while those who do not pay will struggle to compete and survive in the long run. In other words, whether corruption greases or sands the wheel, it will have negative externalities on firms operating in the same market and business environment, but not directly involved in the transaction (Esarey & Chirillo, 2013). According to de Jong, Tu, and van Ees (2012), the externalities could occur at different levels. First, bribe payers receive favorable treatments that will help them win projects and hence increase their revenues, which will damage the competition. Second, corrupt firms may also be able to obtain loans and finance that could be used for expansion and investment purposes. This in turn will have a detrimental effect on firms' access to credit (Wellalage, Locke, & Samujh, 2019) by increasing the cost of financing and risk premiums (Wu, 2009). Third, this corrupt behavior will breed more corruption, which thereby reduce the chance for small firms to compete even by providing corruption and making the cost of doing business higher (McKinney & Moore, 2008). In fact, research shows that corruption may increase the cost of doing business by up to 5% (Wu, 2009).

To lessen these negative externalities and improve the playing field, identifying the determinants of corruption is crucial (Sharma & Mitra, 2015). However, the literature largely focuses

on finding explanations at the national level (Chen, Yaşar, & Rejesuset, 2008; Gorsira, Denkers, & Huisman, 2018; Tonoyan, Strohmeier, Habib, & Perlitz, 2010). Consequently, there is relatively little research at the micro or firm level (Chen et al., 2008; Francisco & Pontara, 2007; de Jong et al., 2012). Even more scarce are studies investigating the link between top manager's characteristics and firm's involvement in corruption, which is surprising given that participation of firms in corruption is fundamentally driven by the executive, and consequently individual, decisions (Gorsira et al., 2018). This paper attempts to fill this gap by investigating whether gender of the top manager and firm involvement in corruption are related. Most importantly, we identify one of the mechanisms through which top manager gender affects the likelihood of corruption, which has not been addressed in prior studies.

We chose to focus on gender for at least two main reasons. First, a considerable body of research has found systematic differences in behavioral characteristics across gender (Dollar, Fisman, & Gatti, 2001; Wood & Eagly, 2012) which may affect firm level outcomes. For instance, Palvia, Vähämaa, and Vähämaa (2020) find that banks with high real estate exposure led by female CEOs have lower default risk. Similarly, Dadanlar and Abebe (2020) show the likelihood of discrimination lawsuit is lower for firms led by female CEOs. Second, research dealing with the organizational benefits of appointing women to management roles has gained traction in recent literature (Glass & Cook, 2016; Perryman, Fernando, & Tripathy, 2020). In line with this, women managers were found to be more fair, transparent, and ethical than their men counterparts (Ingersoll, Glass, Cook, & Olsen, 2019). Thus, if firms with women top managers are found to be more ethical, and hence less likely to engage in corruption, requiring more policy interventions could be justified to encourage women to accept managerial positions in order to reduce corruption at both firm and macro levels.

To this end, we draw on social role theory (Eagly, 1987; Eagly & Wood, 2016; Wood & Eagly, 2012) and hypothesized that firms with women top managers are less likely to engage in corruption. Based on data from 99 countries, we find that this is indeed the case. Interestingly, we also find that this relationship is mediated by bribery request – whether firms have received a request to pay a bribe to get things done. We also conducted a robustness check using different specification, sensitivity analysis, alternative estimation techniques, as well as sub-sample analyses, and the results are consistent.

This paper makes several contributions to the literature. First, it adds to the growing literature that attempts to investigate corruption from the supply side (de Jong et al., 2012; Tonoyan et al., 2010). Although corruption requires actors from both the demand and supply sides (Cuervo-Cazurra, 2006), and a thorough investigation of corruption requires an analysis of the bribe payers and takers (Tonoyan et al., 2010), the literature emphasizes the demand side by focusing on the bribe takers. Second, this paper complements the growing stream of literature dealing with firm-level determinants of corruption by investigating the link between gender and the likelihood of firms engaging in corruption, which is not well understood or studied in the literature (Frank, Lambsdorff, & Boehm, 2011). This study further identifies bribery request as an important variable mediating the relationship between top manager's gender and firm's likelihood of engaging in corruption. This is a novel insight to the literature on firm level corruption. Third, the study provides empirical evidence from firms in more than 99 developing and emerging countries across four continents. The few studies that attempted to link gender with corruption were conducted on either a single country or not more than a handful of countries (Trentinin & Koparanova, 2013).

The rest of the paper is structured as follows. Section two provides a review of the related literature and develops hypotheses for testing. Section three describes the set of variables as well as the method we used to conduct the study. Section four provides our findings, followed by our discussion and conclusions in section five.

THEORY AND HYPOTHESES DEVELOPMENT

The hypothesis that women are less likely to be involved in corruption has been posed since the early 2000s (Dollar et al., 2001; Swamy, Knack, Lee, & Azfar, 2001; Goetz, 2007). This led some supranational organizations such as the World Bank to emphasize the importance of high-level women's involvement in public office to reduce the level of corruption in their policy statements (Goetz, 2007).

In line with this, the empirical studies conducted to test this hypothesis largely focus on women's involvement at governmental and country corruption levels (Esarey & Chirillo, 2013). For instance, Dollar et al. (2001) found that greater representation of women in parliament is associated with low levels of corruption in a state. According to Dollar et al. (2001), women are less likely to sacrifice the common good for personal gain, and their presence in the upper hierarchy of the bureaucratic structure influence the behavior of their men colleagues. Similarly, Swamy et al. (2001) found that corruption is less severe in countries where women hold a larger share of parliamentary seats as well as higher positions in government. By using a regional data on governance in Europe, Agerberg (2014) has also shown that a larger share of women politicians might have a positive effect on governance quality and reduce corruption. These studies demonstrate that the higher the representation of women in government bureaucracies, the lower the level of corruption.

Although there are not many studies dealing with corruption and gender on the supply side and at the firm level, the few studies conducted suggest that gender could indeed be an important indicator. For instance, by using a survey of enterprise owners and managers in Georgia, Swamy et al. (2001) demonstrated that firms owned or managed by men are significantly more likely to be involved in bribe-giving. Similarly, Trentini and Koparanova (2013) studied 5,471 firms across 31 countries in Europe and Asia, and found that women entrepreneurs have a significantly lower propensity to engage in corruption than their men counterparts. According to social role theory, this could be because of the contrasting distribution of men and women into social roles (Eagly, 1987; Eagly, Wood, & Diekmann, 2000; Eagly & Wood, 2016; Wood & Eagly, 2010).

Social role theory

Social role theory (SRT) provides a possible explanation for sex differences and similarities in social behavior (Wood & Eagly, 2010; Eagly & Wood, 2016). According to SRT, behavioral differences and similarities among men and women is primarily the result of the distribution of social roles within society (Eagly et al., 2000). The division of labor is further supported by the behavior of men and women through socialization and the formation of gender roles, which becomes a consensually shared expectation within the society (Eagly & Wood, 2016). Because of the different roles they have occupied throughout history, most men have developed agentic traits while most women have developed communal traits (Schneider & Bos, 2019; Eagly & Wood, 2012, 2016). Therefore, SRT posits that women show more compassion, care for others, and have more awareness of social responsibility than men (Liao, Zhang, & Wang, 2019; Carli & Eagly, 2016).

According to Eagly and Wood (2016, 2012), three mechanisms may explain the process through which gender roles influence people's behavior. The first mechanism is biological. It involves hormonal changes that may act to facilitate feminine and masculine behaviors. For instance, higher levels of testosterone correlate with dominance behaviors, which entails risk-taking, dominance, and aggression, which may harm others (Booth, Granger, Mazur, & Kivlighan, 2006). The second mechanism involves the personal adaptation of gender norms where the norms become standards for judging one's own behavior. Individuals comply with the norms to the extent that they have integrated gender roles into their self-concepts. "Women internalize a self-concept that involves behaving communally; they identify communal behavior as desirable for themselves and experience greater self-esteem when their behavior is in alignment with communal ideals" (Schneider & Bos, 2019, p. 189).

The third mechanism involves behavioral confirmation of gender roles where people respond to the expectations of others (Eagly & Wood, 2016). Expectancy related to typical roles fosters behaviors congruent with those typical roles through expectancy confirmation processes (Eagly et al., 2000). Deviation from the expected communal behavior ideal may carry social sanctions (Anglin et al., 2018) and costs for the individuals (Schneider & Bos, 2019), including dislike and social exclusion (Eagly & Wood, 2016). Such costs are even greater for women when they show agentic behavior that violates the norms of how they are expected to behave (Schneider & Bos, 2019). Therefore, the negative and positive reactions from others would make following the expected gender roles easier than disregarding them (Eagly & Wood, 2016). These role expectations thus guide behavior and decision making in most situations (Pradhan, Jena, & Mohapatra, 2018).

In line with the prediction of SRT, empirical studies have shown that women leaders and managers indeed behave differently as compared to their men counterparts. For instance, Torgler and Valev (2010) find that women are more averse to corruption and tax evasion as compared to their men

counterparts. Liao et al. (2019) argue that women directors are more inclined to implement environmental innovation. Women leaders have also been found to be more long-term oriented and focused on stakeholders, even at the expense of short-term profits (Matsa & Miller, 2013; Silverman, 2003; Brammer, Millington, & Pavelin, 2007).

Prior studies on communal qualities and moral reasoning have also demonstrated that women tend to be more caring for others and socially oriented than men (Francoeur, Labelle, Balti, & Bouzaidi, 2019). Extending the findings in other social science fields that have demonstrated women's inclination towards altruistic behavior, Hechavarria, Ingram, Justo, and Terjesen (2012) argue and find that women entrepreneurs are more likely to emphasize social objectives and social value creation in their entrepreneurial endeavors. Similarly, Eddlestone and Powell (2008) have also shown that men business owners prefer making communal contributions to the society to a lesser extent as compared to women business owners. Combining the predictions of SRT on gender roles and the fact that corruption is an antisocial behavior benefiting not societal wellbeing but rather the few actors involved, we would predict businesses run by women managers are less likely to get involved in corruption. Consequently, we hypothesize:

Hypothesis 1. Firms with a woman top manager are less likely to engage in corruption.

Role of Bribery Request

Some studies question the view that universally women have a higher moral threshold and hence are more averse to corruption. For instance, Esarey and Chirillo (2013) find that women's disapproval of corruption is higher than men's disapproval only in countries with democratic institutions. This suggests that the relationship between gender and corruption could possibly be mediated by other factors. Drawing on SRT, we would predict that women could be less likely to engage in corruption because they are less likely to receive a bribery request as compared to their men counterparts.

One of the mechanisms identified in SRT through which gender roles influence behavior is the expectations of others. Eagly and Wood (2012) argue that because of the cost related to it, individuals may not exhibit a behavior deviating from what is considered as a norm for their gender. Thus, women are less likely to engage in corruption, because it is not a communal behavior. More importantly, women are often expected to act in a more selfless and collectively oriented manner than men (Anglin et al., 2018; Wood & Eagly, 2012). If others expect that women do not engage in non-communal behavior, we can assume that such 'others' are less likely to ask them to behave in a certain way from the beginning. In fact, SRT suggests that beliefs about groups in society have developed because the experiences of group members in their typical role shapes and defines the attributes that perceivers associate with the group (Gupta et al., 2019). Thus, we would argue that women are less likely to be invited to engage in corruption activities by corruption recipients because of the perception the latter may have about women's behavior, which is communal and more selfless. In line with this, research has shown that the perception of bureaucrats is indeed an important factor in determining whether a firm will be required or expected to pay a bribe and the amount of that bribe (Francisco & Pontara, 2007). By using data from the International Crime Victim Survey, Mocan (2004) has also shown that men are more likely to be asked for a bribe than women.

Furthermore, women may not also be part of the networks that facilitate corruption because of the stereotypical role they play in society. Because men, historically, have had more opportunity and better access to social networks through their participation in labor markets (Chowdhury, Desai, & Audretsch, 2018), women managers and entrepreneurs tend to have a lower degree of social capital compared to their men counterparts (Neumeyer, Santos, Caetano, & Kalbfleisch, 2019). As a result, women are often excluded from accessing networks dominated by men, such as politics (Neumeyer et al., 2019) through which corruption flows (Esarey & Chirillo, 2013). Interestingly, Lutter (2015) argues that even in situations where women have managed to get into a certain social network, they will still be disadvantaged if the network is cohesive. Assuming that corruption networks are quite cohesive and closed, we would argue that women managers and leaders may not have access to these networks, and even if they join, they will not be actively involved, as "it is social intimacy that creates the environment that promotes corruption" (Tanzi, 1998, p. 4). In fact, Mocan (2008) has also argued that because men are likely to have more contact with government officials in civil and business life, as well as a higher propensity for illicit activity or tolerance of it, they are more likely to receive a bribe request. Therefore, we argue that the likelihood of women managers becoming involved in corruption could partly depend

on whether they have been asked to become involved in corruption and make a payment. Of course, we assume here that corruption transactions are mostly initiated from the demand side, i.e., the corruption takers. Consequently, we posit the following two hypotheses:

Hypothesis 2a. Firms with a woman top manager are less likely to receive a bribery request.

Hypothesis 2b. The relationship between top manager gender and firm likelihood to engage in corruption is mediated by bribery request.

METHOD

Data Source and Definition of Variables

We obtained the data used for this study from the World Bank Enterprise Survey (WBES). A representative sample of firms from each country's non-agricultural formal private economy were drawn using stratified random sampling by taking into account firm size, business sector, and geographic region. The survey stratifies firm size using a composite measure of the number of permanent and temporary employees as follows: small (5-19), medium (20-99), and large (100+). Similarly, it further stratifies by sector, such as manufacturing and service. In larger economies, further disaggregated stratification of firm sector is undertaken using the number of employees, value added and type of establishment. However, firms that belong to a public utility, government service, health care, or financial services are excluded from the survey. The geographic region strata select regions within a country where the largest production or economic activity is carried out. The survey covers over 140 countries using uniform methodology and hence the indicators can be compared across countries and/or over the years 2006 to 2020. The collected data includes a range of indicators: firm characteristics, firm performance, firm workforce, regulation and taxes, corruption, crime, informality, gender, finance, infrastructure, innovation and technology, and the biggest obstacles firms face.

In addition to this, we obtained our institutional variables from the Heritage Foundation. The data set constructs indices for the following areas: property rights, government integrity, judicial effectiveness, tax burden, government spending, fiscal health, business freedom, labor freedom, monetary freedom, investment freedom, trade freedom, financial freedom, and overall score. The indices cover over 180 countries from 1995 to 2019. To capture the prevalence of corruption practices across countries, we collected corruption perception index from Transparency International. We also collected GDP per capita from the World Bank World Development Indicators (WDI) online. When we merge the datasets, our final sample for the analysis covers 62,351 firms from 99 countries for the period of 2007 to 2018¹.

Dependent Variables

Bribery payment is derived from the survey item in the WBES “*It is said that establishments are sometimes required to make gifts or informal payments to public officials to ‘get things done’ with regard to customs, taxes, licenses, regulations, services, etc. On average, what percentage of total annual sales, or estimated total annual value, do establishments like this one pay in informal payments or gifts to public officials for this purpose?*” Hence, our dependent variable (*bribery payment*) is a dummy variable with value 1 if the answer to the above question is greater than 0, and 0 otherwise. Prior studies that investigate corruption with the same dataset (Birhanu, Gambardella, & Valentini, 2016; Webster & Piesse, 2018; Wellalage et al., 2019) have used this measurement.

Bribery request measures if a firm has received a bribery request to get things done. The indicator is constructed from six questions in which firms were asked whether an informal gift or payment is requested or expected when they apply for an/a (1) electrical connection, (2) water connection, (3) import license, (4) operating license, (5) construction related permit, or (6) inspections, or meetings with tax officials. Hence, it is a dummy variable with 1 if firms have received at least one bribery request and 0 otherwise.

¹ Please see distribution of our sample by country and year in Table 1 in the appendix

Independent Variable

Woman top manager. To evaluate whether top manager gender affects the likelihood of firms engaging in corruption, we include the top manager's gender in the regression equation. It is a dummy variable that takes 1 if the top manager of the firm is woman and 0 otherwise. In this study, we assume that the behavioral differences between women and men are reflected in the decisions made by the top manager (Palvia et al. 2020) and should therefore influence the firms' decision to engage in corruption.

Control Variables

Following prior literature on corruption and firm characteristics (e.g., de Jong et al, 2012; Francisco and Pontara, 2007; Mendoza et al., 2015; Ramdani & van Witteloostuijn, 2012; Wu, 2009) we employ a number of control variables such as firm age, firm size, export propensity, financial constraint, manager's work experience, ownership structure, and domestic ownership. We also controlled country level variables such as GDP per capita and legal system quality. To capture differences in the institutional context across countries that may affect the relationship between top manager's gender and firm involvement in corruption, we included *business freedom index*. The index ranges from 1 to 100 where 100 denotes stronger degree of business freedom. Furthermore, we included *corruption perception index* from transparency international to capture the disparity in the prevalence of corruption across countries. This index ranges from 10 to 100, where 100 represents lowest level of corruption. Finally, we control for potential year, industry, and country specific heterogeneities with year fixed-effects, sector fixed-effects, and country fixed-effects respectively. Table 1 presents the definitions and measurements of control variables.

Table 1: Definition and measurement of control variables included in the model

Explanatory variables	Definition	Measurement
Business freedom index	It is a weighted score from 10 elements related to procedures of starting, running, and closing a business.	0 to 100
Log of GDP per Capita	Logarithm of Current GDP per capita in USD	Logarithm of the amount
Legal system quality	Perception of the judiciary, based on the answer to the following question: Does the firm strongly agree or tend to agree that the court system is fair, impartial, and uncorrupt?	1 = yes; 0 = otherwise
Financial constraint	Firms that did not apply for a loan for the following reasons: complex application procedure, unfavorable interest rates, very high collateral requirement, insufficient size of loan and maturity, perception it would not be approved, and other reasons.	1 = yes; 0 = otherwise
Export propensity	When at least 10 percent of the firm's annual sales is derived from direct export	1 = yes; 0 = otherwise
Top Manager's Experience	Top manager's years of experience working in the firm's sector.	Logarithm of Years
Firm Size	Logarithm of number of employees	Logarithm of the amount
Corruption Perception Index	It is a composite index about corruption across countries	0 to 100
Ownership Structure		
Open share	Firm legal status is open-shareholding	1 = yes; 0 = otherwise
Closed share	Firm legal status is closed-shareholding	1 = yes; 0 = otherwise
Sole proprietorship	Firm legal status is sole proprietorship	1 = yes; 0 = otherwise
Partnership	Firm legal status is Partnership	1 = yes; 0 = otherwise
Limited Partnership	Firm legal status is Limited partnership	1 = yes; 0 = otherwise
Domestic	Firm is domestically owned	1 = yes; 0 = otherwise
Firm Age	Number of years since the firm was established.	Logarithm of years
Sector	Three sector classifications of the firm: manufacturing, retail and other services.	1 = yes; 0 = otherwise for each sector

MODEL

In order to test our hypotheses, we estimate three models: two models with *bribery payment* as a dependent variable and the other with *bribery request* as a dependent variable. In model (1), we estimate *bribery payment* on *woman top manager* and other control variables with the following equation:

$$bribery\ payment_i = \alpha + \beta_1 woman\ top\ manager_i + X_i' \gamma_i + \varepsilon_i \quad (1)$$

Where, X_i' is a vector of control variables, and γ_i represents the associated coefficients. Since we are interested to see the mediating role of *bribery request*, we also estimate *bribery request* dummy as dependent variable over *woman top manager* and control variables.

$$bribery\ request_i = \omega + \theta_1 woman\ top\ manager_i + X_i' \sigma_i + \varphi_i \quad (2)$$

We then augment equation (1) with our mediating variable, *bribery request*.

$$bribery\ payment_i = \mu + \pi_1 woman\ top\ manager_i + \pi_2 bribery\ request_i + X_i' \rho_i + \epsilon_i \quad (3)$$

We estimate all the three equations with Logistic regression.

To test Hypothesis 2b, we employ non-linear mediation analysis (Imai, Keele, & Tingley 2010a; Imai, Keele, & Yamamoto, 2010b; Imai, Keele, Tingley, & Yamamoto, 2011). We undertook the analysis using a user written package, *ldecomp*, on STATA (Buis, 2010). This is because our dependent variable as well as our mediating variables are binary and hence marginal effects are not constant — they are dependent on the value of covariates used in the estimation. Therefore, calculating the mediation effects by taking the product of coefficients, as it is the case in linear regression, no longer works.

In the non-linear regression, the causal mediation effect is calculated as:

$$\delta_i(t) = Y_i(t, M_i(1)) - Y_i(t, M_i(0)) \quad (4)$$

for each unit of analysis i and Treatment status 0 and 1, where δ_i , Y_i and M_i refer to causal mediation effect, outcome variable and mediating variable respectively. The causal mediation effect is the change in the outcome variable as a result of change in the mediator from the value that would be realized under no treatment or control condition, $M_i(0)$, to what would be observed under the treatment condition, $M_i(1)$, while the status of treatment is hold to be constant at t . Furthermore, we can also calculate the direct effect of the treatment as:

$$\varsigma_i(t) = Y_i(1, M_i(t)) - Y_i(0, M_i(t)) \quad (5)$$

for each unit of analysis i and Treatment status 0 and 1.

RESULTS

Descriptive statistics and regression results

Table 2 presents the mean, standard deviation, minimum and maximum of the variables used for the study. In our sample, 9,626 firms (15.44 percent of the total) have a *woman top manager*, 8,762 firms (14.05 percent) made a *bribery payment*, and 8,104 (13.00 percent) firms received a *bribery request*. Among firms that made bribery payment, the depth of bribery, which is measured as a percentage of bribery payment to their annual sales, ranges from 0.001 to 100 percent with a mean of 7.94 percent of annual sales. However, the mean of the depth of bribery in the total sample (which includes all firms irrespective of their involvement in bribery) is 1.1 percent of their total annual sales. Our institutional proxy variables, *business freedom index* and *corruption perception index* have a mean of 57.75 and 34 respectively.

Table 2: Summary statistics of the variables

Variable	Obs.	Mean	Std. Dev.	Min	Max
Bribery Payment	62,351	0.14	0.35	0	1
Bribery request	62,351	0.13	0.34	0	1
Woman Top Manger	62,351	0.15	0.36	0	1
Business Freedom	62,351	57.75	13.66	28.3	93.50
Log of GDP per capita	62,351	7.95	0.94	5.50	9.72
Legal System Quality	62,351	0.44	0.50	0	1
Financial Constraint	62,351	0.29	0.46	0	1
Export Propensity	62,351	0.14	0.34	0	1
Corruption Perception Index	62,351	34.11	10.38	11	78
Top Manger's Experience	62,351	2.74	0.67	0	4.11
Firm size	62,351	3.43	1.35	0	12.03
Domestic	62,351	0.93	0.25	0	1
Firm Age	62,351	2.66	0.79	0	5.23

Table 3 shows the correlation matrix of the main variables used in our analysis. *Bribery payment* is correlated positively with *bribery request* and negatively with *woman top manager*. Similarly, the correlation between *bribery request* and other control variables is in line with the theoretically expected sign.

Table 3: Correlation matrix of the variables

	(1)	(2)	(3)	(4)	(5)	(6)	(8)
1. Bribery Payment	1						
2. Bribery Request	0.379***	1					
3. Woman Top Manger	-0.004	-0.020***	1				
4. Business Freedom	-0.022***	-0.074***	0.053***	1			
5. Log of GDP per capita	-0.105***	-0.153***	0.056***	0.462***	1		
6. Legal System Quality	-0.089***	-0.076***	-0.011***	-0.093***	-0.049***	1	
7. Export Propensity	0.025***	0.022***	-0.018***	0.049***	0.059***	0.019***	1
8. Corruption Perception Index	-0.178***	-0.170***	-0.008**	0.228***	0.455***	0.109***	0.069***
9. Top Manger's Experience	-0.030***	-0.027***	-0.065***	0.153***	0.158***	-0.059***	0.063***
10. Firm Size	0.003	0.042***	-0.083***	-0.007*	0.054***	0.053***	0.307***
11. Firm Age	-0.021***	-0.021***	-0.038***	0.006	0.079***	-0.014***	0.097***

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4 shows the result from the Logistic regressions for model (1), (2) and (3). In model (1), we estimate equation (1) — *bribery payment* on *woman top manager* and control variables. The coefficient for *woman top manager* is negative and significant ($\beta = -0.095$, $p < 0.05$) indicating that firms with a woman top manager are less likely to make bribery payment. The result supports our Hypothesis 1.

Model (2) estimates our mediating variable, *bribery request*, on *woman top manager* and control variables. The coefficient for *woman top manager* is negative and significant ($\beta = -0.079$, $p < 0.01$). It shows that firms with *woman top manager* are less likely to receive *bribery request*. The result supports our Hypothesis 2a.

Table 4: Regression Result

	Bribery Payment	Bribery request	Bribery Payment
	(1)	(2)	(3)
Woman Top Manger	-0.095** (0.038)	-0.079** (0.038)	-0.086** (0.040)
Bribery request			1.921*** (0.032)
Business Freedom Index	-0.041*** (0.008)	-0.023*** (0.008)	-0.045*** (0.009)
Log of GDP per capita	-2.683*** (0.577)	-1.327*** (0.485)	-2.261*** (0.581)
Legal system quality	-0.417*** (0.029)	-0.461*** (0.028)	-0.302*** (0.031)
Financial Constraint	0.037 (0.031)	0.156*** (0.029)	-0.008 (0.032)
Export Propensity	0.209*** (0.040)	0.133*** (0.039)	0.184*** (0.042)
Corruption Perception Index	-0.071*** (0.011)	-0.039*** (0.011)	-0.061*** (0.012)
Top Manger's Experience	-0.011 (0.023)	0.060*** (0.022)	-0.030 (0.024)
Firm Size	0.025** (0.012)	0.151*** (0.011)	-0.024* (0.013)
Ownership structure			
Open share	0.072 (0.123)	-0.081 (0.117)	0.113 (0.129)
Closed share	0.100 (0.113)	0.102 (0.104)	0.079 (0.118)
Sole proprietorship	0.004 (0.112)	-0.029 (0.103)	0.023 (0.117)
Partnership	0.043 (0.118)	0.195* (0.108)	-0.021 (0.124)
Limited partnership	0.151 (0.117)	0.114 (0.107)	0.147 (0.122)
Domestic	0.264*** (0.056)	0.162*** (0.054)	0.210*** (0.058)
Firm Age	0.038* (0.020)	-0.064*** (0.020)	0.064*** (0.021)
Constant	22.145*** (3.682)	10.559*** (3.081)	18.679*** (3.703)

Sector	YES	YES	YES
Year Fixed Effect	YES	YES	YES
Country fixed effect	YES	YES	YES
Log-Likelihood	-19,725.02	-21,072.11	-17,959.25
Number of observations	62,351	62,351	62,351
Chi ²	8,181.909	5,217.949	9,945.899
Pseudo R ²	0.221	0.125	0.290

Standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Model (3) augments model (1) with our mediating variable, *bribery request*, to check if it mediates the relationship between *bribery payment* and *woman top manager*. The coefficient for bribery request is positive and significant ($\beta = 1.921$, $p < 0.01$) whereas the coefficient for *woman top manager* is negative but lower in absolute value terms than what we get in model (1) without the mediating variable as a regressor ($\beta = -0.086$, $p < 0.05$). Although these coefficients suggest that bribery request indeed plays a mediating role, they cannot be interpreted directly because calculating the mediation effect by taking the product of coefficients as it is the case in linear regression no longer works in non-linear regressions (Buis, 2010; Imai et al., 2010a). Hence, we carried out non-linear mediation analysis using equation (4) and (5).

Table 5 shows the average indirect effect (Average Causal Mediation Effect), the average direct effect and the total effect of the observed coefficients. The coefficient for direct effect is negative and significant ($\beta = -0.079$, $p < 0.05$). Similarly, the coefficient for indirect effect is negative and significant ($\beta = -0.055$, $p < 0.01$) but smaller than the direct effect. The sum of the direct and indirect effects gives the total effect. This shows that the size of the indirect effect is about 41 percent of the total effect, indicating significant mediation by *bribery request*. Hence, these results give empirical support to our Hypothesis 2b. Table 6 shows the same mediation analysis results with observed odd ratios.

Table 5: Mediation Analysis: observed coefficient

	Observed coefficient	Bootstrap std. err.	Normal-based [95% Conf. Interval]	
Average indirect effect	-0.0548***	0.0108	-0.0759	-0.0337
Average direct effect	-0.0788**	0.0372	-0.1518	-0.0059
Total effect	-0.1336***	0.0391	-0.2102	-0.0571

Bootstrap replications: 5207

Table 6: Mediation Analysis: observed odd ratio

	Observed Odd ratio	Bootstrap std. err.	Normal-based [95% Conf. Interval]	
Average Indirect effect	0.9467***	0.0100	0.9273	0.9665
Average direct effect	0.9242**	0.0344	0.8592	0.9941
Total effect	0.8749***	0.0340	0.8108	0.9441

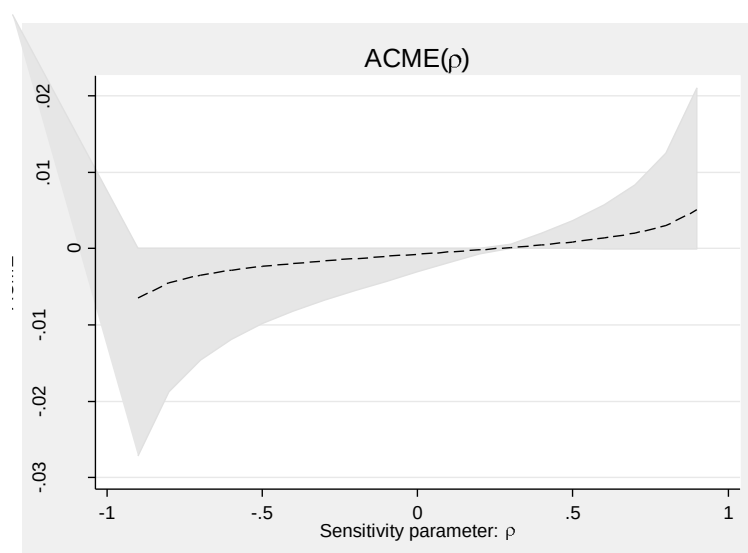
Bootstrap replications: 5180

Robustness tests

We undertook robustness analysis to ensure that our main results hold for sensitivity analysis, different specifications, and sub-samples. First, to check whether the Sequential Ignorability (SI) assumption is violated or not, we carried out sensitivity analysis. The SI assumption — the treatment and mediator are exogenous and that no omitted variables are confounding the mediation effect — is

needed for identification in mediation analysis models (Imai et al., 2010a, 2010b; Tingley et al., 2014). With the sensitivity analysis, we can see to what degree the key identifying assumption must be violated for the conclusions obtained in the mediation analysis to be reversed. It is based on an estimation of a sensitivity parameter ρ —a correlation between the error terms of the mediator and the outcome models (Imai et al., 2010a, 2010b; Tingley et al., 2014). A large value of ρ indicates existence of strong confounding between the mediator and outcome variable and hence violation of the SI assumption. For sensitivity analysis, it is possible to approximate using linear probability modeling for binary outcome and mediating variables (Tingley et al. 2014; Vaznyte, Andries & Demeulemeester, 2021). Figure 1 plots the estimated Average Causal Mediation Effect (ACME) of the *bribery request* mediator against differencing values of sensitivity parameter ρ . As it can be seen, the ACME equals zero when ρ is 0.3. It indicates that our main conclusion about the average mediation effect is robust and can be causally interpreted.

Figure 1: Average causal mediation effect as a function of degree of violation of SI assumption



Second, we conducted matched sample analysis to ensure firms that have a woman top manager are comparable with firms that do not have a woman top manager. We use propensity score matching and our treatment variable is *woman top manager*. The important feature of propensity score matching for our case is that it accounts for any endogenous selection based on observable variables. Propensity score matching is calculated using *probit* model by including institutional and firm characteristics determinants of woman top manager. The matching is undertaken by the user written package, *psmatch2* on STATA with one-to-one matching by dropping 1 percent of the treatment observations at which the *pscore* density of the control observations is the lowest. The matched sample includes 19,060 (of which 9,530 firms have a woman top manager and 9,530 firms do not have a woman top manager). However, the final regression sample, owing to collinearity with country fixed effect, further reduced to 18,933 with 9,463 firms that do not have a woman top manager and 9,470 firms with a woman top manager. Table 7 depicts the regression results of the matched sample, which is consistent with our main findings.

Table 7: Regression results with matched sample

	Bribery Payment	Bribery request	Bribery Payment
	(1)	(2)	(3)
Woman Top Manger	-0.098** (0.048)	-0.079* (0.048)	-0.084* (0.051)
Bribery request			2.034*** (0.061)

Business Freedom Index	0.007 (0.015)	-0.009 (0.014)	0.001 (0.016)
Log of GDP per capita	-2.437* (1.307)	-2.659*** (0.952)	-1.934 (1.356)
Legal system quality	-0.302*** (0.053)	-0.502*** (0.054)	-0.157*** (0.057)
Financial Constraint	0.008 (0.057)	0.191*** (0.054)	-0.054 (0.060)
Export Propensity	0.359*** (0.073)	0.210*** (0.075)	0.305*** (0.078)
Corruption Perception Index	-0.089*** (0.020)	-0.039* (0.021)	-0.076*** (0.021)
Top Manger's Experience	0.039 (0.040)	0.073* (0.039)	0.018 (0.042)
Firm Size	0.049** (0.023)	0.211*** (0.022)	-0.021 (0.025)
Ownership Structure			
Open share	0.370 (0.242)	0.219 (0.240)	0.353 (0.246)
Closed share	0.359 (0.220)	0.351 (0.214)	0.308 (0.218)
Sole proprietorship	0.165 (0.219)	0.175 (0.214)	0.140 (0.219)
Partnership	0.046 (0.235)	0.258 (0.228)	-0.016 (0.236)
Limited partnership	0.364 (0.226)	0.207 (0.220)	0.354 (0.226)
Domestic	0.234** (0.105)	0.200* (0.107)	0.156 (0.110)
Firm Age	0.019 (0.038)	0.008 (0.037)	0.009 (0.040)
Constant	17.463** (8.656)	17.416*** (6.112)	13.859 (8.997)
Sector	YES	YES	YES
Year Fixed Effect	YES	YES	YES
Country fixed effect	YES	YES	YES
Log-Likelihood	-5,892.24	-6,049.66	-5,337.67
Number of observations	18,933	18,924	18,933
Chi ²	2,599.171	1,547.613	3,138.160
Pseudo R ²	0.250	0.133	0.321

Standard errors in parentheses *** p < 0.01, ** p < 0.05, * p < 0.1.

Third, there may be a potential concern of endogeneity in our results because prior research suggests that woman top managers may not be assigned randomly to firms (De Cabo, Gimeno & Nieto, 2012). In order to address this concern, we adopt two stage least square instrumental variable regression. We used fitted probabilities of *woman top manager* as an instrument for a potential endogenous binary variable, *woman top manager*, as Wooldridge (2010: see p. 903–953) suggests. In addition to control variables, we added Women Business and the Law Index (WBL index) from the World Bank and proportion of permanent full-time workers that are female to fit *woman top manager* using *probit* model. The Women Business and the Law Index quantifies discriminatory laws by gender as a measure of legal gender disparity across countries. Angrist and Pischke (2008) suggest the use of 2SLS for Limited Dependent Variables with endogenous regressors as the IV method captures the average treatment effect regardless of whether the dependent variable is binary, non-negative or continuous. Hence, we apply 2SLS with fitted probabilities of *woman top manager* as an instrument. Table 8 depicts the results of the IV regressions. As it can be seen in the table, the F-statistics of exclusion restriction of the instrument from the first stage meets the minimum requirement and Shea's partial R^2 of the instrument explains most of the variance in the model, which affirms the validity of our instrument. The results from 2SLS IV approach are consistent with our main findings.

Table 8: Two stage Least Square Instrumental Variable regression (second stage results)

	Bribery payment	Bribery request
	(1)	(2)
Woman Top Manger	-0.047*** (0.013)	-0.063*** (0.013)
Business Freedom Index	-0.006*** (0.001)	-0.002** (0.001)
Log of GDP per capita	-0.392*** (0.062)	-0.230*** (0.069)
Legal system quality	-0.041*** (0.003)	-0.048*** (0.003)
Financial Constraint	0.008*** (0.003)	0.017*** (0.003)
Export Propensity	0.020*** (0.004)	0.017*** (0.004)
Corruption Perception Index	-0.007*** (0.001)	-0.003** (0.001)
Top Manger's Experience	-0.001 (0.002)	0.004* (0.002)
Firm Size	0.002 (0.001)	0.016*** (0.001)
Ownership Structure		
Open share	0.010 (0.011)	-0.010 (0.012)
Closed share	0.011 (0.010)	0.010 (0.011)
Sole proprietorship	0.010 (0.010)	-0.003 (0.011)
Partnership	0.016 (0.011)	0.021* (0.011)
Limited partnership	0.022** (0.010)	0.016 (0.011)
Domestic	0.023*** (0.005)	0.016*** (0.006)
Firm Age	0.003 (0.002)	-0.006*** (0.002)
Constant	3.779*** (0.410)	2.236*** (0.455)
Sector	YES	YES
Year Fixed Effect	YES	YES
Country fixed effect	YES	YES
Number of observations	57,776	57,776
Chi ²	15,312.378	5,461.117
R ²	0.209	0.110
F test	3056.16	3056.16
Partial Shea R ²	0.0769	0.0769
Minimum eigenvalue statistic	4800.4	4800.4

Robust standard errors in parentheses *** p < 0.01, ** p < 0.05, * p < 0.1.

Fourth, although we include a range of control variables that we identified from the literature in our regression, there is a potential concern that firms with woman top manager may differ on

unobservable variables. To ensure our results are not driven by this unobservable heterogeneity, we follow recent studies to evaluate the extent of this concern (Altonji, Elder, & Taber, 2005; Assenova & Sorenson, 2017). We undertook ratio tests as $\rho = |\hat{\beta}^F|/|(\hat{\beta}^R - \hat{\beta}^F)|$, where $\hat{\beta}^F$ denotes the estimated coefficient of *woman top manager* of the unrestricted (full) model, whereas $\hat{\beta}^R$ denoted the estimated coefficient of *woman top manager* in a restricted model (with one fewer regressor) in a regression with the same dependent variable. This ratio is interpreted as how much larger would selection on unobserved factors should be relative to selection on observed factors to account for the result. Altonji et al. (2005) suggest that for an estimate to be robust to selection on unobserved factors, the ratio test should be greater than 1 ($\rho > 1$). We carried out this ratio test for equation 1. The value of ρ in our analysis starts from 7.56. Hence, our main result is not driven by unobserved heterogeneity in firms in relation to gender of top manager and bribery.

Finally, as there might be geographic regional dimension of gender and corruption relationship, we conducted sub-sample analyses to check whether our main findings are not driven by observations from some specific regions. We undertook five sub-sample analyses by dropping all firms from one region at a time. The regional classification is based on the World Bank regional classification (Sub-Saharan Africa, East Asia and the Pacific, Latin America, Middle East and North Africa, and Southern Asia)². Our main results stand firm for the sub-sample analyses.

DISCUSSION AND CONCLUSIONS

With the aim of untangling firm-level determinants of corruption (Francisco & Pontara, 2007), this study set out to examine the link between top managers' characteristics and firm involvement in corruption, which is barely addressed in the literature (Gorsira et al., 2018). Building on social role theory (Eagly, 1987; Eagly & Wood, 2016; Wood & Eagly, 2012), it specifically investigates whether top manager's gender influences firm involvement in corruption. Consistent with our theorizing, we find that firms with a woman top manager are less involved in corruption and less likely to receive a corruption request from officials compared to firms with a male top manager. Notably, we also find that the bribery request mediates the relationship between the top manager's gender and firm involvement in corruption.

Our first finding that firms with a woman top manager are less involved in corruption aligns with the findings of the pioneering study of Swamy et al. (2001), who find that women managers of firms in Georgia pay fewer bribes. The finding also resembles results from studies addressing corruption from the bribery takers' perspective, suggesting that women are less prone to engage in corrupt transactions (Agerberg, 2014; Dollar et al., 2001). Commenting on the findings of Swamy et al. (2001), however, Goetz (2007) argues that further analysis at the bribery request level is required as woman top managers could, from the beginning, be asked less frequently to pay a bribe. This is similar to the view posed in what Agerberg (2014) calls "the opportunities perspective", where gender difference in corruption is understood as a function of the difference in opportunities for corrupt behavior. For instance, based on a survey data from Ghana, Alhassan-Alolo (2007) concludes that there is no gender gap in officials' attitudes toward corruption when exposed to similar opportunities. Although this view is mostly based on studies from the bribe takers' side, it is also relevant for studies from the perspective of the bribe payers as argued by Goetz (2007).

Our study responds to this view by investigating the link between top managers' gender in firms and their likelihood of receiving bribery requests. Interestingly, we find that this is indeed the case. Yet our further analysis, aimed at examining whether exposure to corruption (i.e., a bribery request) explains the gender difference we observed in firms involved in corruption, reveals that the bribery request only partially mediates the relationship between top managers' gender and firms' involvement in corruption. Therefore, we conclude that exposure to corruption does not explain gender differences in corruption fully. This finding is in line with Agerberg (2014), who concludes that opportunities do not fully account for the gender differences observed in corruption from the side of the bribe takers. We would further argue that Social role theory (SRT) provides a good explanation for why this holds, and we interpret our results in light of the theory.

² Please see Table 2, 3 and 4 in the appendix for the full results of the sub-sample analyses.

SRT posits that the behavioral differences observed across gender result from the different gender roles men and women have played in society (Eagly & Wood, 2016, 2012). One of the mechanisms through which gender roles influence behavior of people is behavioral confirmation of gender roles where people respond to others' expectations (Eagly & Wood, 2016). Therefore, as they internalize a self-concept that involves behaving communally (Schneider & Bos, 2019), women consider a behavior that is not communal as undesirable. Therefore, and as our results demonstrate, women top managers and their firms are less likely to engage in corruption.

Interestingly, SRT also suggests that behavioral expectations originate not only from oneself but also from societal expectations. Thus, women are often expected to act in a more selfless and collectively-oriented manner than men (Anglin et al., 2018; Wood & Eagly, 2012). As a result, bribe takers do not expect them to engage in corruption, and hence are less likely to request them to do so. Therefore, as the results of this study support, firms managed by a woman top manager are less likely to be invited to participate in corruption. In other words, given that gender roles are conditioned by others' expectations, and given women's traditional adherence to the communal construct, women are asked less often to engage in corruption. However, if they do receive such an invitation, some of them may assume that the communal construct has been broken, and thus decide to engage in the transaction. Nevertheless, those with a strong aversion to corruption would adhere to their own moral code regardless of what others might expect of them. This is probably why our results show a partial mediation of the bribery request (which reflects expectations) in the relationship between the top manager's gender and the firm's involvement in corruption.

The findings of this study have important policy implications. The results suggest that policy measures aimed at increasing the representation of women in corporate executive positions and boardrooms may have a positive economic impact at firm and country level by reducing corruption. This is of course in addition to the social impact that such policy initiatives may have in creating the much-needed gender equality at the firm level, particularly in management positions. In addition, introducing a gender focus in anti-corruption policy measures through mainstreaming gender equality seems justified and important to create social and economic well-being.

This study has limitations that opens up future research avenues. First, although the WBES dataset enabled us to cover a large number of observations from several countries, which enhances the generalizability of our study, our study may suffer from the cross-sectional nature of the dataset. To answer the research question we posed in this study, it would have been ideal to utilize a panel data where we would be able to compare the corruption levels before and after the appointment of a new top manager between firms appointing a woman top manager and those who do not. However, we addressed some of these challenges by applying different estimation techniques in our robustness analysis. For instance, we utilized propensity score matching to correct the unobserved heterogeneity. Furthermore, we deployed the two-stage instrumental variable regression to mitigate endogeneity concerns in our findings. The results from these robustness exercises are similar to our main results, which enhances our confidence in the findings. Yet, future research may test these findings with a panel dataset.

Second, we acknowledge that there might be a response bias in the dataset. For example, one could argue that the woman top managers may have underreported their misconduct, which could still be in line with the theory we utilized in this study. In fact, response bias is one of the key challenges that studies on corruption face. However, the question posed in the WBES to measure bribery request and involvement was framed indirectly to address and reduce any self-censoring biases respondents may have. These measurements have also been utilized in prior studies addressing the issue of corruption (Birhanu, Gambardella, & Valentini, 2016; Webster & Piesse, 2018; Wellalage et al., 2019) and hence is fairly established.

Third, we assume that a corruption transaction is initiated from the demand side (i.e., bribery takers), and the survey questions measuring our dependent variables were designed with this assumption in mind. Therefore, the study does not capture corruption initiated by bribe payers. Furthermore, given that in most of the countries in this study, men still dominate the political landscape, their perception towards women and gender roles is crucial to our theorizing based on social role theory. However, as the political landscape changes, and the proportion of women in politics increases, it would be interesting to explore if the gender difference in corruption changes along with perceptions towards gender roles. Thus, future research may address this through a longitudinal study observing the changes in the political landscape, gender roles in society, and level of corruption at the firm level.

Finally, we only measured corruption in monetary terms. However, as rightly argued by Goetz (2007), women may face different forms of corrupt behavior from corruption takers, including sexual favors as opposed to money. Although the question used in this study to measure bribery depth is a financial measurement (i.e., percentage of sales), the question related to the bribery request may well include other forms of payments, because the question asked to capture bribery request was phrased as “whether informal gift or payment” is requested. Of course, we do not argue that the question is explicit enough and hence respondents may not consider sexual elements as part of their answer. Future research may address this by looking at different forms of corruption and the difference in gendered behavior still holds.

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Appendix

Table 1: Sample by country and year

	Year of survey												
Country name	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Afghanistan	0	0	0	0	0	0	0	239	0	0	0	0	239
Albania	0	0	0	0	0	0	229	0	0	0	0	0	229
Angola	0	0	0	220	0	0	0	0	0	0	0	0	220
Argentina	0	0	0	776	0	0	0	0	0	0	819	0	1,595
Armenia	0	0	33	0	0	0	336	0	0	0	0	0	369
Azerbaijan	0	0	16	0	0	0	261	0	0	0	0	0	277
Bangladesh	515	0	0	0	0	0	0	0	0	0	0	0	515
Barbados	0	0	0	113	0	0	0	0	0	0	0	0	113
Belarus	0	13	0	0	0	0	311	0	0	0	0	549	873
Benin	0	0	71	0	0	0	0	0	0	98	0	0	169
Bhutan	0	0	0	0	0	0	0	0	244	0	0	0	244
Bih	0	0	18	0	0	0	333	0	0	0	0	0	351
Bolivia	0	0	0	295	0	0	0	0	0	0	274	0	569
Botswana	0	0	0	230	0	0	0	0	0	0	0	0	230
Bulgaria	0	0	13	0	0	0	225	0	0	0	0	0	238
Burkina Faso	0	0	206	0	0	0	0	0	0	0	0	0	206
Burundi	0	0	0	0	0	0	0	118	0	0	0	0	118
Cambodia	0	0	0	0	0	0	0	0	0	160	0	0	160
Cameroon	0	0	297	0	0	0	0	0	0	198	0	0	495
Cape Verde	0	0	101	0	0	0	0	0	0	0	0	0	101
Central African Republic	0	0	0	0	129	0	0	0	0	0	0	0	129
Chad	0	0	125	0	0	0	0	0	0	0	0	97	222
Chile	0	0	0	967	0	0	0	0	0	0	0	0	967
China	0	0	0	0	0	1,755	0	0	0	0	0	0	1,755
Colombia	0	0	0	836	0	0	0	0	0	0	819	0	1,655
Costa Rica	0	0	0	36	0	0	0	0	0	0	0	0	36
Croatia	0	0	0	0	0	0	309	0	0	0	0	0	309
Côte d'Ivoire	0	0	0	0	0	0	0	0	0	154	0	0	154
DRC	0	0	0	0	0	0	341	0	0	0	0	0	341
Ecuador	0	0	0	324	0	0	0	0	0	0	342	0	666
Egypt	0	0	0	0	0	0	2,380	0	0	1,526	0	0	3,906
El Salvador	0	0	0	315	0	0	0	0	0	668	0	0	983
Ethiopia	0	0	0	0	446	0	0	0	779	0	0	0	1,225
Gambia	0	0	0	0	0	0	0	0	0	0	0	116	116
Georgia	0	4	0	0	0	0	305	0	0	0	0	0	309
Ghana	0	0	0	0	0	0	420	0	0	0	0	0	420
Guatemala	0	0	0	545	0	0	0	0	0	0	298	0	843
Guinea	0	0	0	0	0	0	0	0	0	53	0	0	53
Guyana	0	0	0	146	0	0	0	0	0	0	0	0	146
Honduras	0	0	0	293	0	0	0	0	0	282	0	0	575

India	0	0	0	0	0	0	0	7,445	0	0	0	0	7,445
Indonesia	0	0	1,136	0	0	0	0	0	960	0	0	0	2,096
Jamaica	0	0	0	248	0	0	0	0	0	0	0	0	248
Jordan	0	0	0	0	0	0	448	0	0	0	0	0	448
Kazakhstan	0	0	75	0	0	0	422	0	0	0	0	0	497
Kenya	0	0	0	0	0	0	484	0	0	0	0	879	1,363
Kosovo	0	0	0	0	0	0	171	0	0	0	0	0	171
Kyrgyzstan	0	0	56	0	0	0	213	0	0	0	0	0	269
Lao PDR	0	0	0	0	0	148	0	0	0	142	0	127	417
Lebanon	0	0	0	0	0	0	381	0	0	0	0	0	381
Lesotho	0	0	7	0	0	0	0	0	0	98	0	0	105
Liberia	0	0	13	0	0	0	0	0	0	0	102	0	115
Malawi	0	0	118	0	0	0	0	349	0	0	0	0	467
Malaysia	0	0	0	0	0	0	0	0	453	0	0	0	453
Mali	0	0	0	177	0	0	0	0	0	75	0	0	252
Mauritania	0	0	0	0	0	0	0	91	0	0	0	0	91
Moldova	0	0	38	0	0	0	288	0	0	0	0	0	326
Mongolia	0	0	34	0	0	0	275	0	0	0	0	0	309
Montenegro	0	0	8	0	0	0	106	0	0	0	0	0	114
Morocco	0	0	0	0	0	0	278	0	0	0	0	0	278
Mozambique	0	0	0	0	0	0	0	0	0	0	0	496	496
Myanmar	0	0	0	0	0	0	0	447	0	519	0	0	966
Namibia	0	0	0	0	0	0	0	461	0	0	0	0	461
Nepal	0	0	311	0	0	0	416	0	0	0	0	0	727
Nicaragua	0	0	0	307	0	0	0	0	0	300	0	0	607
Niger	0	0	75	0	0	0	0	0	0	0	79	0	154
Nigeria	0	0	0	0	0	0	0	1,419	0	0	0	0	1,419
North Macedonia	0	0	27	0	0	0	300	0	0	0	0	0	327
Pakistan	0	0	0	0	0	0	541	0	0	0	0	0	541
Papua New Guinea	0	0	0	0	0	0	0	0	41	0	0	0	41
Paraguay	0	0	0	251	0	0	0	0	0	0	321	0	572
Peru	0	0	0	826	0	0	0	0	0	0	829	0	1,655
Philippines	0	0	1,134	0	0	0	0	0	637	0	0	0	1,771
Romania	0	0	28	0	0	0	441	0	0	0	0	0	469
Russia	0	0	161	0	0	3,120	0	0	0	0	0	0	3,281
Rwanda	0	0	0	0	181	0	0	0	0	0	0	0	181
Senegal	0	0	0	0	0	0	0	389	0	0	0	0	389
Serbia	0	0	50	0	0	0	256	0	0	0	0	0	306
Sierra Leone	0	0	6	0	0	0	0	0	0	0	98	0	104
Sri Lanka	0	0	0	0	506	0	0	0	0	0	0	0	506
Sudan	0	0	0	0	0	0	0	516	0	0	0	0	516
Suriname	0	0	0	0	0	0	0	0	0	0	0	154	154
Tajikistan	0	87	0	0	0	0	223	0	0	0	0	0	310

Tanzania	0	0	0	0	0	0	362	0	0	0	0	0	362
Thailand	0	0	0	0	0	0	0	0	0	731	0	0	731
Timor-Leste	0	0	0	0	0	0	0	0	87	0	0	0	87
Togo	0	0	106	0	0	0	0	0	0	121	0	0	227
Trinidad and Tobago	0	0	0	295	0	0	0	0	0	0	0	0	295
Tunisia	0	0	0	0	0	0	396	0	0	0	0	0	396
Turkey	0	416	0	0	0	0	1,166	0	0	0	0	0	1,582
Uganda	0	0	0	0	0	0	334	0	0	0	0	0	334
Ukraine	0	105	0	0	0	0	135	0	0	0	0	0	240
Uruguay	0	0	0	509	0	0	0	0	0	0	305	0	814
Uzbekistan	0	146	0	0	0	0	369	0	0	0	0	0	515
Venezuela	0	0	0	170	0	0	0	0	0	0	0	0	170
Vietnam	0	0	616	0	0	0	0	0	180	0	0	0	796
Yemen	0	0	0	313	0	0	223	0	0	0	0	0	536
Zambia	0	0	0	0	0	0	561	0	0	0	0	0	561
Zimbabwe	0	0	0	0	534	0	0	0	0	252	0	0	786
Total	515	771	4,879	8,192	1,796	5,023	14,239	11,474	3,381	5,377	4,286	2,418	62,351

Table 2: Sub-sample Analysis 1

	Excluding Sub-Saharan Africa			Excluding East Asia and the Pacific		
	Bribery payment	Bribery request	Bribery payment	Bribery payment	Bribery request	Bribery payment
	(1)	(2)	(3)	(1)	(2)	(3)
Woman Top Manger	-0.109** (0.045)	-0.077* (0.044)	-0.104** (0.046)	-0.116** (0.046)	-0.092** (0.046)	-0.104** (0.048)
Bribery request			1.837*** (0.038)			1.876*** (0.035)
Business Freedom Index	-0.063*** (0.012)	-0.031*** (0.010)	-0.062*** (0.012)	-0.069*** (0.011)	-0.028*** (0.010)	-0.070*** (0.011)
Log of GDP per capita	3.639*** (0.704)	-0.493 (0.574)	3.868*** (0.717)	-2.193*** (0.713)	-1.670*** (0.564)	-1.630** (0.704)
Legal system quality	-0.491*** (0.035)	-0.505*** (0.033)	-0.378*** (0.037)	-0.432*** (0.033)	-0.425*** (0.031)	-0.333*** (0.035)
Financial Constraint	0.065* (0.037)	0.236*** (0.035)	0.003 (0.039)	0.064* (0.033)	0.111*** (0.032)	0.042 (0.035)
Export Propensity	0.219*** (0.046)	0.138*** (0.045)	0.195*** (0.049)	0.130*** (0.046)	0.136*** (0.044)	0.098** (0.049)
Corruption Perception	0.011 (0.015)	-0.063*** (0.014)	0.037** (0.016)	-0.074*** (0.014)	-0.025* (0.014)	-0.070*** (0.014)
Top Manger's Exper.	-0.056** (0.026)	0.061** (0.026)	-0.079*** (0.028)	0.019 (0.026)	0.048* (0.024)	0.009 (0.027)
Firm Size	0.025* (0.013)	0.168*** (0.012)	-0.029** (0.014)	0.005 (0.013)	0.126*** (0.012)	-0.034** (0.014)
Ownership Structure						
Open share	-0.135 (0.149)	-0.061 (0.143)	-0.117 (0.151)	0.087 (0.136)	-0.064 (0.127)	0.116 (0.144)
Closed share	-0.003 (0.136)	0.141 (0.129)	-0.038 (0.137)	0.120 (0.125)	0.155 (0.114)	0.081 (0.131)
Sole proprietorship	-0.162	-0.068	-0.147	0.071	0.041	0.077

	(0.137)	(0.129)	(0.138)	(0.124)	(0.113)	(0.131)
Partnership	-0.063	0.239*	-0.145	0.159	0.229*	0.102
	(0.143)	(0.134)	(0.144)	(0.131)	(0.118)	(0.138)
Limited partnership	0.062	0.102	0.043	0.143	0.139	0.123
	(0.142)	(0.134)	(0.143)	(0.130)	(0.117)	(0.137)
Domestic	0.178**	0.140**	0.131*	0.279***	0.075	0.260***
	(0.069)	(0.068)	(0.072)	(0.065)	(0.061)	(0.068)
Firm Age	0.071***	-0.052**	0.091***	0.042*	-0.078***	0.073***
	(0.023)	(0.023)	(0.024)	(0.022)	(0.022)	(0.023)
Constant	-19.210***	6.014	-21.963***	20.621***	13.020***	16.092***
	(4.512)	(3.680)	(4.615)	(4.542)	(3.561)	(4.484)
Sector	YES	YES	YES	YES	YES	YES
Year Fixed Effect	YES	YES	YES	YES	YES	YES
Country fixed effect	YES	YES	YES	YES	YES	YES
Log-Likelihood	-14,489.06	-15,665.28	-13,400.41	-16,067.99	-17,380.32	-14,717.90
Number of Obs.	49,769	49,769	49,769	52,769	52,769	52,769
Chi ²	6,914.341	4,202.676	7,805.773	6,736.016	4,593.483	8,122.940
Pseudo R ²	0.254	0.135	0.310	0.218	0.132	0.284

Standard errors in parentheses *** p < 0.01, ** p < 0.05, * p < 0.1.

Table 3: Sub-Sample Analysis 2

	Excluding Latin America			Excluding Middle East and North Africa		
	Bribery Payment	Bribery request	Bribery Payment	Bribery Payment	Bribery request	Bribery Payment
	(1)	(2)	(3)	(1)	(2)	(3)
Woman Top Manger	-0.092** (0.041)	-0.072* (0.041)	-0.084** (0.043)	-0.097** (0.039)	-0.103*** (0.039)	-0.079* (0.041)
Bribery request			1.944*** (0.034)			1.974*** (0.034)
Business Freedom Index	-0.057*** (0.010)	-0.036*** (0.009)	-0.062*** (0.011)	-0.022** (0.010)	-0.028*** (0.008)	-0.025** (0.010)
Log of GDP per capita	-4.536*** (0.755)	-3.417*** (0.618)	-3.852*** (0.745)	-4.542*** (0.719)	-1.926*** (0.523)	-3.981*** (0.712)
Legal system quality	-0.415*** (0.030)	-0.455*** (0.029)	-0.297*** (0.032)	-0.403*** (0.031)	-0.439*** (0.030)	-0.293*** (0.033)
Financial Constraint	0.041 (0.032)	0.158*** (0.030)	-0.007 (0.034)	0.037 (0.032)	0.149*** (0.030)	-0.008 (0.034)
Export Propensity	0.241*** (0.043)	0.149*** (0.042)	0.220*** (0.046)	0.227*** (0.042)	0.125*** (0.041)	0.207*** (0.045)
Corruption Perception	-0.043*** (0.015)	0.000 (0.016)	-0.036** (0.015)	-0.084*** (0.013)	-0.051*** (0.012)	-0.071*** (0.013)
Top Manger's Exper.	-0.021 (0.024)	0.062*** (0.024)	-0.043* (0.026)	-0.019 (0.024)	0.058** (0.023)	-0.040 (0.026)
Firm Size	0.049*** (0.012)	0.149*** (0.012)	-0.000 (0.013)	0.014 (0.012)	0.154*** (0.011)	-0.039*** (0.013)
Ownership Structure						
Open share	0.176 (0.131)	-0.061 (0.123)	0.231* (0.138)	-0.017 (0.125)	-0.118 (0.119)	0.036 (0.132)
Closed share	0.124 (0.120)	0.067 (0.110)	0.119 (0.126)	0.062 (0.113)	0.087 (0.104)	0.049 (0.119)
Sole proprietorship	0.022 (0.119)	-0.036 (0.108)	0.052 (0.125)	-0.045 (0.112)	-0.058 (0.103)	-0.010 (0.119)
Partnership	0.042 (0.125)	0.203* (0.113)	-0.028 (0.132)	-0.007 (0.120)	0.185* (0.110)	-0.076 (0.127)
Limited partnership	0.177	0.111	0.180	0.099	0.058	0.117

	(0.124)	(0.112)	(0.130)	(0.118)	(0.108)	(0.124)
Domestic	0.246***	0.232***	0.164**	0.292***	0.157***	0.240***
	(0.061)	(0.060)	(0.064)	(0.058)	(0.056)	(0.061)
Firm Age	0.056***	-0.076***	0.088***	0.047**	-0.052**	0.070***
	(0.022)	(0.021)	(0.023)	(0.021)	(0.021)	(0.023)
Constant	34.519***	24.196***	29.505***	33.482***	14.979***	29.002***
	(4.935)	(3.985)	(4.838)	(4.638)	(3.400)	(4.584)
Sector	YES	YES	YES	YES	YES	YES
Year Fixed Effect	YES	YES	YES	YES	YES	YES
Country fixed effect	YES	YES	YES	YES	YES	YES
Log-Likelihood	-16,955.87	-18,232.53	-15,324.87	-17,506.31	-19,061.22	-15,856.21
Number of Obs.	49,688	49,688	49,688	56,406	56,406	56,406
Chi ²	6,977.689	4,383.334	8,521.884	7,611.908	4,524.674	9,062.684
Pseudo R ²	0.225	0.120	0.300	0.232	0.122	0.304

Standard errors in parentheses *** p < 0.01, ** p < 0.05, * p < 0.1.

Table 4: Sub-Sample Analysis 3

	Excluding Southern Asia		
	Bribery payment	Bribery request	Bribery payment
	(1)	(2)	(3)
Woman Top Manger	-0.087** (0.040)	-0.082** (0.041)	-0.076* (0.042)
Bribery request			2.017*** (0.035)
Business Freedom Index	-0.018** (0.008)	-0.008 (0.008)	-0.023*** (0.009)
Log of GDP per capita	-4.470*** (0.575)	-1.922*** (0.496)	-3.960*** (0.595)
Legal system quality	-0.393*** (0.031)	-0.518*** (0.032)	-0.259*** (0.033)
Financial Constraint	0.025 (0.033)	0.184*** (0.033)	-0.034 (0.035)
Export Propensity	0.234*** (0.042)	0.134*** (0.044)	0.212*** (0.045)
Corruption Perception Index	-0.105*** (0.011)	-0.056*** (0.011)	-0.093*** (0.012)
Top Manger's Experience	0.044* (0.025)	0.053** (0.025)	0.034 (0.026)
Firm Size	0.013 (0.013)	0.181*** (0.012)	-0.044*** (0.014)
Ownership Structure			
Open share	0.195 (0.134)	-0.018 (0.135)	0.236* (0.142)
Closed share	0.174 (0.124)	0.134 (0.122)	0.153 (0.131)
Sole proprietorship	0.091 (0.123)	0.087 (0.122)	0.090 (0.130)
Partnership	0.065 (0.131)	0.193 (0.130)	0.011 (0.139)
Limited partnership	0.278** (0.128)	0.255** (0.126)	0.261* (0.136)
Domestic	0.258*** (0.057)	0.183*** (0.056)	0.203*** (0.060)
Firm Age	-0.007	-0.071***	0.016

	(0.022)	(0.022)	(0.023)
Constant	41.524***	16.711***	36.876***
	(4.658)	(3.953)	(4.809)
Sector	YES	YES	YES
Year Fixed Effect	YES	YES	YES
Country fixed effect	YES	YES	YES
Log-Likelihood	-16,849.34	-17,065.67	-15,215.85
Number of Obs.	52,134	52,134	52,134
Chi ²	6,827.126	4,406.085	8,550.266
Pseudo R ²	0.220	0.132	0.296

Standard errors in parentheses *** p < 0.01, ** p < 0.05, * p < 0.1.

HOW WOMEN ENTREPRENEURS CREATE SOCIAL CHANGE BY FILLING INSTITUTIONAL VOIDS: EVIDENCE FROM SUB-SAHARAN AFRICA

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ABSTRACT

Research on women's entrepreneurship in sub-Saharan Africa has documented governmental and non-governmental initiatives to tackle gender based issues related to informal institutional voids. Despite overall improvements in the social status of women in African societies, this approach takes for granted that women are able to grasp entrepreneurial opportunities without external assistance. Building on a bottom-up approach, our study addresses this limitation by investigating how and through which mechanisms women in sub-Saharan Africa build inclusive societies through entrepreneurship. Following an inductive multiple case study methodology, we propose a grounded process model which describes mechanisms pursued by women entrepreneurs to overcome gendered constraints, whilst simultaneously creating inclusive societal change in local communities. Our study provides fine-grained insights on institutional work practices to fill gender-based informal institutional voids. Moreover, it unveils actions through which women entrepreneurs integrate community-based entrepreneurial initiatives to promote inclusive societies in sub-Saharan Africa.

Keywords: women's entrepreneurship, sub-Saharan Africa, informal institutional voids

INTRODUCTION

There are many examples of women, who through small acts of resistance broke the veil of prejudice, and in so doing created long term social change. Rosa Parks, by refusing to give up a seat on a bus to a white man gave rise to the fight for racial equality and human rights in the United States. More recently, Malala Yousafzai, through her courageous commitment and after surviving grievous injury, has championed rights to education for women denied it in Pakistan.

Studies have suggested that the increased participation of women in entrepreneurship can play an important role in catalyzing social change (Pargelova et al., 2021; Haugh and Talwar, 2016), especially in Africa (Ojong et al., 2021; UN Women, 2021). For instance, women entrepreneurs in sub-Saharan Africa lead 58% of businesses, and can be considered the "backbone of Africa" (World Bank Group, 2019). This is surprising, if we consider that dominant social norms in Sub-Saharan Africa in general still constrain opportunities for women and limit them to traditional activities such as childcare.

Building on such evidence and the "moral imperative to tackle the persistent, but tractable, global problems" (George et al., 2016b, p. 1893), scholars have begun to document the sources of such constrained conditions for women, which are attributable predominantly to social norms, beliefs, and values that fail to ensure equal access to market and resources – i.e., *informal institutional voids* (Webb et al., 2020). Literature has investigated mechanisms to tackle such gender based voids through top-down approaches. For instance, Mair et al. (2016) document the actions pursued by an NGO to eliminate

persisting social inequality providing sanitation services. Zhao and Wry (2016) meanwhile, research how microfinance organizations are affected by patriarchal logics in lending money to women. Recently, Drori et al. (2018) furthermore documented how microfinance intermediaries use “inclusive language” to tackle gender-based financial exclusion in developing countries. Such top-down approaches can produce positive outcomes for gender equality and building more inclusive societies but have their limits.

Whilst the above approaches underline the importance of women’s entrepreneurship to address societal challenges, such as inequality, poverty, stigmatization etc., it also assumes that women are “unable to achieve their entrepreneurial potential without the assistance of education, support and encouragement” (Roos et al., 2019: 279). This might not be the case, with a more bottom-up approach possible and in need of further study. Better understanding of the role of women in promoting social change through entrepreneurial action is needed (Ojong et al., 2021; Pargelova et al., 2021). Indeed, research has documented that when facing informal institutional voids, entrepreneurs are triggered to pursue social changes (Bruton et al., 2021). In this view, entrepreneurship is a means toward social change (Rindova, 2009; Sarasvathy and Dew, 2005). Scholars have documented positive impacts of female-led entrepreneurs on gender equality in impoverished communities, providing greater dignity to women overall (Siqueira et al., 2016). However, empirical works have also found that on the African continent dominant social patterns may create obstacle for efforts towards inclusivity and gender equality (George et al., 2016a; Yousafzai et al., 2021). Therefore, women’s entrepreneurial actions aimed at driving social change are sometimes stigmatized and sanctioned, because are seen as forms of unacceptable cultural transgression (McMullen and Dimov, 2013). In some cases, these may also bring to violence and family conflicts which expose women to safety issues (Ojong et al., 2021). In such overall situations, and heeding the need for a greater understanding of bottom-up approaches to social change implemented by women in Africa (Haugh and Talwar, 2016; Ojong et al., 2021; Saebi et al., 2019), and calls for contextualization of entrepreneurship under a change-creation perspective (Pargelova et al., 2021; Welter et al., 2019), this work aims at addressing the following question: *How and through which mechanisms do women in Africa build inclusive societies through entrepreneurship?*

To address this question, we conducted an inductive multiple case study methodology (Eisenhardt, 1989), which investigated 26 women entrepreneurs in four African countries (Kenya, Uganda, Sudan and Ethiopia). We selected East African countries for the magnitude of societal challenges, such as poverty, inequality, lack of education etc. (Lashitew et al., 2020a; Holt and Littlewood, 2017), together with vast informal institutional voids in culture and beliefs (Zoogah et al., 2015; Sydow et al., 2020; Chipp et al., 2019). We coded and analyzed data following the Gioia et al. (2013) methodology to finally build a grounded model.

Our findings show a three-phase process model which depicts how women entrepreneurs overcome (1) ‘*exclusionary constraints*’ (informal institutional voids), engage in (2) *community-based institutional work* to enable the creation of (3) *social change for women in the community*. Thus, through individual work around practices and community-oriented approach, they have been able to overcome voids concerning women in African societies.

With our work, we contribute to extending literature on informal institutional voids (Webb et al., 2020; Siqueira et al., 2016; Mair et al., 2016), and literature on social change and social entrepreneurship in impoverished settings (George et al., 2016a; Saebi et al., 2019; Holt and Littlewood, 2017; Pargelova et al., 2021).

The paper proceeds as follows. In the next section, we introduce the theoretical background on informal institutional voids, women’s entrepreneurship and social change. We then explain the methodology, including the processes of data collection and analysis. Findings are then presented and discussed. Finally, contributions to theory and practice are offered.

THEORETICAL BACKGROUND

Informal institutional voids in women entrepreneurship

Developing economies are characterized by institutional constraints due to formal and informal structural impediments. While scholarly efforts have largely focused on actions to work around lack of formal institutional support (Ge et al., 2019), recently academic interest has recognized the relevance

and detrimental impact for entrepreneurs of *informal institutional voids* defined as “the inability of norms, values, and beliefs and their localized representations to facilitate stable, efficient, and effective transactions and enterprise processes that contribute to the development of productive markets” (Webb et al., 2020: 508).

Research has documented several sources of such voids, such as caste systems that demarcate the spectrum of business opportunities based on ethnicity or family origin (Zoogah, Peng and Woldu, 2015) as well as traumatic shocks to human society such as the African slave trade which produced heterogeneous effects on ethnic groups still evident in modern Africa (Pierce and Snyder, 2020). Beliefs about the inferiority of some social categories have particularly fostered discrimination of women, especially in the business environment (Zhao and Lounsbury, 2016). Indeed, gender norms that are socially constructed and embedded in many societal processes and patterns may result in men and women being treated unequally in terms of access to and control over resources and markets (Brush et al., 2019).

As a result, women, according to some cultures, are not legitimated to run business activities, being not aligned with the dominant and “generalized perception or assumption that the actions of an entity [women in this case] are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions” (Suchman, 1995: 574). For instance, women in Africa often lack of legitimacy in running business activities due to constraining norms towards female-owned businesses (Ojong et al., 2021), such as expectations of women to stay home and raise children (Kalafatoglu and Mendoza, 2017).

These aforementioned institutional constraints generate detrimental consequences for women entrepreneurs. First, social norms tend to push women into limited business opportunities, being often located “in service-oriented sectors that are largely black economies that reproduce the gender” (Pajnik and Campani 2011, p. 9), such as hairdressers, cosmetics, and personal hygiene products. Second, women often not have access to property rights and are often excluded from basic access to credit markets (Cleaver, 2005). Therefore, women-led enterprises are characterized by low starting and working capital, have a low growth rate, and limited potential (Osoro et al, 2013). Third, even when they are provided with some basic rights (i.e., some form of ownership), they are often spatially isolated in resource-poor regions with undeveloped infrastructure, and obliged to prioritize other roles defined by identity or gender before pursuing entrepreneurial interests or incur more significant costs when exercising their rights (Kantor, 2009). For instance, patriarchal social structures make women dependent on men in their lives and decisions, creating resistance to them starting a business and growing independent spirit of entrepreneurship (McKay, 2001). Fourth, gender bias excludes or limits women from participating in more resourceful networks, which are often more family-centred, constraining business resource channels (Baycan-Levent, Masurel, Nijkamp, 2006). For instance, Brush et al. (2019) documented that women entrepreneurs are often at a disadvantage position within the entrepreneurial ecosystem.

Taking together these challenges, women face obstacles to creating economic independence and this negatively affect their ability to start a business. Furthermore, in many contexts, gender biases have forced younger women into child labor to ensure a livelihood for their family and limit their personal and professional growth, since they cannot access education, which is a fundamental requirement to be able to successfully start and subsequently grow one’s business (Abu-Ghaida and Klasen, 2004). Moreover, these gaps have cognitive consequences, empirical works showed that women often struggle to have self-confidence in terms of required skills to become entrepreneurs (Wilson et al., 2007; Pathak et al., 2013). Recent international reports confirm this evidence, documenting that women and female-headed households are vulnerable and more likely to live under the threshold of poverty and so be victim of hunger and violence (African Economic Outlook, 2021).

Women’s Entrepreneurship for social change

Most entrepreneurs take a society’s current institutional order as given, and a de facto starting point to adhere with in order to achieve their ends; some others, on the contrary, purposely refuse the institutional status quo and advance actions that transgress dominant social patterns (Sarasvathy and Dew, 2005; Kalantaridis and Fletcher, 2012). In this view, entrepreneurship is not only a means for addressing poverty and improving the living conditions of excluded groups (Sutter et al., 2019; Bruton,

Sutter, and Lenz, 2021), but also as a tool to overcome stigma, thereby unravel relations of oppression and exploitation (Verduijn, Dey, Tedmanson, and Essers, 2014).

Researchers have documented women who resist stereotypes and gender norms in their societies, building gender equal business relationships, and independence as well as self-emancipation through entrepreneurship (Ruebottom and Toubiana, 2020). For instance, Ojong et al., (2021) noted that entrepreneurship enables women to enhance self-esteem, confidence, and emotional well-being, with positive impact on their social status and capacity to negotiate with men (Constantinidis et al., 2019).

In some cases, these actions affect the structure and functioning of institutions promoting social change. Therefore, entrepreneurship not only improves women's social status, but also generates positive externalities in society. In this vein, research has demonstrated how the status of a woman as an entrepreneur improves the social position of other women in the community (Sequeira et al., 2016). Scholars have also documented that entrepreneurs may pursue changes in the social context when the institutional framework is no longer acceptable (Bruton, Ahlstrom, and Li, 2010). In this view, entrepreneurial actions may have the explicit aim of altering, disrupting, and dismantling existing institutional frameworks (Coyne and Leeson, 2004) as well as inculcating the formation of new institutions (Lawrence, Suddaby and Leca, 2011). For instance, liberal feminist movements fostered entrepreneurship as a means to social change, to promote equality of rights to overcome structural and cultural barriers that reproduce discrimination against women in the business environment (Calás, Smircich and Bourne, 2009).

Women entrepreneurs represent an important avenue for inclusive socioeconomic development. Despite this, in Africa especially, turning institutional environments towards inclusivity and gender equality remains a significant challenging (George et al., 2016a). Indeed, unequal societal patterns remain dominant in many African countries, demarking what is right and not, creating insurmountable barriers for women to tackle sources of social exclusion and gender inequality (Silvey and Elmhirst, 2003; Xie et al., 2021). Human history has repeatedly shown that women are further sanctioned and stigmatized for trying to change the status quo and so transgress social norms (McMullen and Dimov, 2013). Empirical works demonstrated that women entrepreneurs face negative perceptions and resistance from their close relatives, particularly their spouses (McClelland, Swail, Bell and Ibbotson, 2005). In this vein, some have highlighted that patriarchal attitudes allow men to interfere in women's businesses, weakening women's positions in negotiations and social interactions (Mordi, Simpson, Singh, and Okafor, 2010). Finally, overcoming such cultural barriers result in family or, even worse, social conflicts creating safety issues for women (Ojong et al., 2021).

While some research has taken a deterministic perspective showing how institutional environments influence, often negatively, women attitudes and opportunities to pursue entrepreneurial opportunities; few studies have investigated how women shape inclusive and equal institutions in a constructivist way. Building on this, Yousafzai et al. (2021, p. 174), argued that "research objectives must also shift from the development of short-term strategies to help women overcome existing barriers to longer term approaches that focus on discovering how to prevent gendered barriers in the first place". Taking into account the aforementioned constraints on women entrepreneurs in developing counties, this article aims to investigate how women shape institutional contexts to favor gender-equality with the following research question: *how and through which mechanisms do women in Africa build inclusive societies through entrepreneurship?*

METHODOLOGY

Research Design and Case Selection

Given our limited knowledge about the different ways women entrepreneurs deal with informal institutional voids, we employed an exploratory multiple-case study method (Eisenhardt 1989). This methodology is well-suited for research questions that focuses on 'why' and 'how' in relatively new and undiscovered areas and when data are collected in uncertain environments (Eisenhardt and Graebner, 2007).

With the research question in mind, we decided to conduct our study in East African countries. Specifically, we focused on Kenya, Uganda, Sudan and Ethiopia, as representative countries of East Africa for their challenges as well as for the economic growth they are experiencing (African Economic

Outlook, 2021; International Monetary Fund, 2019). Those countries represent a fruitful field for investigating entrepreneurship as a way to address societal challenges, such as poverty, inequality, lack of education etc. (Rivera-Santos et al. 2015; Lashitew et al., 2020a; Kolk and Rivera-Santos, 2018); secondly, across these countries significant informal institutional voids in norms, culture and beliefs are evident (Zoogah et al., 2015; Sydow et al., 2020; Chipp et al., 2019). Finally, the importance of women entrepreneurs in such economies is well recognized, making those countries an appropriate setting for understanding how women entrepreneurs aim to drive societal change through entrepreneurship (George et al., 2016b).

We selected a theoretical sampling approach, which is recommended for studies which seek to develop new models, concepts and tools in connection with existing theories (Glaser and Strauss, 1967). We focused on cases that were rich in data, with a fit to our research question and where women entrepreneurs were willing to share stories, data and experiences, which are particularly touching especially in the case of violence and other constraints. Overall the data sources are presented in Table 1.

Table 1. Data sources

Data Source	Type of data	Quantity	Use in the Analysis
A. Public documents	Report from NGOs, Government, Institutions	148 pages	Familiarize with the cultural context and business ecosystem.
B. Interviews	Semi-structured interviews	#26 women entrepreneurs #31 semi-structured interviews: - Mar-Aug 2021: #15 (KE-ET) - Sept-Dec 2021: #11 (UG-SU) - Oct-Dec 2021: #5 follow up calls Total duration: 24 h and 28 m	Reconstruction of the set of concepts produced in the data table.
C. Secondary data	Notes from field visits Pictures from field visits Video from field visits	124 pages 67 pictures 46 videos	Support, integrate and triangulated evidence from interviews.

Data Collection

We collected multiple sources of data, including an initial desk analysis through reports from NGOs, Governments and other institutions such as World Bank, International Monetary Fund United Nations, British Council etc. This initial stage started in December 2020, and enabled a better comprehension of the context of the research. Secondly, we engaged with E4Impact Foundation – an NGO which focuses on forging new generations of entrepreneurs in Africa, working in several countries. Through this Foundation we have been able to explore potential case studies, which matched with the purpose of the research and subsequently obtain secondary data from the interviewed women entrepreneurs.

Primary data collection started with a first round of 15 semi-structured interviews, undertaken by one author in Kenya and Ethiopia starting from March 2021. After the initial round, we revised the protocol according to the Gioia et al. (2013) methodology, and started an initial analysis of raw data. Due to the Covid-19 global pandemic situation, we conducted a second round of interviews through conferences calls between September and December 2021 with 11 Ugandan and Sudanese women entrepreneurs. We also undertook five follow up calls with women entrepreneurs in Kenya and Ethiopia to fine tune the data collected, and overall validate the grounded model we were developing in a process of iteration between data and theory (Glaser and Strauss, 1967). Overall we carried out 31 semi-structured interviews in the four East African countries. This process continued until further data collection and analysis yielded no further explications of a given category or theme as it will be discussed in the data analysis (Gehman et al., 2018). This is what Glaser and Strauss (1967) referred to as theoretical saturation. Table 2 offers the overview of the cases.

Table 2. Interview data

#	Name	Age	Location	Country	Industry	Round #1	Round #2
1	Alice M.	-	Nairobi	KE	Micro-finance	✓	
2	Caroline M.	47	Nairobi	KE	Agro-food	✓	
3	Humaida S.	-	Karthoum	SU	Pharmaceuticals		✓
4	Ruth B.	49	Nairobi	KE	Agro-food	✓	
5	Barbara K.	34	Nairobi	KE	Ethical fashion	✓	✓
6	Phyllis M.	52	Nairobi	KE	Health & education	✓	✓
7	Mary T.	27	Kampala	UG	Social housing		✓
8	Rose A.	54	Kampala	UG	Agro-food		✓
9	Irene N.	-	Nairobi	KE	Essential goods		✓
10	Susan O.	35	Nairobi	KE	Agri-tech	✓	✓
11	Evelyne N.	-	Kampala	UG	Green energy		✓
12	Joan K.	-	Kampala	UG	Education		✓
13	Elizabeth O.	-	Nairobi	KE	Agro-food	✓	
14	Jane N.	54	Kampala	UG	Agro-food		✓
15	Josyline M.	44	Isiolo	KE	Agro-food	✓	
16	Mihret A.T.	26	Addis Abeba	ET	Digital service	✓	
17	Everlyne A.	35	Nairobi	KE	Agro-food	✓	
18	Bethelhem A.	34	Addis Abeba	ET	Services	✓	
19	Sara Y.	38	Karthoum	SU	Agro-food		✓
20	Ernestine A.	37	Luweero	UG	Healthcare		✓
21	Rebecca K.	34	Nairobi	KE	Social housing	✓	✓
22	Rosemary M.	49	Nairobi	KE	Agro-food	✓	
23	Agnes I.	34	Kampala	UG	Wholesale & Retail		✓
24	Diana N.	40	Kampala	UG	Manufacturing		✓
25	Alice K.	63	Nairobi	KE	Education	✓	✓
26	Caroline A.	47	Nairobi	KE	Agro-food	✓	

Data Analysis

We approached our study through the lens of our research question (Eisenhardt 1989): *how and through which mechanisms do women in Africa build inclusive societies through entrepreneurship?* Following the rigorous Gioia et al. (2013) methodology, we gradually developed our data structure based on three main steps.

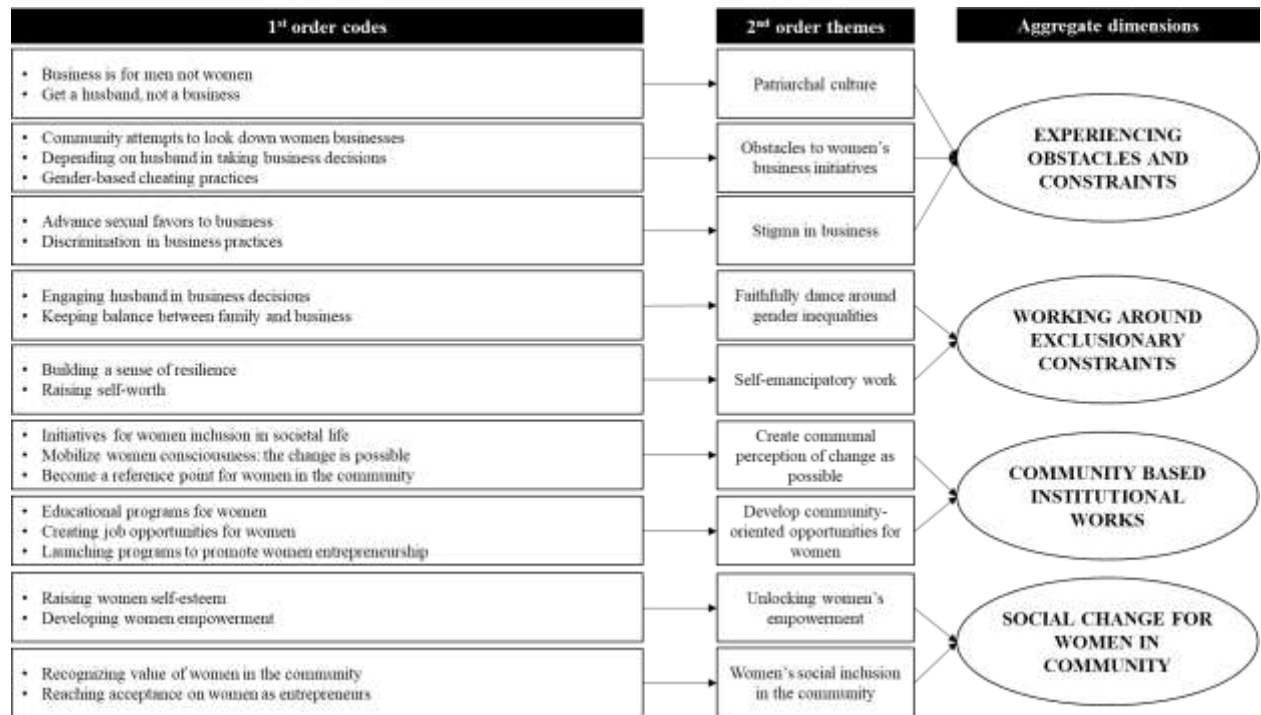
Step 1: Creating first-order codes

We started with no-priori hypotheses, and we labelled the challenges mentioned in the interviews by women entrepreneurs, seeking to understand their underlying causes. At the same time, we focused on the actions of women entrepreneurs to overcome such constraints. Further, we started to highlight operational mechanisms within the community, and the generated impact on the community as discussed by informants. Codes were derived inductively from the data and ranged in length from a few words to whole sentences. Following the re-reading process for the interviews and other data, we gradually combined the original labels into the preliminary first-order codes.

Step 2: Aggregating first-order codes and second-order themes

At this stage, we gathered the first-order codes into themes that had already been identified in the literature. Using axial coding, we combined first-order codes into second-order themes, engaging in a comparison of emerging constructs with existing concepts in the theory (Gioia et al., 2013). Finally, we grouped second-order themes into four broader conceptual categories (aggregate dimensions): *‘Experiencing obstacles and constraints’*, *‘Working around exclusionary constraints’*, *‘Community-based institutional work’* and *‘Social change for women in the community’*. Figure 1 reports the Data Structure, while for limited space we have not included a Data Table with selected quotations.

Figure 1. Data Structure



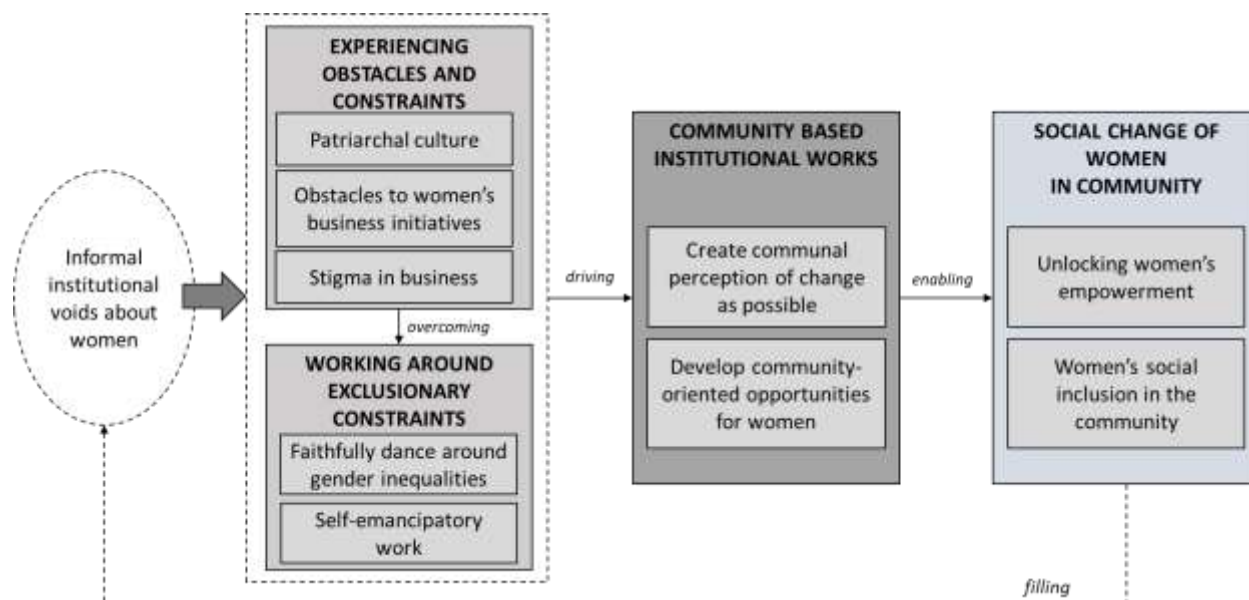
Step 3: Building the grounded model

Once second-order themes had been identified and grouped into the four aggregate dimensions, we examined the relationships among these constructs. We attempted to understand the process by which women entrepreneurs in contexts of informal institutional voids generate social change through entrepreneurship. We collated evidence and the grounded model developed from the data analysis is presented in the next section.

FINDINGS

The article focused on women entrepreneurs (WEs) that pursue actions to tackle social exclusion in sub-Saharan Africa. Building on data collected in 2021, we advance a grounded model describing a three-phase process with four aggregate dimensions: *Experiencing obstacles and constraints*; *Working around exclusionary constraints*; *Community based institutional work*; and *Social change for women in the community*. The Figure 2 shows the grounded model that we developed.

Figure 2. Grounded Model



Experiencing obstacles and constraints

Our model shows that women in sub-Saharan Africa face cultural and societal patterns that are obstacles to entrepreneurial action. We conceptually organized the aggregated dimension of “Experiencing obstacles and constraints” into three second order codes: ‘patriarchal culture’, ‘obstacles to women’s business initiatives’, and ‘stigma in business’.

Patriarchal culture. Women in sub-Saharan Africa experience a widespread belief that “Business is for men not women”. This manifests in local communities where women are not expected to have the skills, expertise, and knowledge to run businesses, and business is seen as a masculine activity and therefore dominated by men. The following quotation clearly explains the reaction of communities when the WE1 started a business:

“When I was starting my business, people were very skeptical and wondering about how I was going to manage to carry out the items, to look for the materials and that architecture is mainly a business designed for men and not women.”

Some societal beliefs do not allow women to act freely within the community, raising physical constraints which limit women’s entrepreneurial activity. This includes limits to the spectrum of business activities women can pursue, reducing their opportunities to be economically independent. In this vein, local and strong institutions such as family and communities force women to accept the social rule of “Getting a husband, not a business”. WE7 in this regard shared her experiences:

“The social and cultural aspects are stronger than anything else because culturally women are forbidden being in public places. Why? They rather must be at home and kitchen at most. Oppression of women entrepreneurs are mostly done by their husbands and if the woman does not submit to the man and choses to business than the marriage has to break”

In Africa, women are often constrained to pursue ancestral activities in the home, such as caring for children and husbands, as argued by the WE2:

A lot of problems exist because in our community, it is still there the conception that females must stay at home, take care of the home and child and cook [...] In Sudan, there are still people who have a patriarchal approach for which women should stay at home, taking care of the family and children and are not meant to cover business roles [...] The stigma comes from years and years ago from the traditional culture embedded in the patriarchal approach, I think”

Obstacles to women’s business initiatives: Women’s attempts to start businesses may be interpreted by communities as a transgression of local norms raising repressive actions from communities to impede or prevent them. Our data relieved that “Communities attempt to lock down women businesses”

through limiting women resources and market accesses. Members of the community might also try to influence husbands in impede their wife's businesses as being non-accepted according to local norms. This situation was shared, amongst others, by WE2

"The community of course looked down upon me at the beginning [...] Men who are exposed do support me to continue with my business but most of them are still rigid with the thoughts that women are not supposed to do business. Therefore, they forge a lot of propagandas (deformation) to my husband so that he may stop me from coming to work. Men in business hardly support women in business because of fear that a wife might have money"

Moreover, women that run businesses are strongly "Depending on husband in taking business decisions". Accordingly, husbands believed they had the right to interfere in women's business decisions. Therefore, women needed the approval of husbands before taking actions, and this, in some cases, delayed business decisions, losing out on opportunities. We see this in the following quotation from interview with WE3:

"Even though this business is solely mine without any contribution of my husband, I cannot make any action without his approval or consent. Most entrepreneurship actions to be taken are those that women cannot make, and men have used that to really oppress us in the business world."

In this regard, our findings documented that men, sometimes, did not involve women in decision-making, despite businesses being run by women, as is clearly observed in the following quotation: "I suffer from exclusion from major decision-making processes [...] exclusion from major decision-making processes at the workplace because of being a woman." (WE5)

Another repressive action from society women experienced was "Gender-based cheating practices" in pursuing entrepreneurial actions. In this case, men in business did not support women entrepreneurs and impeded their actions by stealing resources or leveraging information asymmetries. For instance, WE1 complained about unequal pricing strategies of suppliers who attempted to cheat women entrepreneurs while favoring business men, as illustrated by the following quotation:

"Sometimes even when you buy things, they do not give you the same price, because they think you are not aware about what the real price is. This happens all the time. Men are treated well, are given attention when they are at the shop, while women are treated rudely. There is never equal treatment. The same thing happens while doing transportation: sometimes, they charge you differently because they feel you not having any other choice. [...] Other than men trying to cheat on you because you are a woman and you don't know the price, not that much."

Stigma in business. Women entrepreneurs faced further challenges in dealing with men related to sexual abuse and forms of discrimination. Building on our data, we observed that women are often victims of men that "advance sexual favors" as a form of exchange in business dealings. This sometimes happened, not as a means to gain further advantage for women, but just to obtain due resources or certifications from men. This is exemplified by WE12 in the following quotation:

When it comes to working for the government, there is a lot of inequality especially for women who are trying to get tenders [...] Tenders usually worth a lot of money in terms of millions, the only problem is that when it comes to women to get these tenders, you have to bribe the official government, or they will ask you to sleep with them. Unfortunately, even when it comes to the payment, when the government must actually pay you as a female entrepreneur it takes time because they want a favor, and most of the time they are sexual favors".

Such abuses were built on the belief that women, who became entrepreneurs, have had sexual exchanges with men, otherwise they would not achieve such opportunities, as WE8 quoted: "People cannot believe that you got into it because of your credits. This is very normal norm in the African society. Sometimes is very frustrating because they do not think you got into it because of your effort".

In terms of "Discrimination in business practices", women were often victims of insults from men. Such practices impede women entrepreneur's activities and raise and reinforce stereotypes that women are unable to run businesses. It follows that women were excluded from business ties and struggled to

have peer-to-peer relationships with men. For instance, WE3 shared the following experience in this regard:

“When I started this business, many men called me with names suggesting that I was a widow. Others called me a prostitute. Because hardware shops are mostly done by men, I faced resistance because they thought”

In conclusion, women that intended to pursue entrepreneurial opportunities faced cultural challenges and repressive actions that stigmatised women. Such a combination of societal beliefs, obstacle and threats hamper women’s efforts to become economically independent.

Working around exclusionary constraints

Our model shows that women entrepreneurs pursue actions to overcome gender-based constraints in running businesses. We conceptually organized the aggregated dimensions of “*Working around exclusionary constraints*” into two second order codes: ‘Faithfully dance around gender inequalities’; ‘Self-emancipatory work’.

Faithfully dance around gender inequalities. Women entrepreneurs pursued strategies that helped them to run business activities without altering beliefs and the status quo. In this vein, they adapted to local cultural norms to still allow them to become entrepreneurs. Accordingly, they actively “Engaging husband in business decisions”, often reducing men’s perceptions of being excluded. In this way, women reduced the interference of men while keeping them updated about business outcomes. For instance, WE7 documented:

“For me, why I have succeeded in business: I have accepted to “faithfully dance to his tune” that is why he allowed me to come and work. He plays supervisory role in this business; I must make sure to let him update about everything that happens, then he makes decisions about the direction to take as he is the one who gave me capital to start the business”

Moreover, women committed to “Keeping balance between family and business” in order to maintain their family responsibility that cultural norms expected from them. Sometimes, women started businesses from home, ensuring they took care of family issues while being able to pursue business activities, as quoted below:

“Women start a business that they can carry out from home, so you do something that does not require you to get out of your home so you can have your customers by while doing other things in the house. Women that are more educated and know about technology are able to do online marketing of the products: customers will call and then you will be able to use the motorbike to deliver. So, they operate from home but still doing their business. This is accepted.” (WE7)

Self-emancipatory work. Women raised consciousness of their independence and strength. Our findings documented that WE emerged from normative obstacles that repressed them under the ‘protection’ of men which limited their actions and opportunities. Such self-emancipatory work was aimed at overcoming societal pressure. Accordingly, women needed to raise self-confidence through “Building a sense of resilience”. For instance, WE20 in this regard stated:

“I realized that for success, I had to stand as a real woman and not to care for what names they call me because I speak out and do the same businessmen do. In this way I am always prepared to stick out my neck, speak the revolting things and walk knowingly into conflicts. Being assertive helps me to use my mind, body and voice to command attention and interest and I can confidently stand up for what I believe”

Moreover, women became conscious about their value and expertise “Raising self-worth”. Such awareness became a turning point for women, and helped them to emerge from repressive societal norms and this enabled them to have confidence in establishing peer-to-peer relationships with men. The following quotation clearly describes this aspect:

“It feels good, and some kind of liberation, when I also can confidently propose a business solution that I know will work for the specific trade, and positively impact the community.”

In conclusion, women pursued actions that enabled them to create opportunities to run entrepreneurial activities while raising confidence through self-emancipatory work which allowed them to become entrepreneurs despite the oppressive societal environment.

Community-based institutional work

In a second phase, we found that by working around exclusionary constraints, WEs are driven to engage in community-based institutional work in order to create social change. We found evidence of two main practices as second order codes: 'Create communal perception of change as possible'; 'Develop community-oriented opportunities for women'.

Create communal perception of change as possible. First, WEs who raised consciousness of their independence and strength were able to engage with the community to create a perception of change as something possible through initiatives for women's inclusion in societal life. For instance, WE#8 documented the involvement of women in meetings with the community to foster their inclusiveness, as explained in the following quote:

"I had then worked in the Maasai community, and our aim was to build equal homes. At the beginning, people were not very involved (...) So, we decided to organize meetings with women and community people to encourage their project [...] I tried to focus mostly on first ladies, which are governors' wives: you encourage them to come to the meeting where you talk about their project in which they are supposed to play a role."

Also, WEs had to mobilize women's consciousness to show that change is possible. This has been documented in many cases, and exemplified in the following:

"Through kindness and way to behave. Mainly it is about talking and teaching. I keep emphasizing to the girls that this is the situation, and these are the values that are there, but things tend to evolve. [...] You teach them the advantages of what they do"

Finally, we found that WEs became reference points for women in the community in order to enact social change. This is reported by WE#7 who argued the need of *"I have been also a reference for many women around [...] I am like a role model to others, a trainer to others"*. Also, WE#12 showed the importance of being a reference point for other young women:

"I see myself as the voice of young women entrepreneurs in Kenya who want to achieve economic sustainability. I also see myself as the voice of the textile and apparel sector: as an institution, the fashion school wants to focus more on employee's rights and regulations that needs to be followed in order to achieve sustainability in the textile and apparel sector" WE#12

Develop community-oriented opportunities for women. We found a second community-based institutional work practice related to developing opportunities for women at a community-level. For instance, some cases developed educational programs for women such as in local sustainable agricultural production (WE#15 and WE#16) or in manufacturing skills (WE#19). Also, WEs were involved in creating job opportunities for women in the community in different sectors. This is reported by WE#1, founder of a micro-finance organization which also provided job opportunities to women:

"I give them the opportunity to have a job, to find their spot in their lives, to be financially stable and capable to rely on themselves, saving them from a precarious situation in which the risk is to be underpaid, used and getting pregnant to have someone to take care of them and to leave their hometown"
WE#1

In a similar vein, our cases highlighted the importance of programs related to promotion of women entrepreneurship in the community:

"It works in partnership with the community to mobilize, link and support small enterprises led by women. We helped them with skills and we ran a 5-year project on "Non-financial Business Support Services to Mitigate Failure of Women Enterprises" [...] It was begun was to address the problem of poor entrepreneurial culture, very low financial literacy and passive involvement of the community" WE#6

Other cases developed entrepreneurial programs and training such as WE#10, business skills-oriented trainings (WE#12, WE#23 and WE#24), finance-oriented programs (WE#8).

Social change for women in the community

In a final step of the model, we observed that community-based institutional work has enabled WEs to ultimately create social change for women in community. Precisely, we found two important changes: “Unlocking women’s empowerment” and “Women’s social inclusion in the community”.

Unlocking women’s empowerment. Our cases showed a first important societal change concerning women in the community, which is related to their self-esteem and empowerment. In fact, we observed that through the process of institutional work at a community-level, women overall raised their self-esteem as documented: “Now girls are able to bring their kids to school, they are no longer running from villages, they can sustain themselves and they changed their attitudes in dressing and keeping their homes. They are able to take positions in politics; someone has become a good leader” (WE#1), or “When women feel more confident and know their power, this will lead to greater ambitions by these people” (WE#10). Overall, women in the community due to their involvement and participation in programs, have been able to change their perception, as documented in the following quotation by WE#11:

“Women will see themselves more useful in their roles and providers for their families. [...] They also see themselves as more powerful as they will have something to offer” WE#11

Through community-based institutional work, our cases have been able to develop women’s empowerment, highlighted in the following quotations: “Through our farm trainings, many persons (women and youths) were transformed and started their own business such as selling eggs and chicken” (WE#15), or “Young women here in Isiolo county are now economically independent [...] we made a little step” (WE#20). Economic independence as a form of empowerment, have been also reported by case #12, as illustrated in the following selected quotation:

They will be independent and do not have to rely on husband or family or whoever, but they will be able to sustain their own family by themselves. As I said, a person who sustains a woman, is sustaining an entire family [...] they are able to sustain the family by themselves without having to rely on men. So, it helps to change the perception of women in our society (WE#12)

Women’s social inclusion in the community. A second societal change that we observed related to the inclusion of women in the community. Many cases highlighted the recognition of women as valuable in the community as something which changed with the work performed by the WEs. For instance, WE#18 recognized changes in community perceptions of gender equality: “It helps understand that a woman is no different than Man to do anything. In business, a woman can do what men can do”. Also, WE#20 reported how the community changed their perception:

“Initially the community doubts your skills and capability to succeed because they look at you as woman. [...] But now they appreciate because this is a service business benefitting them directly [...] women raised their value against other people here” WE#20

Another important change concerned the social acceptance of women as entrepreneurs by community members as they recognize women in business: “I think I am now more included because I have interacted with people and made them aware that my doing business is more about bringing social transformation” (WE#12). In a similar way, the following quotation highlight this important social change on inclusiveness of women as entrepreneurs:

“Society is changing its view of women’s roles and is accepting women entrepreneurship. Through what I offer, I aim at expanding and consolidating this view by giving to women the opportunity to be successful entrepreneurs” WE#12

Overall, we illustrated a three-phase model which show how WEs engage in a process of overcoming entrepreneurial obstacles, undertaking community-based institutional work, to create social change in the community. Thus this process enables women entrepreneurs to change their societies and ultimately

contribute to filling informal institutional voids concerning women, which were the origin of the obstacles experienced by women entrepreneurs at phase 1.

DISCUSSION

Our three-phase grounded model depicts how women entrepreneurs overcome informal institutional voids and *entrepreneurial obstacles* (1), engage in *community-based institutional work* (2), and enable the creation of *social change for women in the community* (3).

In the first phase, we observed specific informal voids related to women entrepreneurs in the form of patriarchal culture, repressive actions against women businesses and stigmatization (Ge et al., 2019; Webb et al., 2020; Chipp et al., 2019). We then illustrated how women entrepreneurs overcome such entrepreneurial obstacles with work around practices (Sydow et al., 2020), precisely (a) faithfully dancing around gender inequalities; and (b) self-emancipatory work. In this regard, emancipation is not only the output of entrepreneurship (Rindova et al., 2009; Chandra, 2017), but a concrete means to overcome specific informal institutional voids.

Thus, through individual work around practices and community-oriented approach, they have been able to overcome negative perceptions concerning women in African societies. In a second phase, we also discovered the importance of working with community (Siqueira et al., 2016; Lashitew et al., 2020a), in the form of community-based institutional work. Such institutional work aims at exploiting relationships with community members to lay the basis for women's involvement.

Finally, this process enabled women entrepreneurs to create social change, by first empowering women (Haugh and Talwar, 2016) and providing social recognition to women in the community.

Contribution to informal institutional voids literature

The first contribution that we offer with our work is related to a greater understanding and contextualization (Welter et al., 2019; Sydow et al., 2020) of informal institutional voids. In fact, the current literature is mainly documenting informal voids in general (Webb et al., 2020; Siqueira et al., 2016), while our study offer a concrete map of informal institutional voids which impede women entrepreneurs. Such voids are also related to violence and criminal actions which constrain women in business. We also explored the implications of such voids, and how women entrepreneurs are able to work around them through an emancipatory process (Chandra et al., 2017; Rindova, 2009).

The theoretical implication is that future research may further explore not only the sources of informal voids, but also the consequences on women entrepreneurs of such voids, such as the positive trigger toward societal change (Pergelova et al., 2021). Thus, our paper offers fine-grained evidence about implications of women-based informal voids and the way by which such entrepreneurs may deal with voids in Africa (George et al., 2016a; Zoogah et al., 2015).

Contribution to literature on social change and inclusive societies in developing countries

Through our research we also enrich knowledge about women entrepreneurs as social change makers (Haugh and Talwar, 2016; Pergelova et al., 2021). In particular, we offer a new perspective on how – through an emancipation process – women entrepreneurs are able to alter current societal norms (Pergelova et al., 2021). In this sense, emancipation is the means (Rindova, 2009; Chandra, 2017) but also the outcome of social change processes implemented by women entrepreneurs. In fact, by emancipating themselves, and engaging in institutional work, women entrepreneurs are able to legitimate other women concerning their value and role in the society.

Thus, our paper stresses the possibility of social change which happens from the ground (bottom up) rather than through a top-down approach (Webb et al., 2021; Siqueira et al., 2016; Mair et al., 2016). This evidence speaks to broader debates on logics and dynamics implemented by women entrepreneurs on how they are embedded in a communitarian context, to foster societal change (Pergelova et al., 2021; Lashitew et al., 2020a). We thus address to calls for contextualization on a quite relevant phenomenon in Africa (George et al., 2016a; Welter et al., 2019), also questioning the relationship and involvement of women entrepreneurs in the community, to effectively enable social change.

Practical implications for entrepreneurship and social change in Africa

With our work we offer implications and suggestions for policymakers and NGOs, calling on them to modify their initiatives and programmes in order to facilitate the women in the self-emancipation process (phase 1 of the model). Secondly, we call for governmental interventions in support of community-based practices implemented by women entrepreneurs which may foster social change (phase 2-3 of the model). Practitioners, in this way, are suggested to transit toward conceiving women entrepreneurs not only as mere beneficiaries, but also as social change agents, and thus develop stronger and broader initiatives to support their entrepreneurial actions.

CONCLUSIONS: LIMITATIONS AND FUTURE RESEARCH

Our study aimed to investigate how women in sub-Saharan Africa build an inclusive society through entrepreneurship. Despite the unique and fine-grained evidence provided in this research, and relevant contributions to women entrepreneurship and social change literature, our research presents some limitations which may encourage further studies on this topic. First, our research focused on only East Africa, including Sudan, Uganda, Kenya, and Ethiopia. However, this may call for cross-regional studies to compare our findings with other social contexts, from which, potentially, may emerge different sources and consequences of women-related issues that impede entrepreneurial actions as well as mechanisms to overcome them and promote social inclusion. Moreover, given the purpose of our study, our sample included only women entrepreneurs which, as described in the article, have faced peculiar gender-based challenges that may not be generalizable and extended into other forms of discrimination, such as tribes, sexual orientation, or social class. Therefore, further studies may investigate how individuals stigmatized by society overcome normative inequalities while promoting inclusive social change.

These are only a few of the routes that scholars may take into consideration for future studies. We hope that our research encourages further research on women entrepreneurship and social exclusion in developing countries.

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ORGANISATIONAL CREATIVITY ON PRODUCT INNOVATION PERFORMANCE OF SMES: EXPLORING MECHANISMS AND BOUNDARY CONDITIONS

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ABSTRACT

Given the increasing level of uncertainty surrounding the current business environment, organisational creativity has become even more crucial and urgent if firms are to recover and survive. Based on survey data from 223 small and medium-sized enterprises (SMEs), this paper draws on the resource-based view (RBV) to explore mechanisms and boundary conditions by examining organisational creativity on product innovation performance of SMEs in Ghana. The results show that both novelty and usefulness dimensions of organisational creativity are positively related to the performance of SMEs with usefulness having greater impact. Design management capabilities (DMC) partially mediates the effect of novelty and usefulness dimensions of organisational creativity on performance. Interestingly, high levels of market awareness deteriorate the indirect effect of both novelty and usefulness on firm performance, via DMC. Our paper enriches the RBV of the firm by highlighting that organisational creativity-performance relationship is more complex than previously noted, as SMEs require significant financial resources, human capital and institutional support to be successful in a dynamic market environment.

Keywords: boundary conditions; organisational creativity; product innovation; firm performance, SMEs

INTRODUCTION

There is a plethora of research that focuses on creativity and innovative performance of small and medium-sized enterprises (SMEs) in the context of developed countries (Markovic et al., 2021; Sozbilir, 2018). However, SMEs in emerging markets including Ghana often lack legitimacy and operate under unregulated and underdeveloped institutional environments (Agyapong & Acquah, 2021). Therefore, understanding the creativity and innovative performance of SMEs from developed countries may offer limited or no useful insight for SMEs in emerging market economies (Boso et al., 2017; Roxas et al., 2017). As the global business environment becomes ever more complex and unpredictable, the need for organisational creativity remains key for corporate survival and competitiveness (Schriber & Lowstedt, 2020; Sozbilir, 2018; Zhou et al., 2019). This is particularly timely, as businesses across the world have been recently confronted with the COVID-19 pandemic which led to changes in consumption patterns, market demand, and disruptive influences across every sector and industry. The increasing level of uncertainties surrounding the current business environment makes creativity even more urgent if firms are to recover and survive (Markovic et al., 2021; Ma et al., 2021). Prior literature suggests that recovery phases for businesses in underdeveloped markets,

particularly, SMEs following economic shocks is challenging and often take a long while (Agyapong et al., 2021). It is, therefore, not surprising that practitioners and researchers around the world have developed particular interests to understand how creativity affects SMEs resilience and successes. Even before the emergence of the COVID-19 pandemic, the issue of whether organisational creativity leads to competitive advantage and superior performance of SMEs has long been debated in the academic literature (Boso et al., 2017; Roxas et al., 2017). Drawing from a meta-analysis, Woodman et al. (1993) argues that organisational creativity – creating something new or doing something for the first time, stimulates firms' performance. There is a well-established strand of literature supporting the assertion that organisational creativity is crucial for product innovation performance and gives innovative firms competitive advantage (Sozbilir, 2018).

Despite the growing body of research on the nexus between organisational creativity and product innovation performance, prior literature has often reported mixed and conflicting results (Liu & Atuahene-Gima, 2018; Mardani et al., 2018; Wijayanto, 2021). Importantly, there is largely inadequate prior literature that explain the mechanisms through which organisational creativity could affect performance (Menges et al., 2011; Sarooghi et al., 2015). This is particularly the case within the context of sub-Saharan Africa, where the existing literature has not adequately explored the mechanisms through which creativity-performance nexus occurs (Afriyie et al., 2019; Dadzie et al., 2012). Boso et al. (2017) and Wang and Miao (2015) have postulated that the effect of organisational creativity on performance is mostly influenced by certain contextual factors. There is therefore the need to consider contextual factors when examining the nexus between organisational creativity and product innovation performance of firms (Boso et al., 2017; Wang & Miao, 2015). The theoretical specification of organisational creativity-performance relationship continues to lack empirical examination of relevant boundary conditions that may influence this important relationship (Boso et al., 2017). Previous studies have considered organisational creativity as a unidimensional construct (Azamela et al., 2022), disregarding the uniqueness of each dimension of organisational creativity and how they may influence performance differently. For example, the usefulness dimension and the novelty dimension of organisational creativity can be fairly independent of each other, thus influencing performance in different ways (Sue-Chan & Hempel, 2016; Yuan & Zhou, 2008, p.3).

While prior research on organisational creativity and SMEs innovative performance has been dominated by advanced economies context (Wijayanto, 2021), this paper focus on an emerging market in sub-Saharan Africa which is largely under-researched. Examining the nexus between organisational creativity and product innovation performance of firms within an emerging market context is even more crucial as such business environments are largely confined by institutional void and critical resource shortage (Boso et al., 2017; Zeschky et al., 2014), underscoring the adage that ‘necessity is the mother of invention’ (Gibbert et al., 2014, p.197). On the one hand, design management capability (DMC) represents a mechanism through which organisational creativity influence innovative performance (Kramolis et al., 2019). There is, therefore, an indirect relationship between organisational creativity and performance through DMC which is conditional upon a firm’s level of market awareness (Boso et al., 2017).

Our paper makes the following contribution to the literature. First, we examine the relative importance of the two dimensions of organisational creativity on the performance of SMEs. We further conceptualize organisational creativity and DMC as firm-level capabilities needed by SMEs to understand and acquire information about customers, competitors, and industry. Since firms often face intense competition from their rivals in dynamic markets environment (Agyapong et al., 2021; Liu & Atuahene-Gima, 2018), we employ the contingency principle which argues that the interplay between the firm internal characteristics and its external factors create a fit which improves firm performance. Second, we investigate the mediating role of DMC in creativity-performance relationship. We highlight that organisational creativity leads to product innovation performance when channeled through DMC. Third, we explained how responsiveness to market needs (market awareness) can moderate the relationship through DMC. We underscore that the indirect effect of organisational creativity on performance via DMC is contingent upon the levels of market awareness – a proxy for the external environment. Specifically, our paper differs from previous studies (Afriyie et al., 2019; Donkor et al., 2018) by investigating how the external environment affects the extent to which SMEs benefit from creativity. This is important because differences in responsiveness to market needs by firms largely

explain why some firms succeed while others fail in business. Finally, we conceptualize organisational creativity as a multi-dimensional construct, comprising novelty and usefulness. This is important because existing studies often produce weak and inconsistent results regarding the creativity-performance relationship without consideration of the differences between novelty and usefulness (Yuan & Zhou, 2008). We further differentiated organisational creativity into various dimensions, such that the influence of each dimension on performance is uniquely identified.

THEORETICAL FRAMEWORK AND HYPOTHESES

Prior literature holds the view that effective management strategy is a critical tool for firms to compete and survive in a dynamic business environment (Gao et al., 2021; Mardani et al., 2018; Ortega, 2010; Sozbilir, 2018). This view further suggests that firms can achieve competitiveness when they devise strategies that best fit the environment in which they operate (de Vasconcellos et al., 2019). This aligns with the notion of ‘business strategic fit’ (Liu & Atuahene-Gima, 2018). In his seminal work, Porter (1980) argues that the success of a firm’s competitive strategy is highly dependent on how its management strategy relates to the business environment. Thus, we contend in this paper that competitive advantage may be highly unlikely for SMEs whose strategic management capabilities mismatches the business environment.

The RBV of the firm assumes that the underlying resources and capabilities of production are generally heterogeneous across firms (Barney, 1991; Bigelow & Barney, 2021). This signifies that firms are heterogeneous in terms of their internal capabilities and resources, and have varying levels of production efficiency (Schriber & Löwstedt, 2020). The assumption of heterogeneity implies that some firms may be superior to others, explaining why some firms succeed while others fail in a competitive business environment (Bigelow & Barney, 2001).

The proponents of RBV acknowledge the critical role of a firm's internal factors such as resources and capabilities in obtaining competitiveness and emphasized the processes by which such competitiveness could be sustained (Newbert, 2008; Ortega, 2010). A firm’s resource bundles and capabilities can only result in sustained competitiveness when they are rare, valuable, and non-substitutable (Barney, 2001; Ortega, 2010). Barney (2001) argues that some resources and capabilities of firms may be inelastic in supply. This implies that it may not always be clear how to deploy these resources and capabilities in the short to medium-term to respond to environment dynamism, thus, reducing firms’ ability to sustain their competitive strategy (Liu & Atuahene-Gima, 2018). We, therefore, contend that creativity may more likely enable firms to build a viable competitive edge (Hsiao & Chou, 2004; Mardani et al., 2018; Sarooghi et al., 2015; Wijayanto, 2021). Firms’ resource bundles and capabilities can lead to a sustained competitive edge when there exist incentives that encourage creativity within the firm (Newbert, 2008). Drawing from the proponents of the RBV, if firms can utilize given resources and capabilities in developing valuable and inimitable new products, they will more likely achieve competitiveness and large economic rents (profit) (Gao et al., 2021). Thus, the major implication of the RBV is that differences in performance outcomes across firms are partly attributed to differences in resource endowment and capabilities (Barney, 2001). In this paper, we proceed on the premise that organisational creativity includes intangible resources (e.g., entrepreneurial, intellectual, technological and reputation). Therefore, it is expected that SMEs can utilize these unique resources and capabilities to achieve the best performance outcomes.

Organisational creativity and product innovation performance

While the concept of organisational creativity has attracted significant scholarly interest over the past few decades, ambiguity exists in its conceptualisation (Boso et al., 2017; Kappel & Rubenstein, 1999). Sue-Chan and Hempel (2016) contend that organisational creativity is not absolute but relative and often specific to the field where the creative act arises. de Vasconcellos et al. (2019) points to the notion that regardless of the domain, whether at the individual or organisational level, creativity is the production of useful new ideas to solve customer problems. According to Amabile (1983, 1988), a product or idea is said to be creative when it is both novel and useful. Following Amabile’s (1983) two-

dimensional view of creativity (novelty and usefulness), we argue that organisational creativity is a two-dimensional construct where the usefulness dimension and the novelty dimension can be fairly independent of each other (Yuan & Zhou, 2008, p.3).

The usefulness of a product, idea or service, which is often regarded as the most important dimension of organisational creativity; it reflects the process of generating useful solutions to meet customers' needs (Liu & Atuahene-Gima, 2018). This shows that the ability of firms, particularly SMEs, to achieve competitiveness depends not only on creative ideas but also on how useful the idea is in solving customers' problems or satisfying changes in customer taste and preferences (Caniels & Rietzschel, 2015; Gao et al., 2021; Mardani et al., 2018). Liu and Atuahene-Gima (2018) postulated that when customers are satisfied with a firm's product offerings, they tend to always associate with such a firm and increase loyalty to the firm. The usefulness of a firm's new processes and products can be a valuable resource for them to effectively compete and survive in a dynamic and complex market environment (Gao et al., 2021; Mardani et al., 2018).

Additionally, novelty refers to the uncommonness of ideas, products or services introduced by a firm (Sue-Chan & Hempel, 2016). Creative firms must go beyond the normal routine to introduce something new to gain a competitive position in the market (Woodman et al., 1993). Boso et al. (2017) contend that a firm can build strong entry barriers against its competitors and deny them the opportunity to survive when it frequently introduces original and differentiated processes and products in the market. In creating new products, firms can engage in several creative activities, including design changes, new packaging, new delivery methods and so on.

Prior literature has shown that organisational creativity is a crucial resource that enables firms to achieve high performance (Gao et al., 2021; Pishghadam & Mehr, 2011; Schriber & Lowstedt, 2020; Weinzimmer et al., 2011). According to Curado et al. (2018), product innovation performance is the outcome of a successful implementation of novel and useful ideas. Wijayanto (2021) argues that organisational creativity is the starting point of every product innovation. Creative firms can innovate easily and faster to take advantage of some identified opportunities, thereby generating large economic rents (Gao et al., 2021). Innovative product largely attracts patronage and gives customers enough incentives to choose such a product over the competitor offerings (Agyapong et al., 2021). Indeed, creativity improves product innovativeness for higher performance (Caniels & Rietzschel, 2015; Mardani et al., 2018).

Building on Amabile's (1983) view that the various dimensions of organisational creativity can achieve different performance outcomes, Yuan and Zhou (2008) and Grant and Berry (2011) asserted that the novelty dimension and the usefulness dimension of creativity are influenced by different social and contextual factors. Thus, the two dimensions may be fairly independent of each other, and the way they influence firms' performance can differ.

Based on the two theoretical dimensions of organisational creativity, it is imperative to consider each dimension of organisational creativity as a unique variable as they may influence performance differently. Thus, we proceed based on RBV that each dimension of organisational creativity offers itself as a unique resource that is valuable, heterogeneous, immobile, inimitable and non-substitutable, hence enabling SMEs to achieve competitiveness and superior performance. Therefore, we propose the following hypothesis:

H1a: Creativity novelty has a direct, positive relationship with the performance of SMEs

H1b: Creativity usefulness has a direct, positive relationship with the performance of SMEs

The mediating role of design management capability

DMC represent a firm's ability to use its managerial skills (expertise) to optimize the design process. According to Chiva and Alegre (2007), design is the outcome of a well-managed process. This process involves the application of unique competencies and skills by a firm to develop new processes and products with high quality and a good-looking appearance (Chiva & Alegre, 2007). Effective DMC can enable firms to achieve product differentiation advantage and superior market performance (Kramolis et al., 2019). Bloch (1995) argued that design quality is undoubtedly imperative for competitive advantage and performance. Creative ideas will more likely promote firms' performance when these firms exhibit strong DMC to be able to convert their ideas into customer problem-solving goods. Thus, a firm's DMC can largely interplay with its creativity to boost performance as it plays an

important role in the successful implementation of new ideas (Hsiao & Chou, 2004; Kramolis et al., 2019).

In recent times, prior literature found evidence of an indirect relationship between organisational creativity and performance and assert that organisational creativity is a context-dependent construct (Boso et al., 2017; de Vasconcellos et al., 2019). Wang and Miao (2015) asserted that organisational creativity may be necessary but not a sufficient condition for performance, hence, organisational creativity does not always drive performance. For example, performance outcomes of a firm's creativity may be highly dependent on certain characteristics of the firm.

We, therefore, contend that DMC will significantly mediate the relationship between organisational creativity and SMEs performance. Nonetheless, we further contend that each dimension of organisational creativity may exhibit a unique impact on performance given this mediating variable. Therefore, we propose the following hypothesis:

H2a: Creativity novelty has an indirect, positive relationship, via DMC, with the performance of SMEs

H2b: Creativity usefulness has an indirect, positive relationship, via DMC, with the performance of SMEs.

The moderating role of market awareness

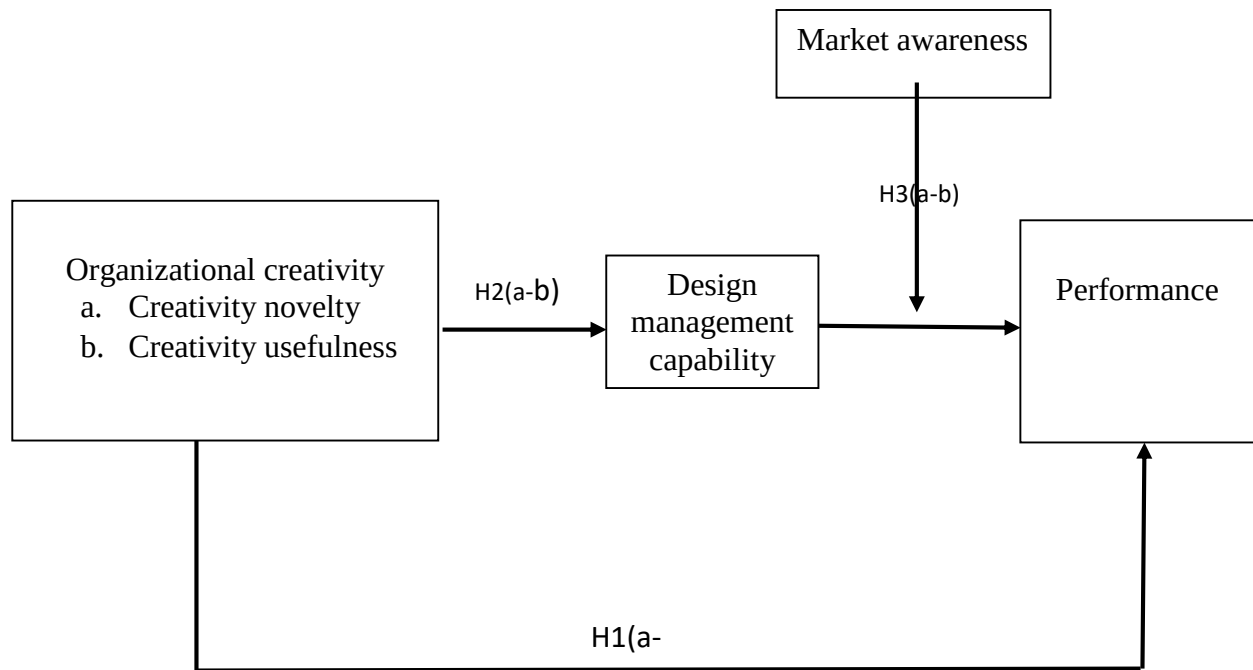
A market environment is said to be dynamic when customers' demand and competitors' strategies as well as the overall business outlook are rapidly changing (Joshi & Campbell, 2003; Story et al., 2015; Panda & Sangle, 2020). Agyapong et al. (2021) described a dynamic market environment as one with flexible entry and exit, thus creating an atmosphere favorable for intense competition. To survive in such an environment, firms must regularly monitor and respond not only to the increasingly changing customer taste and preferences but also to the rapidly evolving competitors' strategies in the market. Story et al. (2015) indicated that firms can build a competitive edge in dynamic market environments when they better understand the strengths and weaknesses of their competing firms, thereby modifying their products and services to take advantage of their competitors' weaknesses. This implies that a firm must vigorously anticipate the likely responses of its competing firms when introducing a new product or service. Thus, a highly dynamic market can influence a firm's resource deployment as well as survival strategies. Boso et al. (2017) argued that the indirect effect of organisational creativity on performance via DMC largely depends on some external factors such as market dynamism.

The increasing scale of globalisation, technological innovations and shortening product life cycles arguably make the market environment increasingly dynamic and uncertain (Zhou et al., 2019). According to Darvishmotevali et al. (2020), the difference between dynamic and stable market is characterized by the extent to which future developments can be predicted. While firms can easily predict future developments in a stable market, high levels of uncertainty and inadequate information often characterized dynamic market environments. Hence, dynamic market environments affect firms' decision-making process and require these firms to continuously adjust to remain competitive and profitable (Joshi & Campbell, 2003; Story et al., 2015; Schriber & Lowstedt, 2020). By this logic, we describe market awareness as a firm's ability to analyze, identify and respond to customers' requirements and competitors' actions and strategies. SMEs with a better understanding of the market in which they operate stand to benefit from creativity by strategically modifying their products and services to sustain a competitive edge (Story et al., 2015). Specifically, the effect of a firm's creativity on performance via DMC is moderated by the degree of market awareness (Figure 1). Organisational creativity is largely driven by firms' desire to respond to external changes, such as market dynamism (de Vasconcellos et al., 2019). We posit that each dimension of organisational creativity may exhibit a unique impact on performance in the presence of market awareness. Therefore, we propose the following hypothesis:

H3a: Market awareness positively moderates the indirect relationship between creativity novelty and performance of SMEs, via DMC

H3b: Market awareness positively moderates the indirect relationship between creativity usefulness and performance of SMEs, via DMC

Figure 1: Conceptualizing the effect of organisational creativity, DMC and market awareness on firm performance.



METHODS

Sample and data collection

The data were collected in two phases using multiple source approaches and a time lag to effectively tackle the problem of common method variance (Boso et al., 2017). During the first phase of the data collection, a total of 600 questionnaires centred on creativity, DMC, and market awareness were sent out to CEOs, Directors, and owner-managers of SMEs. After several telephone calls, personal visits, and email reminders, 315 completed questionnaires were obtained, representing a response rate of 52.5%. In the second phase of the data collection, all the 315 questionnaires received in the first phase were administered with a focus on performance variable to senior account officers (finance managers) of the same SMEs. However, 57 respondents failed to participate in the second phase, hence, 258 questionnaires were received. Upon our initial screening, 35 of the filled questionnaires were excluded either because they were incomplete or filled by the firms' CEOs who doubled as account officers. Overall, 223 questionnaires from the survey were used.

Measurement of variables

Creativity novelty

Creativity novelty ($\alpha = 0.843$) is measured using three items: (1) we normally have original ideas for our design processes and business operations, (2) we normally generate unprecedented solutions to problems, and (3) we always find new solutions to solve problems without relying on the traditional ways of solving our problems. Overall, managers and/or owners of the selected firms were asked to indicate the extent to which each item correctly defines their business activities using a seven-point Likert scale (1 = "very poor" and 7 = "extremely well").

Creativity usefulness

Creativity usefulness ($\alpha = 0.849$) is measured by the following items: (1) we normally develop simple solutions to complex problems, (2) we normally focus on identifying adequate plans to implement our new ideas, and (3) we usually combine ideas in a productive manner (e.g., Caniels & Rietzschel, 2015; Mardani et al., 2018).

Design management capability

DMC ($\alpha = 0.949$) measures were adapted from Bloch's (1995) product design and customer items. Overall, eight items were used to measure DMC of SMEs. These include: (1) we normally design and launch our new products faster into the target market, (2) we normally use the latest computer-aided design tools effectively in our business, (3) we normally estimate the true cost of our new products/services during the design process, (4) we normally test the manufacturability of our new products (e.g., standards, design process, etc.), (5) we normally get new product ideas from our customers, (6) we always get different functions in our firm to work together, (7) we normally find new design ideas that cannot be imitated easily, and (8) we quickly become aware of innovations and imitations of competitors.

Market awareness

The paper considered market awareness (responsiveness) ($\alpha = 0.871$) as a proxy for the external environment based on the work of Story et al. (2015). Market awareness was measured using the following items: (1) we quickly respond to important changes in our local market environment (e.g., regulation, technology), (2) we quickly respond to important changes made in the price structure of competitors in our local target markets, and (3) we rapidly respond to local market competitive actions that threaten us in our target markets.

Product innovation performance

Firm performance ($\alpha = 0.816$) is subjectively measured using three main items adopted from Boso et al. (2017). These include: (1) level of profit, (2) growth in profitability, and (3) return on investment (ROI). It must however be noted that the paper attempts to reduce this subjectivity by asking respondents to rate the extent to which each item appropriately describes their firms' performance year on year at least for the past three years.

Control variables

We controlled for three firm-specific characteristics: firm age, industry sector and firm size since they can potentially influence firm performance (Cheng & Yang, 2019). Firm age captures the experience of a firm and is measured as the total number of years the firm has stayed in business. To determine if the sector in which firms operate has any influence on their performance, the study includes industry sector as a dummy (e.g., 1 = if a firm is operating in the service sector and 0 = if the manufacturing sector). Firm size is measured as the total number of full-time employees engaged by a firm in its operations.

Data analytic process

The sample characteristics is shown in table 1. It suggests that 58.7% of the firms were operating in the service sector and over 81.6% of these firms have existed for more than 11 years, 74.9% of the firms have between 30 to 99 employees. Majority (78.5%) of the firms do not have a specific unit for research and development. Table 2 shows statistics for the assessment of validity and reliability of the constructs. Reliability and validity tests were performed using LISREL 8.80. Reliability of measures was assessed using composite reliability (CR) and Cronbach's alpha (α) (CA) while validity was assessed using average variance extracted (AVE), factor loadings and discriminant validity (correlation) (Agyapong et al., 2021). All the measures are good for empirical estimates as they far exceeded their recommended thresholds. Table 3 shows statistical results for the model fit. Confirmatory factor analysis (CFA) was performed on the retained items to assess the fitness of the constructs. Some fit indices were analyzed, including χ^2 / DF , CFI, RMSEA, NNFI, SRMR, and GFI. In addition, the square root of the AVE of the key constructs was revealed to be greater than their

interconstruct correlation, indicating strong evidence of the relationship between each pair of constructs (discriminant validity). Table 4 shows results of Harman's single-factor test which was performed to assess the possible occurrences of common method bias in the data. Results showed that the total variance extracted by one factor is 45.79%, which is less than the maximum recommended threshold of 50% (Aguirre-Urreta & Hu, 2019). This indicates that our data is free from the problem of common method bias.

Table 1: Firm characteristics

Variable	Category	Frequency	Percent
Industry sector	Manufacturing	92	41.3
	Service	131	58.7
	Total	223	100.0
Firm age	Less than 10 years	41	18.4
	11 – 20 years	171	76.7
	Above 20 years	11	4.9
	Total	223	100.0
Firm size	2 – 29 employees	56	25.1
	30 – 99 employees	167	74.9
	Total	223	100.0
Research & Development unit	Yes	175	78.5
	No	48	21.5
	Total	223	100.0

Table 2: Assessment of validity and reliability of the constructs

Constructs and their measurements	Factor loading	t-value	CR	AVE	CA
Creativity novelty (Yuan & Zhou, 2008; Sue-Chan & Hempel, 2016)			0.762	0.521	0.843
-We normally have original ideas for our design processes and business operations	0.85	Fixed			
-We normally generate unprecedented solutions to problems	0.66	8.12			
-We always find new solutions to solve problems without relying on the traditional ways of solving our problems	0.64	7.97			
Creativity usefulness (Sue-Chan & Hempel, 2016)			0.753	0.504	0.849
-We normally develop simple solutions to complex problems	0.70	Fixed			
-We normally focus on identifying adequate plans to implement our new ideas	0.72	8.69			
-We usually combine ideas in a productive manner	0.71	8.54			
Design management capability (Kappel & Rubenstein, 1999; Chiva & Alegre, 2007)			0.908	0.555	0.949
-We normally design and launch our new products faster into the target market	0.70	Fixed			
-We normally use the latest computer-aided design tools effectively in our business	0.64	9.10			
-We normally estimate the true cost of our new products/services during the design process	0.78	10.89			
-We normally test the manufacturability of our new products (e.g. standards, design process, etc.)	0.79	11.00			
-We normally get new product ideas from our customers	0.66	9.26			
-We always get different functions in our firm to work together	0.81	11.29			
-We normally find new design ideas that cannot be imitated easily	0.69	9.77			
-We quickly become aware of innovations and imitations of competitors	0.86	12.02			
Market awareness			0.741	0.500	0.871

-We quickly respond to important changes in our local market environment (e.g., regulation, technology)	0.77	Fixed			
-We quickly respond to important changes made in the price structure of competitors in our local target markets	0.70	8.16			
-We rapidly respond to local market competitive actions that threaten us in our target markets	0.62	7.61			
Firm performance			0.770	0.530	0.816
-Level of profit	0.61	Fixed			
-Growth in profitability	0.82	8.44			
-Return on investment (ROI)	0.74	8.11			
Note: CR, AVE and CA denote Composite Reliability, Average Variance Extracted and Cronbach's Alpha (α) respectively.					

Table 3: Model fit results

CFA model	χ^2	DF	χ^2/DF	RMSEA	CFI	NNFI	SRMR	GFI
Creativity novelty	3.34	2	1.67	0.055	0.994	0.982	0.025	0.993
Creativity usefulness	3.47	2	1.74	0.058	0.993	0.979	0.023	0.992
Market awareness	3.40	2	1.70	0.056	0.994	0.983	0.023	0.992
Design management	7.47	5	1.49	0.047	0.997	0.993	0.021	0.987
Firm performance	3.03	2	1.52	0.048	0.996	0.988	0.022	0.993
Overall	22.71	12	1.89	0.069	0.980	0.961	0.040	0.972

Note: χ^2 = Chi-square; DF = Degree of freedom; RMSEA = Root mean square error of approximation; CFI = Comparative fit index; NNFI = Non-normed fit index; SRMR = Standardized root mean square residual; GFI- Goodness of fit index.

¹Standardized estimates are reported.

Table 4: Common method bias test

Factor	Total Variance Explained					
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.680	48.399	48.399	9.158	45.789	45.789
2	1.166	5.830	54.230			
3	1.079	5.397	59.627			
4	.981	4.907	64.534			
5	.852	4.260	68.793			
6	.827	4.136	72.930			
7	.659	3.294	76.224			
8	.610	3.052	79.276			
9	.556	2.780	82.055			
10	.521	2.604	84.660			
11	.492	2.459	87.119			
12	.460	2.301	89.420			
13	.391	1.957	91.377			
14	.332	1.662	93.039			
15	.317	1.583	94.622			
16	.295	1.473	96.095			
17	.257	1.284	97.378			
18	.221	1.106	98.485			
19	.155	.773	99.258			
20	.148	.742	100.000			

Extraction Method: Principal Axis Factoring.

Table 5: Descriptive summary and inter-construct correlation

	Mean	SD	FP	NCRT	UCRT	DMC	MA	INDUS	Age	Size
FP	5.810	1.078	0.728							
NCRT	5.799	1.032	0.072**	0.722						
UCRT	5.824	1.109	0.073**	0.076**	0.710					
DMC	5.783	1.056	0.074**	0.089**	0.082**	0.745				
MA	5.903	1.033	0.077**	0.085**	0.084**	0.087**	0.707			
INDUS	0.587	0.493	0.019**	0.020**	0.013	0.017*	0.154*	1		
Age	0.767	0.424	-0.021**	-0.011	-0.024**	-0.020**	-0.179**	0.550**	1	
Size	0.251	0.435	0.004	-0.002	-0.004	-0.001	-0.042	-0.124	-0.194**	1

Note: FP = Firm performance; NCRT = Creativity novelty; UCRT = Creativity usefulness; DMC = Design management capabilities; MA = Market awareness (market responsiveness); INDUS = industry sector (business activity); Age = firm age or experience (total number of years in existence); Size = firm size (total number of full-time employees engaged by the firm) (Boso et al., 2017).

N = 223

* $p < 0.05$ (2-tailed test)

** $p < 0.01$ (2-tailed test)

RESULTS

The PROCESS macro in SPSS was employed to test our hypotheses. This approach allows for direct, indirect, and conditional indirect effects to be examined using bootstrapping technique (Hayes, 2017). In particular, this approach enables us to estimate the conditional indirect effect of novelty and usefulness on firm performance, through DMC, at different levels of market awareness. We selected 5000 bootstrap samples and a 95% confidence interval (CI), which are necessary to ensure bias-free and robust results (Gao et al., 2021). To account for firm-specific characteristics, we employed firm age, size and industry sector as covariates.

The results in Table 6 shows that novelty and usefulness are both positively and significantly related to firm performance (*novelty*: $\beta = 0.299$; $LLCI = 0.103$; $ULCI = 0.495$; *usefulness*: $\beta = 0.360$; $LLCI = 0.216$; $ULCI = 0.504$). The results suggest, therefore, that each dimension of organisational creativity significantly improves firm performance. Similarly, both novelty and usefulness displayed positive and significant impact on DMC (*novelty*: $\beta = 0.875$; $LLCI = 0.810$; $ULCI = 0.941$; *usefulness*: $\beta = 0.753$; $LLCI = 0.675$; $ULCI = 0.831$). More so, DMC is positively and significantly related to firm performance ($\beta = 0.427$; $LLCI = 0.232$; $ULCI = 0.623$).

As shown in Table 6, the mediating (indirect) effect coefficient of DMC between novelty and firm performance is significantly positive ($\beta = 0.374$; $LLCI = 0.190$; $ULCI = 0.562$). In the same vein, the mediating effect coefficient of DMC between usefulness and firm performance is significantly positive ($\beta = 0.293$; $LLCI = 0.180$; $ULCI = 0.407$). This indicates that organisational creativity translates into firm performance through DMC, therefore, supporting H2. Nonetheless, since novelty and usefulness had a significant direct effect on firm performance, it can be argued that DMC partially mediates the effect of novelty and usefulness on firm performance.

The results further show that market awareness negatively moderates the indirect effect of novelty on firm performance via DMC. The conditional indirect coefficient is significantly negative ($\beta = -0.227$; $LLCI = -0.296$; $ULCI = -0.152$; $R^2_{change} = 0.062$). Specifically, higher levels of market awareness deteriorate the indirect effect of novelty ($\beta = -0.203$; $LLCI = -0.384$; $ULCI = -0.014$) on firm performance. Similarly, market awareness ($\beta = -0.195$; $LLCI = -0.267$; $ULCI =$

-0.134 ; $R^2_{change} = 0.054$) negatively moderates the indirect effect of usefulness on firm performance, via DMC. The results further show that the effect of novelty ($\beta = 0.265$; $LLCI = 0.085$; $ULCI = 0.449$) and usefulness ($\beta = 0.220$; $LLCI = 0.088$; $ULCI = 0.354$) on firm performance, via DMC are strengthened at low levels of market awareness.

Table 6: Summary of results

Effect type	Paths	Effect	(Boot) SE	(Boot) LLCI	(Boot) ULCI
¹Direct	Creativity novelty → Performance	0.299**	0.100	0.103	0.495
	Creativity usefulness → Performance	0.360**	0.073	0.216	0.504
	Creativity novelty → DMC	0.875**	0.033	0.810	0.941
	Creativity usefulness → DMC	0.753**	0.040	0.675	0.831
	DMC → Performance	0.427**	0.099	0.232	0.623
²Indirect	Creativity novelty → DMC → Performance	0.374**	0.096	0.190	0.562
	Total	0.673**	0.051	0.773	0.625
	Creativity usefulness → DMC → Performance	0.293**	0.057	0.180	0.407
	Total	0.653**	0.047	0.560	0.746
³Moderation	DMC → (DMC x MA) → Performance	-0.257**	0.038	-0.331	-0.182
	DMC → (DMC x low MA) → Performance	0.286**	0.080	0.128	0.444
	DMC → (DMC x high MA) → Performance	-0.244*	0.020	-0.448	-0.039
⁴Mediated-moderation	Creativity novelty → (DMC x MA) → Performance	-0.227**	0.036	-0.296	-0.152
	Creativity novelty → (DMC x low MA) → Performance	0.265**	0.092	0.085	0.449
	Creativity novelty → (DMC x high MA) → Performance	-0.203*	0.093	-0.384	-0.014
	Creativity usefulness → (DMC x MA) → Performance	-0.195**	0.034	-0.267	-0.134
	Creativity usefulness → (DMC x low MA) → Performance	0.220**	0.068	0.088	0.354
	Creativity usefulness → (DMC x high MA) → Performance	-0.184**	0.079	-0.342	-0.032

* $p < 0.05$, ** $p < 0.01$ (2-tailed test)

^a DMC = Design Management Capability; MA = Market Awareness (responsiveness).

^b Covariates in models outcome include firm age, firm size and industry sector.

^c 11-20 years is the reference category for the age variable.

^d 2-30 employees (full-time) is the reference category for the size variable.

^e Service-oriented activity is the reference category for the industry dummy.

^f Number of bootstrap samples includes 1000 & 5000.

^g Standardized estimates are reported.

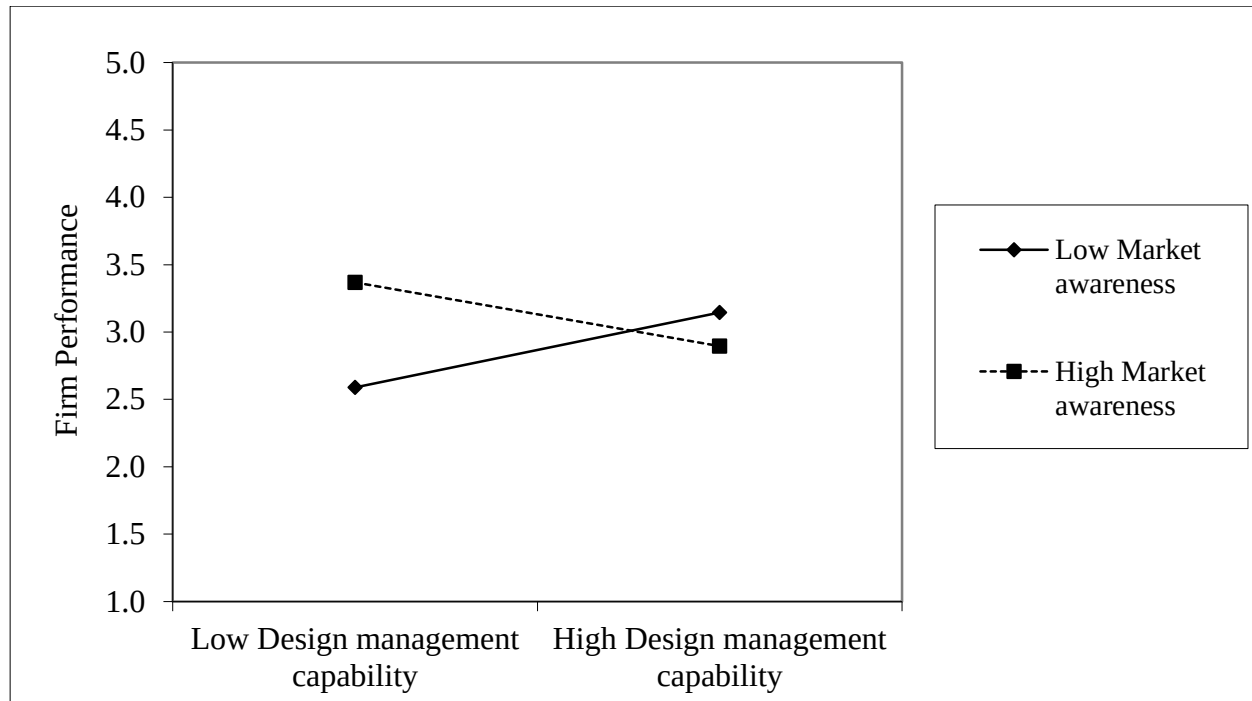


Figure 2: The moderating role of market awareness in the relationship between DMC and firm performance.

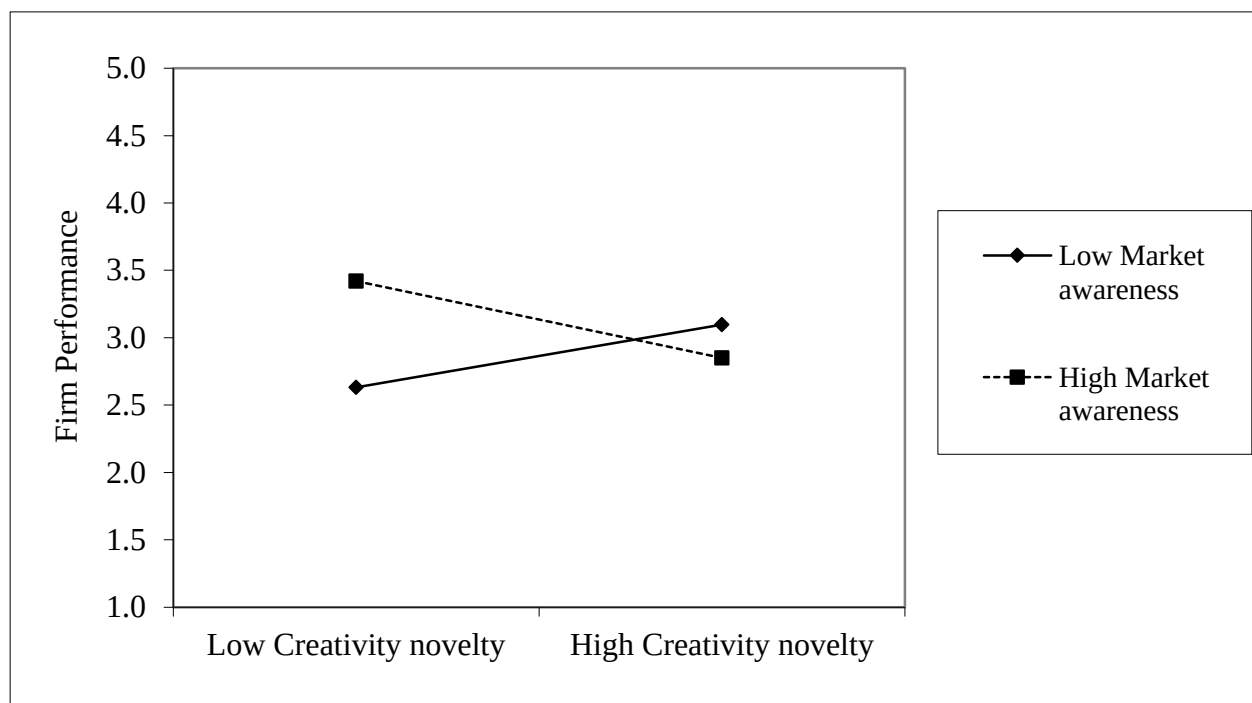


Figure 3: Conditional indirect effect of creativity novelty on firm performance at the values of the moderator, market awareness, via DMC.

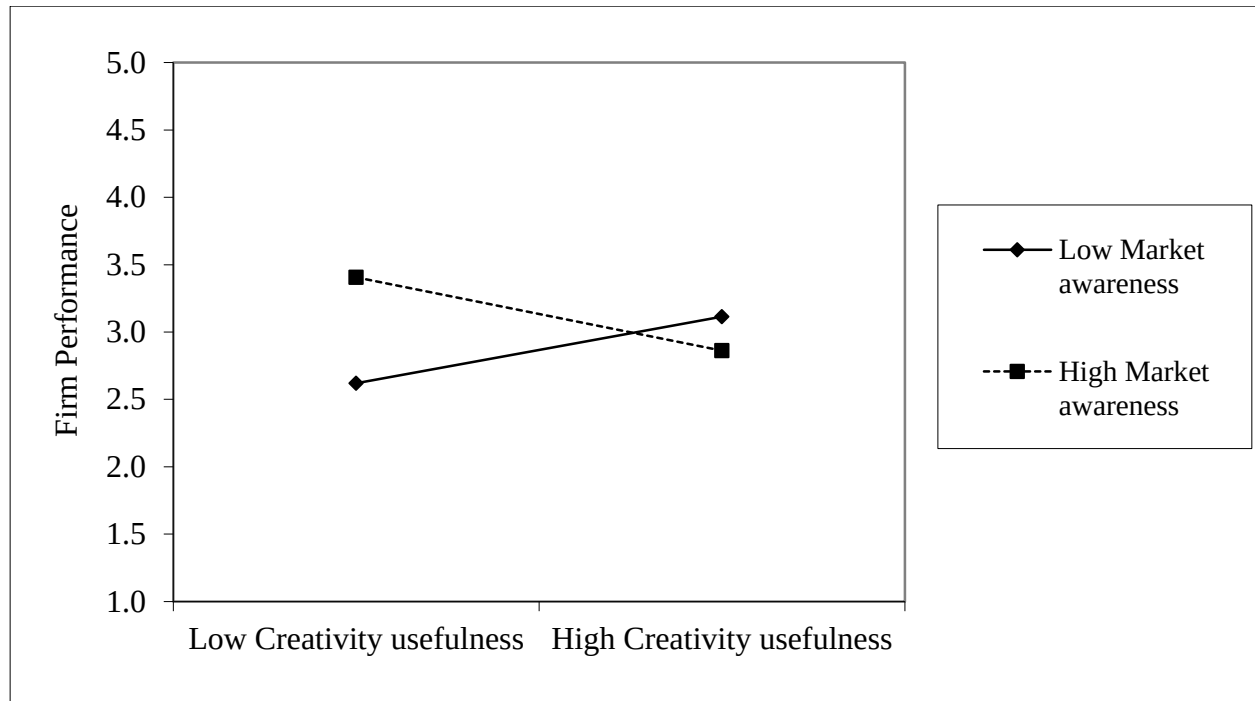


Figure 4: Conditional indirect effect of creativity usefulness on firm performance at the values of the moderator, market awareness, via DMC.

DISCUSSION

In this paper, both novelty and usefulness dimension of creativity are positively related to firm performance, supporting the assertion that firms are more likely to compete and survive in a dynamic business environment when they are highly creative in introducing new processes, ideas, products or services. However, considering the magnitude of the influence; usefulness is more significant to the performance of SMEs than novelty. This is consistent with Yuan and Zhou (2008) and Sue-Chan and Hempel (2016) argument that the two dimensions of organisational creativity is independent of each other and are largely dissimilar in the way they influence the performance of firms. When creative ideas or processes are always useful in solving customers' problems or satisfying changing needs, customers will always associate themselves with such creative firms and increase their loyalty to them (Liu & Atuahene-Gima, 2018). Therefore, creative firms can make it difficult for their competitors to compete in a dynamic market environment when their creative ideas and processes are continuously useful in satisfying market needs. Firms with effective design capabilities to develop and introduce new products or processes faster are more likely to continuously differentiate their market offerings from competitors' products, thus enabling them to benefit from creative activities (Story et al., 2015). Organisational creativity, measured either as novelty or usefulness, can positively enhance the performance of SMEs when channeled through DMC. Importantly, superior product design capabilities are significant for the effective implementation of creative ideas within an organisation (Hsiao & Chou, 2004; Kramolis et al., 2019). Creative firms with effective DMC are more likely to achieve a competitive edge and superior performance since they can regularly gain customers' loyalty through product differentiation (Chiva & Alegre, 2007).

The results show that with high levels of market awareness, a firm is expected to respond appropriately to customers' needs by introducing products and processes that are more likely to increase customers' satisfaction and loyalty. As a result, the firm can occupy a better position in the market realizing the best performance outcomes and denying other competing firms from surviving (Liu & Atuahene-Gima, 2018). In other words, firms with a better understanding of customers' needs can take steps to introduce new products or processes that are more appealing to their customers and extremely difficult to be replicated by competing firms in the industry. For example, firms with better knowledge

of customers' tastes tend to place greater efforts into achieving customer satisfaction in the face of competition for high market success (Liu & Atuahene-Gima, 2018).

However, this result may reflect the difficulties that businesses, particularly SMEs in developing markets experience in their quest to undertake creative product innovations (Agyapong & Acquah, 2021; Kwarteng et al., 2016). These developing market complexities include weak institutional support, inadequate human capital, and financial constraints (Osei et al., 2016). Yet, in most dynamic market environments, a high proportion of financial resources, human capital and stable institutional quality are required by SMEs to build resilience and sustainable creativity (Erastus et al., 2014; Ntiamoah et al., 2016). Therefore, SMEs operating in developing and emerging markets are not able to build adequate creativity structures to regularly respond to customers changing needs and demand (Aidoo et al., 2020). Other constraints of SMEs including high start-up cost are among the several bottlenecks facing SMEs in emerging markets, particularly sub-Saharan Africa where SMEs dominate key sector economic sectors (Ntiamoah et al., 2016).

As some resources and capabilities of firms are inelastic in supply, it is difficult for SMEs in volatile market environment to deploy these resources in the short to medium-term to respond to the increasingly changing market needs (Barney, 2001; Bigelow & Barney, 2021). This largely explains why even with higher levels of market awareness, the performance outcomes of SMEs' creativity are less encouraging. Although a creative firm may have better knowledge of customers' tastes at each material time, inadequate financial and technical capacity can thwart the implementation process of such creative ideas (Forkuoh et al., 2015).

Theoretical and managerial implications

This paper makes key theoretical and practical contributions to the organisational creativity-performance nexus. First, this paper contributes to literature by conceptualizing organisational creativity as a multi-dimensional construct. Specifically, we extend scholarship on the organisational creativity-performance nexus by examining the extent to which each dimension of organisational creativity, namely novelty and usefulness, influences SMEs performance. Second, we further extend literature by introducing the mediating role of DMC in the causal relationship between the dimensions of organisational creativity and SMEs performance within a developing market perspective. As previous studies have acknowledged that the effect of organisational creativity on firm performance is highly context-dependent, emphasizing an indirect relationship. This paper contributes to the literature by furthering our understanding of how DMC can mediate the creativity-performance nexus. We demonstrated the critical role that DMC plays in translating each dimension of organisational creativity in SMEs performance.

Third, given the varying effects of the two dimensions of organisational creativity on SMEs performance, managers may pursue the two dimensions in varying degrees in accordance with the objectives of the firm to build strategic fit that best suit the business environment in which they operate. As the results indicated, the two dimensions of organisational creativity can help a firm to address specific objectives with the usefulness dimension playing the most significant role in stimulating firm performance. In order to enhance performance, SMEs must understand when to commit internal resources and competencies to produce new and distinct products (novelty), and when to add satisfying value to new or existing products (usefulness). Finally, our paper lend support to the assertion that organisational creativity, measured as novelty and usefulness, translates into product innovation performance when channeled through DMC. SMEs faced with intense competition from well-established domestic and multinational companies must understand that a more effective DMC is required to significantly complement novelty, and usefulness to produce greater performance outcomes.

CONCLUSION AND LIMITATIONS

Despite the growing body of research in examining the effect of organisational creativity on firm performance, the empirical evidence is often scanty within the context of developing market economies, where the relevant boundary conditions and mechanisms are largely unexplored. In this paper, both novelty and usefulness dimensions of organisational creativity are positively related to

SMEs performance but with usefulness having greater impact. SMEs must create a strategic fit in dynamic market environments to benefit from creativity when they strengthen their DMC. If SMEs intend to regularly achieve product differentiation advantage and deny their competitors from gaining customers' loyalty, they may consider investing in DMC which is as important as creativity in enhancing innovation performance. Interestingly, high levels of market awareness weaken the contributions of DMC to firm performance, particularly in developing markets where SMEs are faced with financial resource constraints, weak institutional support systems and inadequate human capital. SMEs must be financially sound and technically innovative under supportive institutional environment to undertake creativity in terms of product differentiation such that it becomes extremely difficult for other competing firms to replicate.

Therefore, with high levels of market awareness, firms can build strategic fit and enjoy superior competitiveness if they strategically employ their resources and capabilities. As a characteristic of any research, the following limitations are acknowledged. Our paper considers only one mediator and one moderator. Yet, there may exist several other contingencies and intervening variables which can equally affect the relationship between organisational creativity and performance (Story et al., 2015; Boso et al., 2017). Future research should consider exploring more intervening variables to offer a comprehensive understanding of this vital relationship. Second, the paper considers only one developing market economy though the implications of our findings can be extended to other SMEs operating in similar markets, particularly in sub-Saharan Africa where they are generally homogeneity in the market dynamics in several respects.

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THE ENDOGAMY TRADITION AND THE BUSINESS PERFORMANCE OF INFORMAL OWNER-MANAGER VENTURES IN SUB-SAHARAN AFRICA

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ABSTRACT

This paper applies a cultural anthropology perspective to analyse how the performance of informal businesses is influenced by informal institutions. We focus on the tradition of family systems, in particular the practice of marrying within a social ingroup, endogamy, which we see as antipathetical to the establishment of market-based relationships. The endogamy tradition can therefore negatively impact business performance by limiting market opportunities and making bridging trust difficult to establish. However, in sub-Saharan Africa, the effect of the endogamy tradition might be attenuated by cultural interventions from administrative practices as well as missionary activities in colonial Africa, especially if the colonialists were characterised by individualistic cultures. Our hypotheses are supported by an empirical analysis based on surveys of informal entrepreneurs in multiple regions of eight African countries.

Keywords: Business performance; informal institutions, informal firms; endogamy; Africa

INTRODUCTION

Firms in developing countries differ from those in developed countries, notably, as emphasised by De Soto (1989, 2000), concerning a widespread informal sector. Even so, economic and business research on the informal sector remains limited and even less attention has been paid to what determines business outcomes *within* the informal sector. Informal firms largely operate *outside* the formal institutional structures (and often in countries without strong formal institutions underpinning factor markets; see: Bruton et al., 2012; La Porta & Shleifer, 2014), but *within* the boundaries of informal institutions (Webb, Ireland & Ketchen, 2014). Hence, business outcomes of informal firms are mostly shaped by informal rather than formal institutions.

By informal institutions, we mean the norms, values, and beliefs supported by social acceptability and not enforced by legal punishment administered by the state (North, 1990; Berrone, Duran, Gómez-Mejía, Heugens, Kostova & van Essen, 2022). Even so, conceptualisation of informal institutions remains somewhat less developed than of formal institutions and we focus on three research gaps. First, while the literature has explored several aspects of informal institutions such as organisations-based social capital (Putnam, 2000; Greif & Tabellini, 2017), social networks (Busch & Barkema, 2022), and trust (Peng, 2003; Mickiewicz and Rebmann, 2020), there has been little research on the family systems and kinship ties – a foundational phenomenon of institutions (Khavul, Bruton & Wood, 2009; Khayesi & George, 2011; Todd, 2019). Second, the evolution of informal institutions is not well documented, although the literature suggests that informal institutions change (Meyer & Peng, 2005; Helme & Levitsky, 2006). Finally, the appropriate level of analysis may differ between informal

and formal institutions; while formal institutions align with country borders due to the nature of enforcement mechanism, regions and individuals in the same country can have very different cultural backgrounds and kinship ties (Schulz et al., 2019).

We address the first two research gaps using a cultural anthropology perspective. We posit that informal institutions are deeply rooted in the *family system*, especially the practice of marriage (Todd, 2019; Henrich, 2020). Taboos on marriage shape patterns of relatedness and alliance formation, which underlie the primary structure of societies and configures interpersonal interactions (Bau & Fernandez, 2020). We follow Schulz et al. (2019) and Henrich (2020) in treating taboos on cousin marriage as a key distinction of family systems. In particular, we draw on the distinction between endogamy and exogamy. Endogamy – the practice of marriage within a specific social group (the *ingroup*) which includes acceptance (or even support for) marriages between close cousins – reinforces kinship ties. In contrast, exogamy – prohibiting cousin marriage but allowing and encouraging marriage outside the ingroup – weakens kinship ties (Rodriguez-Garcia, 2006).

We address the second research gap by conceptualising the persistence and evolution of informal institutions seen as factors affecting informal businesses' performance. The cultural anthropology literature stresses that the effect of the endogamy tradition can be persistent because social beliefs based on family systems can be transmitted both inter-generationally (Bau & Fernandez, 2021) and within localities due to social learning (Todd, 2019). At the same time, the endogamy tradition can evolve when societies go through momentous changes such as the large-scale European colonisation in Africa (Nunn, 2010). For example, in Africa, the impact of the endogamy tradition may have been modified by antipathetical values imposed by some colonisers.

Africa also represents an ideal setting to tackle the third research gap because, in much of the continent, informal institutions such as family systems vary at the ethnic-group levels and these often cut across country frontiers (Alexander & Honig, 2016). Thus, ethnic groups within the same country, even geographically proximate ones, can have different informal institutions, while the same ethnic group in different countries may still preserve common values. This feature, while not unique to sub-Saharan Africa (SSA), is especially prominent there, largely as a consequence of the colonial partition (Michalopoulos & Papaioannou, 2014). Therefore, making cross-ethnicity comparisons in Africa while using country fixed effects to control for confounding effects from formal institutions helps with separate identification of formal and informal institutions. Our focus on SSA as the empirical setting also answers the calls for a greater consideration of Africa in management research (e.g., George, Corbishley, Khayesi, Haas & Tihanyi, 2016).

THEORY: MOTIVATING THE HYPOTHESES

Seen from the cultural anthropology perspective (Schulz et al., 2019; Henrich, 2020), informal institutions originate in family systems that define the structures of kinship and mutual obligations and privileges that result from the related social identities. Building from the fundamental social link between a mother and her child, family systems sustain broad and complex patterns of mutual support and cooperation. However, these patterns may be more or less effective at providing support for market-based systems of business activities. Endogamy practices create strong kinship ties (Henrich, 2020), reinforcing obligations towards ingroups and permitting the least individual freedom in that the marriage choices are subjected to strict customary rules (Todd, 1985). This socially enforced reliance on interdependence within the clan restricts the possibilities for arms-length trading between both firms and individuals on open markets. Put another way, while endogamy implies stronger bonding trust, which may be beneficial, it simultaneously makes it harder to establish bridging trust. Moreover, endogamous societies also give rise to in-group nepotism and favouritism in hiring and operating. This may lead to suboptimal organisational structures and performance of firms (Akbari, Bahrami-Rad & Kimbrough, 2019).

The cultural anthropology literature also proposes that the effects of the endogamy tradition will be persistent (Todd, 1985; Henrich, 2020). Even if cousin marriage is no longer practised contemporarily, the outlook and cultural norms associated with it, attributing primacy in social and business relations to the ingroup, are likely to endure. Path-dependence in family systems is argued to result from the intergenerational transmission of values and social beliefs (Bau & Fernandez, 2021),

largely within ethnic groups, and from local traditions; as succinctly phrased by Todd (2019), places have memories.

This analysis has particular resonance for informal firms because they largely operate outside the formal institutional structures, and therefore are less beholden to external market and government forces (Batjargal, Hitt, Tsui, Arregle, Webb & Miller, 2013; de Castro, Khavul, Bruton, 2014). In addition, they often operate in countries without strong formal institutions underpinning factor markets, including in Africa (de Soto, 1989; Bruton et al., 2012; La Porta & Shleifer, 2014). Importantly however, informal firms operate within the boundaries of informal institutions (Webb, Ireland & Ketchen, 2014). We posit the following hypothesis:

Hypothesis 1: The tradition of endogamy in a given ethnic area in SSA will be associated with lower performance of informal businesses.

Although the literature argues that informal institutions such as the endogamy tradition can be persistent over long periods, they are not viewed as unchanging; they may be affected by momentous changes or institutional shocks (Harrell 1997). In particular, the colonial experience in Africa can be seen as a large cultural intervention (Acemoglu & Robinson, 2012; Decker, Estrin & Mickiewicz, 2020) which may have reduced the cohesiveness of ethnic networks (Collier & Gunning, 1999). Colonisers' cultures left imprints on their colonies via major state formal interventions such as the imposition of new laws and administrative practice (La Porta et al., 1998) as well as non-state cultural influences that include missionary activities (Nunn, 2010). We propose that the impact of the endogamy tradition may have been attenuated by some type of the colonial experience, but was not entirely erased.

A cultural trait that is particularly alien to the endogamy tradition is individualism, which prioritizes individual objectives over the collective goals of the ingroup and emphasises personal achievement and independent decision-making (Heine, 2020). Britain is a positive outlier in terms of individualistic values, though all European colonisers apart from Portugal score above the mean (Hofstede et al., 2010; Taras et al., 2012). Moreover, the deeper counterpart of British individualism is the family system based on the nuclear family tradition, which cultural anthropologists locate at the opposite extreme from endogamy on the spectrum of family systems (Todd, 2019). The legal systems and administrative practices of the British Empire therefore reflect a culture of individualism which may have affected the impact of the endogamy tradition in its colonies. The emphasis on the individual may also enable deeper contact with the outgroup by blurring the ingroup boundary, facilitating a wider scope for market-based transactions. Therefore, we propose:

Hypothesis 2a: The effect of the endogamy tradition in a given ethnic area in SSA on informal businesses' performance is attenuated in those former colonies that were exposed to more individualistic cultures, in British colonies in particular.

We posit a related argument that focuses on a non-state channel of colonial influence, the colonisers' religion. Todd (2019: 10) argues that religion and family systems co-evolve, while Henrich (2020) suggests that Western Christianity took a strong position in its prohibitions and regulations against endogamy in general, and cousin marriage in particular. He argues that the influence of the Western Church resulted in a gradual breakup of the traditional kinship structures in Western and Central Europe via the virtual eradication of endogamy. Later, large-scale missionary activities were closely associated with European expansion, including in Africa (Nunn, 2010). Once again, exogamy was a key element of the doctrine and the practices that Christian missionaries sought to implement in Africa, even when, as occurred in some places, this ran directly counter to the local family system. Thus, the geographic density of Christian missions in ethnic areas of Africa during colonisation is likely to be positively associated with a weakening of the endogamy tradition. As a result, we propose the following:

Hypothesis 2b: The effect of the endogamy tradition in a given ethnic area of SSA on informal businesses' performance is attenuated where Christian missions were denser during the colonial period.

DATA AND METHODS

Our dataset builds on the World Bank Informal Sector Business Surveys (ISBS), which comprise surveys of informal business owners-managers, implemented between 2011 and 2020 in eight countries in SSA: Democratic Republic of the Congo (DRC), Ghana, Kenya, Mozambique, Rwanda, Somalia, Zambia and Zimbabwe. Consistent with the International Labour Office (ILO), the ISBS defines informal enterprises as firms not registered with the local ministry of commerce or the respective municipality. The ISBS are the counterparts of the well-recognised World Bank Enterprise Surveys (WBES) but focusing exclusively on informal firms and only in urban areas. Sampling methods and questionnaires are consistent across countries and years and they aim to ensure the representativeness of each country samples (Assenova & Sorenson, 2017).

Explanatory variables

At the individual level, we utilise data on gender, age, education, business experience, length of time spent in a given city (to control for migration status), sole ownership, sectoral affiliation, as control variables, all being associated with business performance based on existing research (Saka-Helmhout, Chappin & Vermeulen, 2020; Alesina et al., 2015; Decker et al., 2020; Pierce & Snyder, 2020).

Our work exploits the fact that family systems vary across the territories of ethnic groups while formal institutions are usually defined at the national level. Furthermore, for hypothesis 1 on persistence of the effect of family traditions, we require historical data. Hence, our measure of endogamy tradition uses a widely recognised ethnicity-level database; the Ethnographic Atlas (Murdock, 1967), which provides information on social, cultural, and economic traits of 1,265 ethnic groups worldwide mostly prior to industrialisation and/or European contact (Giuliano & Nunn, 2018). Ethnographic information is coded for the earliest period for which satisfactory ethnographic data has been available or reconstructed (Giuliano & Nunn, 2013). Our measure of the endogamy tradition is cousin marriage practice, where parallel-cousin marriage implies lineage endogamy (Schulz, 2017). Following the literature (Rijma and Carmichael, 2016; Schulz, 2021), we use *variable 25* (cousin marriage preferred; rather than just permitted) to construct the endogamy tradition variable: dummy = 1 (0) if cousin marriage is preferred (otherwise). We link the information from the Ethnographic Atlas with the ISBS utilising the Ethnolinguistic Map (Murdock, 1959) which documents the territories of the historical homelands of each ethnic group. We relied upon the GPS coordinates data available from the ISBS to link a business location with an ethnic area. As different ethnic groups are sampled in different periods of time in the Ethnographic Atlas, we also include the year of the information to control for measurement errors. Our sample is balanced in terms of the endogamy practice: 51% (49%) owner-managers are exposed to the tradition of endogamy (exogamy).

To test H2a, we use a dummy on whether an informal firm is located in a previous British colony. For H2b, data is based on a map by Roome (1924) which documents the location of Christian mission stations in colonial Africa; we calculate the number of mission stations per 1,000 square kilometres in each ethnic homeland in our sample.

Dependent variables: measures of performance

Following Assenova & Sorenson (2017), we use revenue and employment as two key measures of informal enterprise performance, and labour productivity (APL) as a third measure. Revenue is calculated as monthly sales revenue and the size of employment includes both paid and unpaid workers. APL is defined as the monthly sales revenue divided by the size of employment. We divide each performance measure by the respective sector-country average.

Model specification

We utilise the following model to test H1. For each informal business i operating in industrial sector p in country j in ethnic homeland s and surveyed in year t :

$$y_{ijspt} = \alpha + \beta * ENDO_s + \delta 1 * X1_i + \dots + \delta n * Xn_i + \eta 1 * Z1_s + \dots + \eta m * Zm_s + u_p + v_{jt} + \epsilon_{ijspt} \quad (1)$$

$ENDO_s$ represents endogamy tradition in ethnic group s . X corresponds to n individual-level control variables, Z relates to m ethnic area-level control variables, ϵ are sectoral fixed effects

(manufacturing, service, trade, and street vendors), and $\square\square$ are country-year fixed effects to control for formal institutions. For Hypotheses 2a and 2b, the above model is augmented with the interactions between the endogamy indicator variable and the relevant variables. All models are estimated by OLS with robust standard errors.

RESULTS

We obtain clear support for H1 that the endogamy tradition has a negative influence on informal sector firm performance. The endogamy tradition indicator variable comes with a negative and significant sign in the core model related to all three measures of performance: revenue ($b=-0.111$, $p<0.01$), employment ($b=-0.132$, $p<0.01$) and APL ($b=-0.103$, $p<0.01$). The magnitude of the effects is not small. Other things being equal, coming from an ethnic group territory with the endogamy tradition (compared with a tradition of exogamy) is associated with a decrease of revenue of 11.1% of the country-sector mean effect. The effect of the endogamy tradition on the other performance measures is similar in magnitude: 13.2% for employment and 10.3% for APL.

We also find strong support for H2a. The endogamy tradition decreases revenue by 21.8% of the country-sector mean effect ($p<0.01$), but this adverse effect disappears in former British colonies (-21.8% plus 22.5% is approximately zero). Similarly, the endogamy tradition reduces APL by 18.7% of the country-sector average ($p<0.01$) but the imprint of the British individualistic culture nearly eradicates this, by 17.6% of the country-sector average ($p<0.01$). However, for employment, the interaction itself is insignificant ($b=0.004$, $p>0.1$). One possible explanation is that when the endogamy tradition was attenuated by British colonial rule, business performance may be enhanced with higher demand for jobs, but the incentive to create job opportunities for kin members in ethnic groups with the endogamy tradition is also diminished. The overall effect on employment is therefore ambiguous.

We do not find consistent support for H2b. When using revenue as the dependent variable, we find the interaction term between the density of mission stations and the endogamy tradition to be insignificant ($p>0.1$). Similarly, the coefficient on the interaction term is insignificant ($p>0.1$) when we use employment as the performance measure. We find some significant results for APL. The magnitude of the effect, however, is smaller than that of the identity of the coloniser in H2a, and the significance level is lower.

DISCUSSION

We have considered how the endogamy tradition affects the performance of firms in the informal sector in SSA and how these effects may be mitigated by aspects of the colonial legacy. We find clear support that the performance of informal sector firms was negatively influenced by the tradition of endogamy. Moreover, the negative impact of the endogamy tradition on informal firm performance was attenuated when the colonial power brought with it a strongly individualistic culture. In comparison, the density of religious missions had much weaker effects on firm performance. Thus, we find evidence for the persistent effects of the informal institution of family system on firm performance over long time periods, as well as for its attenuation by cultural shocks such as colonisation.

Platteau's work (2019) on religious conversion in colonial Africa helps to explain the ambiguous findings for H2b. Christianity faced strong competition from Islam and the arrival of Christian missionaries incentivised Muslims to expand their faith, while mass conversions were often based on loose conditions; "Christians" might declare themselves to be converted without fully appreciating all the implications. Moreover, individuals who chose to convert often did so to emancipate from traditional kinship groups. So missionary activities may not have attenuated the endogamy tradition because people who endeavoured to protect traditional family systems were less likely to be converted.

This paper has important implications for managerial practice. To enhance business performance, it is essential for business owners and managers to consider the deep roots of the informal institutions of the communities or groups with which they interact, such as the way families and societies are organised. Our managerial implications reach beyond the informal sector. Firms operating in SSA

may benefit from a deeper understanding of the continent's considerable ethnic and cultural diversity. In addition, firms should be aware that their informal subcontractors, exposed to different informal institutions, might have different business purposes: informal firms in ethnic groups with the exogamy tradition may be driven by market outcomes such as revenue but those with the endogamy tradition might prioritise job creation.

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DECOLONIZING AFRICAN BUSINESS SCHOOLS THROUGH INFORMAL ECONOMY RESEARCH

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ABSTRACT

Africa's economy is largely informal, employing majority of its economically active population. However, research from business schools on the continent seem to focus more on the formal economy at the detriment of the informal sector. By way of contributing to the advocacy for increased context-relevant management scholarship in Africa, three main questions are addressed in this study. First, this study explores the extent to which scholarship in African business schools have focused on informal economies in the past decade. Second, this study interrogates plausible factors inhibiting informal economy research in Africa. Third, this study draws from decolonial theories to propose practical ways in which business schools could offer more responsive and context-relevant research through their engagement in informal sector research. This study offers significant contribution to the ongoing discourse of management scholarship in Africa by highlighting how informal economy research offer a path for decolonizing research in business schools.

Keywords: Africa, informal, economy, research, business school, decolonial

INTRODUCTION

The contribution of scientific research to national development has long been discussed in many managements learning literature (Abrams, 1925; Gill et al., 1989; Lupton et al., 1976). In more recent years, there have been a greater call for such inquiries to stir greater responsibility among businesses in society, particularly through management education and business research (Durepos et al., 2019; Morsing & Rovira, 2011; Sambrook & Willmott, 2014; Warhurst, 2012). For developing countries particularly in Africa, this call is critical considering the years of experiment for development since post-colonial era and the respite offered by proven scientific principles that has shown practical implications for socio-economic development. Namanji and Ssekyewa (2012) recognize this call by mapping how development research (does not) contribute to development in Africa. Though realization of this research-development nexus is not short in the literature, the major challenges in materializing it in most African countries have not been explored.

In advancing reasons for the establishment of the Africa Journal of Management (AJOM), three founding executives of the African Academy of Management (AFAM), which is the publisher of the Africa Journal of Management (AJOM), alluded to the growing assertion that indigenous management knowledge has significant implications for Africa in equipping leaders and managers on the continent with relevant knowledge, skills and capabilities for the transformation of organizations (Nkomo et al., 2015). These context-relevant arguments have similarly been advanced by several management scholars on/about the continent (George et al., 2016; T. R. Lituchy et al., 2013; Nkomo, 2017; Zoogah & Peng, 2019). What remains missing, however, are the empirical nuances and particularly, the sectorial focus that should characterize such management research on the continent.

Africa's growing economy in the past couple of decades has been largely formed around informal businesses. Though this characteristic of the continent's economy has been recognized by some leading scholars advocating for the imperative of management research in Africa (see Nkomo et al., 2015; Zoogah, 2008; Zoogah et al., 2015), scholarship in informal economy in Africa has unfortunately

not been identified as a plausible direction to delineate Afrocentric management studies from the mainstream management discourse dominated by global North scholarship. For instance, in the conceptual model proposed by Nkomo and colleagues (2015) about how the African context could be integrated in the development of management theory and research, though researchers identified existence of ‘radical contrast’ between Africa’s institutional frameworks and those in developed economies, the informal economy was conspicuously missing in their context-specific dynamic model. The only reference to informal economy research was when the researchers considered it more interesting to study informal and community organizations in rural contexts than in urban settings. This is despite the admission that African economies are least made up of manufacturing and industrialized firms with over 80% of the workforce in informal activities in the agrarian sector (Nkomo et al., 2015). Other studies (see Nkomo, 2017; Zoogah & Nkomo, 2013), have been instrumental in promoting management research in Africa, yet, the dynamics of the informal economy have not been the focus for future research for most of these studies. Thus, though the informal economy is largely considered as essential in management research in Africa, little has been discussed about the factors inhibiting its popularity among scholars in business schools on the continent.

Drawing from decolonial theories and by way of contributing to the advocacy for increased management scholarship in Africa, three main questions are addressed in this study. First, this study explores the extent to which scholarship in African business schools have focused on informal economies in the past decade. This is by way of ascertaining the growth in scholarship among business schools in Africa and the kind of issues that had dominated these studies. Second, this study interrogates plausible factors inhibiting informal economy research in Africa. Considering that economies in Africa are largely acknowledged to be informal (Fafchamps, 2004; George et al., 2016; Mbaku, 2004; Nkomo et al., 2015), this study takes interest in interrogating why management scholarship on the continent appear to focus on formal institutions with its related institutional voids, managerial capacity, and employee wellbeing issues (George et al., 2016) at the detriment of the precarity in informal economies. Finally, this study draws from decolonial theories to propose practical ways in which business schools could offer more responsive and context-relevant research through their engagement in informal sector research. The contribution of this study to African management scholarship advocacy is in its critical discussions of factors inhibiting informal economy research and cogent arguments for considering the informal economy as a practical focus for management research in Africa.

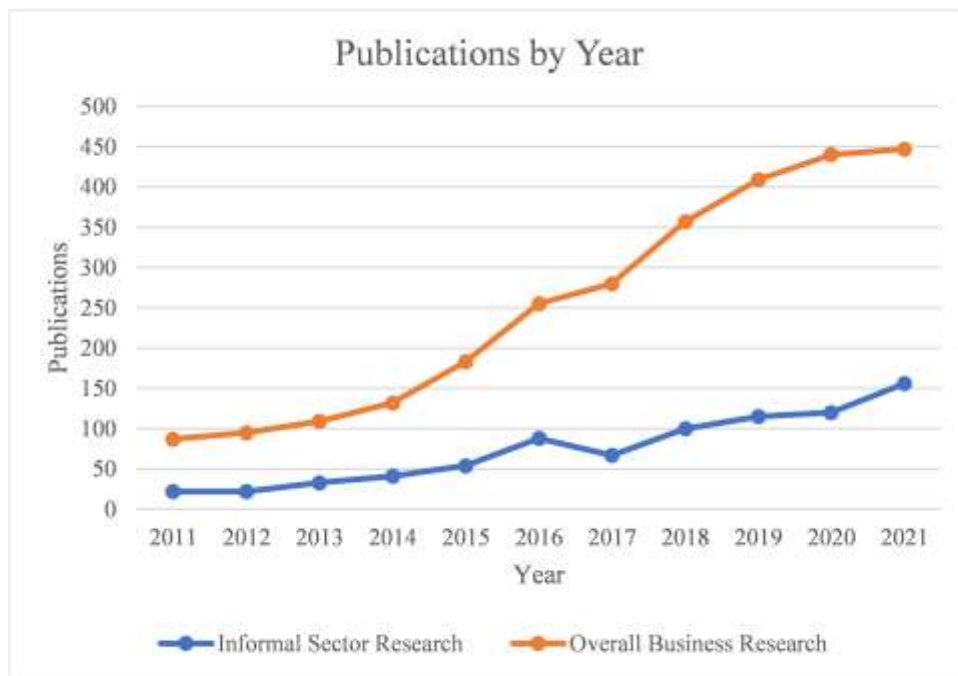
INFORMALITY OF AFRICAN ECONOMIES VS BUSINESS RESEARCH

For several years, African economies particularly in the post-independence era, have largely evolved into small informal and unstructured organizations (Kiaga & Leung, 2020; UNECA, 2015). This has been attributed to structural adjustment programmes (SAP) that assumed great importance for several African nations as succour for the debt distress situations which many low-income countries found themselves in the 1980s because of international commercial credit reforms (Lehman et al., 1991; Mohs, 1988). These programmes led by the World Bank and IMF came with conditions of deregulation and economic liberalisation, allowing market forces to determine resource allocation and thus driving an aggressive agenda for privatisation (Lehman et al., 1991; Logan, 2015). But for an economy built on low levels of literacy and inadequate skills development (UNECA, 2015), the result has been that privatisation, as a consequence of SAP, has transformed African economies into vibrant informal hubs.

Currently, the informal sector in sub-Saharan Africa is considered among the largest globally (Medina et al., 2017) and across the continent is the major source of employment accounting for about 80% of the workforce (Anku-Tsedde & Arthur, 2021; Kiaga & Leung, 2020). Despite the idiosyncratic challenges peculiar of informal economies such as the lack of social protection, businesses in these sectors have been vibrant and have for the past decades been the backbone of nations in most African states. The United Nations Economic Commission for Africa (2015) describes the sector as dynamic in employment creation and value addition and estimates that the sector contributes to about 55 percent of the GDP of sub-Saharan African countries. In Ghana, for instance, the services sector comprised mainly of informal businesses including transport, trade and local eateries, has for more than a decade contributed an average of 45% to GDP, compared to agricultural and manufacturing/industry sectors (Ghana Statistical Service, 2020).

However, this informal sector growth in post-independent Africa has surprisingly not attracted sufficient attention from researchers on the continent, particularly in business schools. An affiliation search in SCOPUS for articles published by the top 20 business schools in Africa based on the Times Higher Education (THE) rankings for 2022 shows that out of 2,794 publications in the fields of business, management, accounting, economics, econometrics and finance in the last decade (2011-2021), only 818 (29%) of these publications have the words, informal* OR SME OR "small business" in their titles, keywords or abstract (see Figure 1). This is despite the phenomenal growth in business research publications from these institutions within the same period. Apparently, as the quest for knowledge on the continent has increased over the years, interest in research that generates understanding of the continent's economic backbone has rather waned.

Figure 1. Publications by Business Schools in Africa (2011-2021).



Source: Author (2021)

This gap trend in business research and informal economy research in Africa is not only paradoxical but has practical implications for contextual knowledge about the continent's economic activities. The trend tells us that there seems to be excessive focus on understanding work relations, business practices and the wellbeing of businesses and people mainly in the formal sector – where firms are more structured, regulated by jurisdictional laws and regulations and where there is mandatory support for the social protection of workers.

Taking these preliminary findings a step further, the influencing factors for the apparent lack of concentration on the informal economy by business school scholars in Africa is discussed in the subsequent section.

Factors Inhibiting Informal Research in African Business Schools

Prior research on management scholarship in Africa have identified both progress and challenges (Nkomo, 2017; Zoogah, Peng, et al., 2015; Zoogah, Zoogah, et al., 2015). While the main progress has been in terms of the numerical surge in management research from African scholars (Zoogah, Peng, et al., 2015; Zoogah, Zoogah, et al., 2015), the challenges have, aside research infrastructure and support issues (Nkomo, 2017), revolved around the lack of sufficient voice of African scholarship in extant literature relative to what is produced by scholars from the Global North (Nkomo, 2017; Zoogah, 2008). The growing number of management research in Africa are described as limited in scope and even when they have extensive scope, are found to lack depth and are more often than not,

replications of Western theories, thus, lacking theory building capacities (Nkomo, 2017). But what accounts for the interest in Western-centric studies that often have very little or no connection to the socio-economic contexts that shape informality among businesses?

This authors in this section discuss three main factors – paradigmatic/methodological, funding and research “silos” – that tend to explain the low contextual and informal economy considerations by researchers in business schools in Africa.

Paradigmatic and Methodological Factors

Research in various fields of studies is often influenced by some philosophical assumptions and research paradigms that inform the decision to adopt a methodological approach over another. Key among these philosophical assumptions in research are the cognitive dilemmas of objectivity and subjectivity (Sułkowski & Nauk, 2013). Objectivity is founded on claims that knowledge is only achieved by invoking “facts” and that true knowledge provides an accurate and objective report of the world (Letherby et al., 2014). Thus, with the philosophical assumption of objectivity, the social world is treated as a hard, external, and objective reality where the analysis of relationships and regularities between various elements is that which constitutes the social world of the researcher. Subjectivity on the other hand emanates from arguments that the roles of values cannot be ignored in the production of knowledge and all claims to truth and objectivity must be challenged (Letherby et al., 2014). With the assumption of subjectivity, there is no absolute standpoint to perceive the world as it is since observation of reality is dependent on the position within which the observer is situated and thus there could be multiple points of view. In other words, it is held by this assumption that there are different but equally legitimate ways of seeing the world (Letherby et al., 2014).

Furthermore, there are philosophical assumptions that form the basic belief, norms and values on which various research paradigms stand. Four of these assumptions are ontology, epistemology, axiology and methodology (Burrell & Morgan, 2017). Scotland (2012) defines ontology as a “branch of philosophy concerned with the assumptions we make in order to believe that something makes sense or is real, or the very nature or essence of the social phenomenon we are investigating” (p. 8). Philosophical assumptions about the nature of reality are crucial to understanding how we make meaning of data gathered. These assumptions, concepts or propositions help to orientate our thinking about the research problem, its significance, and how we might approach it so as to contribute to its solution. Ontology is so essential to a paradigm because it helps to provide an understanding of the things that constitute the world, as it is known (Namanji & Ssekyewa, 2012). It seeks to determine the real nature, or the foundational concepts which constitute themes that we analyse to make sense of the meaning embedded in research data. Namanji and Ssekyewa (2012) define epistemology as the study of the nature of knowledge and justification. Axiology refers to the ethical issues that need to be considered when planning a research proposal (Burrell & Morgan, 2017). Methodology is the broad term used to refer to the research design, methods, approaches and procedures used in an investigation that is well planned to find out something (Neuman, 2014). These philosophical assumptions underpin the research paradigms of positivism, constructivism, and critical realism. For the purpose of this study, positivism is premised on the observation of reality and universal truths such that the researcher cannot in any way influence the results of the research because of the expectation to be objective and independent (Namanji & Ssekyewa, 2012). Constructivism is based on the argument that doing realistic research in the world does not happen in isolation of our experiences (Namanji & Ssekyewa, 2012).

In business and management research, contentions about the worldview exist but with greater leaning towards objectivity and positivism (Painter-morland, 2015). In most business and management research, the promotion of organizational or work activities with the ultimate goal to promote the well-being of humans is generally the focus. However, our normative evaluation and tacit assumptions of what well-being entails provides some understanding of how reality is perceived in social business and management research. Drawing from cognitive science research, (Lakoff & Johnson, 1999) explains the moral metaphors that underpin our understanding of the concept of well-being, pointing to the most basic normative orientation that well-being is wealth. That is, increasing one’s well-being and having the resources to do so is good whilst decreasing same is bad (Painter-morland, 2015). In other words, this perspective suggests that increase in well-being is gain whilst it is a loss or cost to decrease in well-being as captured in our everyday phrases such as, ‘investing in relationships’, ‘profiting from hard

work' (Painter-morland, 2015). The implication of some of these everyday words suggests the normative imperative of increased well-being through a causal input-output structure (Painter-morland, 2015). Even in our expression of moral accusations, we use quantified statements such as 'his insults robbed me of my dignity', 'he broke my heart' which connote a decrease in well-being but more importantly, a transactional structure in which some kind of loss or damage is experienced (Painter-morland, 2015). Even in our attempts to remedy a decrease in one's well-being, Lakoff and Johnson (1999) explain that we incur moral debts in statements such as. 'you owe someone an apology for the insult'. Furthermore, it important to note that as economic transactions depend on financial bookkeeping, so does our normative functioning depend on 'moral bookkeeping' made up of elements such as expectations of reciprocation and the possibility of revenge (Painter-morland, 2015). Thus, our normative metaphors rely on some form of bookkeeping in a profit and loss scheme which tends to link our understanding of well-being closely to ideas of financial calculability.

These normative evaluations and moral metaphors explain why many studies in the business and management field often perceive the world as objective and thus lean often towards positivist research paradigms. Many research in business and management studies often perceive reality as facts and thus believe in the use of statistical data to demonstrate relationships of cause and effect. For instance, (Itani, 2017) analysed 73 articles with about 13 to 16 set of articles each from the past five decades (1960s, 1970s, 1980s, 1990s, 2000s) all from the journal, Human Resource Management, which is the only human resource journal in the prestigious FT45 and consistently listed in the 4th class of the Association of Business School's journals ranking guide. Itani (2017) concluded that most of HRM research from these periods could dominantly be placed in the mainstream positivistic paradigm, confirming that in the HRM discipline, postpositivism remains the dominant research paradigm. The overconcentration of positivist paradigm approaches and its associated quantitative methods by

African business schools deny them from often producing research that address the pertinent development requirements of informal economies. Drawing from development research, Namanji and Ssekyewa (2012) argue that despite the need for reliable research done with facts and figures, research that drive policy support for development cannot be done without the support of sophisticated informed and inclusive constructions of the world through interaction of the researcher and the researched. Thus, in a bid to understand the (informal) world around them, African business and management scholars cannot solely rely on positivist research alone but need to adopt varying research approaches that are context relevant. In fact, these philosophical paradigms have been identified as developed to match the socio-empirical environment of Western societies and thus are often unable to inform the complexities of informal setups in Africa (Bob-Milliar, 2020).

Typical deficiencies in the over-reliance on positivist research for development in informal economies is exemplified in the implementation of the electronic transaction levy (E-levy) in Ghana. The main empirical evidence that led to the introduction of the E-levy were 'facts and figures' research that showed that between 2017 and 2021, the total worth of mobile money transactions in Ghana increased from GH¢155 billion to GH¢986 billion recording over 636% increase in such transactions (Ghana Revenue Authority, 2022). These transactions which were mainly in the informal sector were observed to be largely untaxed. This apparent shift in payment methods from traditional to digital payments led to the introduction of the E-levy to expand the tax net to include such transactions which are predominantly in the informal sector. Nonetheless, there have been setbacks in the mobilization of revenue through the E-levy ranging from political contestations to reduced mobile money transactions as reported by IMANI Africa (Boakye, 2022). Recently, it was reported that of the E-levy had generated less than GH¢60 million after two months of its implementation instead of the expected GH¢600 million which is just 10% of its projected revenues (Boakye, 2022). This is largely due to the inability of the government to rely to research that involved in-depth consultation of actors in the informal sector with regards to the manner and purpose for which they used mobile money transactions and to understand the likely elasticity consequences that could arise from imposing taxes on such mode of transactions highly patronized by informal sector players. Indeed, research based on statistical data alone was definitely not going to reveal the behavioral patterns of players in unstructured informal businesses.

Funding Factors

Another factor inhibiting research in African Business Schools is the lack of funding sources. Research funding in Africa has for years been woefully inadequate (Bob-Milliar, 2020; Daszkiewicz et al., 2022) and in the past three decades, available funds for research in Africa has mainly been from foreign sources (Bob-Milliar, 2020). This is said to be creating a situation of pervasive consultancy culture in the production of knowledge by African institutions (Bob-Milliar, 2020). (Daszkiewicz et al., 2022) argue that colonial legacies, unequal power dynamics and economic disparities are influencing the production of knowledge and its dissemination in Africa. Funded research in most African institutions have been identified as often serving the interest of those foreign funding bodies (such as development banks and international agencies) with very sparse concern for how they align or address the priorities of the local economies of developing countries (Daszkiewicz et al., 2022; Lewis, 2003). Besides, there is also evidence of unequal resource share when it comes to research funding in developing countries in Africa as compared to developed countries (Istratii & Demeter, 2020). These resource limitations inhibit the production of context relevant knowledge from informal markets in Africa which often requires complex, rigorous and often financially demanding funding opportunities – which is mostly lacking for African Business Schools.

Furthermore, the funding challenges for African institutions are sometimes exacerbated into situations where not only do researchers on the continent have to respond to the skewed research demands of funding sources, but also only become data mines for foreign collaborators providing raw materials in the form of data that is exported to foreign academics who develop their theories which often does not match the African informal context (Bob-Milliar, 2020).

Besides, there are even reports that funding-application processes such as eligibility criteria, review processes for proposals, deadlines for funding applications and the evaluation processes of proposals in themselves limit applicants from indigenous communities and developing countries (Istratii, 2019). This often creates situations where most African scholars are unable to access funding for research that are critical in addressing the issues in their economy such as a research-based development of the informal sector.

Research Silos

Another critical factor limiting African Business Schools from engaging in informal research that are responsive to their economies is the lack of interdisciplinary research. In most African Business Schools, the disciplinary culture is such that the professional identity of academics in a particular discipline establishes an invisible boundary in their research orientations and interests, which are often aligned with the dictates of their specializations. Such professional identities, which is the individual's perception of him or herself as a member of a profession with responsibilities to society (Blasco, 2021), often launch researchers in most Business Schools to strongly align with either a 'hard' discipline such as economics or a 'soft' discipline such as human resource management (Biglan, 1973; Blasco, 2021). Though these disciplinary specializations are important for the professional identification of researchers, it results in mental models where business researchers engage in a counter-productive responsibility dichotomy where they perceive their disciplines as more important than that of others (Blasco, 2021). This reduces useful research collaborations that cut across disciplines and thus create a scenario where research produced by most business and management scholars are constructed in silos, with limited in scope and discipline.

For African economies, such research silos lead to a much more complex problem in the production of knowledge with high disciplinary fidelity but limited applicability in resolving the multi-faceted challenges that exist in informal economies that dominate the region. This apparent lack of interdisciplinary scholarship in business schools in Africa with other relevant discipline leads to limited understanding of the informal economy which dominates economic activities in Africa and limits the establishment of an effective application of business and management research to development in these jurisdictions.

DECOLONIZING BUSINESS RESEARCH IN AFRICA

Since the International Conference on Decolonising Our Universities held in Malaysia in 2011, there has been a surge in interest among scholars particularly from developing countries in search for non-Eurocentric paradigms (Alvares & Shad Saleem Faruqui., 2014). The agenda for decolonizing

universities however is not meant to spark a tirade against the West by asking institutions in developing countries to shut out Europe and North America. Rather, it is meant to make African and Asian universities truly global and also contextually relevant by breaking the power asymmetries in knowledge production where there appears to be some intellectual monopoly of Western theories and knowledge to accommodate the pertinent and vast knowledge of African and Asian societies and cultures (Alvares & Shad Saleem Faruqui., 2014).

It is however important to note that the awareness to break away from Western-dominant paradigms in research and education did not only commence with the Malaysian conference. Indeed, there have been several attempts by scholars in Africa to drive agendas towards the development of methodologies and paradigms suitable for exploring African situations (Lauer & Anyidoho, 2012; T. R. Lituchy et al., 2013; Reviere, 2001; Zoogah, 2008; Zoogah & Nkomo, 2013). Some of these efforts have often been descriptive of the state of African management scholarship. What appears missing are specific ways in which business and management research in Africa could find its voice in this decolonial quest. As shown previously, some pertinent factors often inhibit the exploration of the informal sector by business and management scholars. But as much as these challenges exist, there are cogent measures that could be taken to promote the production of knowledge in Africa's dominant informal economy.

Afrocentric Research Paradigms

There have been efforts by African researchers to promote research paradigms and methodologies that are suitable in exploring and explaining the dynamics and phenomena in African contexts (Bob-Milliar, 2020; Lauer & Anyidoho, 2012; Reviere, 2001). These studies have been critical of the disproportionate dominance of Western theories and the power asymmetries that characterize knowledge production. For instance, Reviere (2001) notes that, “traditional Eurocentric research criteria of objectivity, reliability, and validity are inadequate and incorrect, especially for research involving human experiences” (p. 709), and thus argues for new research orientations that challenge research inquiry where the processes of knowledge construction and methodologies are given prominence over the well-being of the people being researched. Reviere (2001) therefore advocates for an Afrocentric research approach that challenges traditional Eurocentric research criteria of objectivity, reliability and validity while extensively capturing the subjective nuances in societies that are often hidden in research data analysis. Bob-Milliar (2020) in his introduction for the special issue in African Affairs journal – Methodologies for Researching Africa – noted that developing a Afrocentric research methodology will be a daunting task considering the multiplicity of methods in major disciplines in African studies but proposes that existing methodologies require some empirical modification for application in Africa.

What is important to note in this search for Afrocentric research paradigms and methodologies, however, is that these emerging paradigms and methodologies must not present merely a new approach to research exclusively for African societies. This will rather result in an unfortunate scientific exile of African research from global discourse thereby creating a situation where research from the continent could only be applicable to the continent and without generating knowledge that is useful for global discourse and consumption. What is required is thus the need to develop research methodologies whose assumptions and philosophies underpin the need to gain deeper understanding and meaning of African societies in ways that are empirically justified and allows African voices to be heard in dominant theories.

For business schools in Africa, this may require the shift from solely positivist research approaches that collates experiences to more pragmatic and constructive paradigms that allow for in-depth understanding of the subjective experiences that influence decision making in informal businesses. These arguments have been strongly advanced by previous researchers who opted for interview-based data collection to address the challenges of obtaining survey data in African contexts (Kolk & Rivera-santos, 2018). For research in business schools to be more responsive and relevant to the African context, they must be perceived as capable of unearthing the hidden trajectories and unexplained phenomena that influences decisions among economic players – and in the case of Africa, informal economy players.

This said, it must be emphasized that the search for methodological rigor for business research must not only be limited to the adoption of more complex positivist approaches for generalizations but rather greater analytical consistency and truthfulness about the unique experiences of those who

constitute the majority in the informal economy, which summarily could explain their informal business models and decision making. It is through these inductive research approaches that studies that are considered mere replicas of previous (Western) theories could be avoided, bringing management scholarship in Africa to a place of theory building and production of high-impact research (Colquitt & Zapata-Phelan, 2007).

Funding for Informal Economy Research

The structure of informal businesses are such that obtaining data from such sources are more intense, involving and financially demanding. Informal businesses especially in Africa are small in size, many, sparsely scattered and often have diverse business activities which require different decision making, management approaches and financial structuring. This often discourages a lot of researchers in engaging in constructivists research to explain the dynamics of the sector especially when there are no funding opportunities.

Even where limited funding opportunities exist, scholars in Africa are often restricted by demands of the funding agency, hence, not at liberty to dive into informal economies. Daszkiewicz and colleagues (2022) however provide some actions scholars from African countries could adopt to shift the power in research priority to meet their imperatives. They propose actions researchers should consider at three phases of the scientific process of research funding, worth considering for business research in informal economies.

At the project design phase, Daszkiewicz and colleagues (2022) recommend that there is the need for Research Institutes to commence discussion on funding procedures that tend to disadvantage African scholars and forge way through which calls for proposals could be improved to address issues of bias and intentional or unintentional discrimination in proposal application. Furthermore, they recommend that research projects in African societies must involve African scholars so they could drive the research to focus on issues relevant to the context. In addition, it is recommended that there should be power considerations when the methodologies of research projects are being considered to ensure greater participation and trust of the most relevant informants and indigenous researchers.

At the implementation stage, Daszkiewicz and colleagues (2022) propose that there is the need to recognize the active reflexivity where the presence of a researcher in the field might create tensions that have nothing to do with the immediate actions of the researchers but everything to do with their status as researchers. Conducting fieldwork in such situations requires the researcher to be sensitive to the aspirations of the community and their goals/perspectives when interacting with a participant. Therefore, involving indigenous researchers in project implementation is key to its success.

Finally, Daszkiewicz et al (2022) propose that there is the need for researchers to bear in mind who the research is being written for. When business researchers engage in informal research and make policy recommendations, the mode of dissemination must not only be limited to foreign journals but also must have policy recommendations drafted in ways that are usable by government authorities. In addition, African governments must prioritize the funding of research in business schools as a way of generating relevant knowledge that could transform their economies. This will create greater sense of ownership of data and research findings which can form the basis of policy decisions and social action. Besides, major private sector organizations could also support informal economy research as ways of understanding a sector which constitutes a critical aspect of their value chain.

Interdisciplinary Research

African scholars in business schools must strive to break away from the silos of the disciplinary specializations that limit their ability to appreciate the joint responsibility various fields have towards the informal economy. Less emphasis should be placed on professional identities as the defining models of research interests with much premium placed on impactful research. This will create an interdisciplinary culture that recognizes the complexities in managing informal businesses.

CONCLUSION

In conclusion, business schools in Africa must recognize the responsibility they have to knowledge production and also the larger society. For an informal sector that employs more than 80%

of the economically active population in Africa, there is the need for the knowledge produced and disseminated by business schools in Africa to be relevant for the development of the informal economy on the continent. This is the responsibility business schools have towards national development on the African continent.

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SUSTAINABLE SUPPLY CHAIN MANAGEMENT PRACTICES AND FIRM PERFORMANCE: THE MEDIATING EFFECT OF SUPPLY CHAIN INTEGRATION

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ABSTRACT

This study aimed to examine the Triple Bottom Line (TBL) perspective of the role of supply chain integration in the inextricable relationship between Sustainable Supply Chain Management (SSCM) and firm performance. Based on a cross-sectional survey of 455 manufacturing and service firms, the study proposed and tested a model grounded upon the political economy theory, using the PLS variance-based structural equation modelling. While SSCM practices positively and significantly impacted firm performance, supplier integration did not mediate the relationship between social supply chain management practices and firm performance. Customer and internal integration mediated the relationship between SSCM practice and firm performance. Supplier integration also mediated the relationship between economic and environmental supply chain management practices and firm performance. This study contributes to the TBL perspective literature on SSCM practices, supply chain integration (customer, internal and supplier integration) and firm performance by investigating the underlying relationships that help establish the rather complex relationship between the TBL perspective of SSCM practices and firm performance.

Keywords: Sustainable Supply Chain, Supply Chain Integration, Triple Bottom Line, Firm Performance, Mediating effect, PLS-SEM

INTRODUCTION

Over the past four decades, efforts to achieve global sustainability in the industry and the corporate world have been against a backdrop of formidable challenges such as climate change, global warming, high resource consumption and persistent fears of depletion of natural

resources (Grydehøj, Adam & Ilan Kelman, 2017). Despite the increasing attention given to SSCM, most SSCM research and models have been focused on the implications of such responsible practices rather than the antecedents or motivations for such practices (Eltantawy et al., 2015). The few studies that have examined corporate motivations have been predominantly qualitative, with few large-scale empirical analyses (Paulraj et al., 2017). Whether theoretical, conceptual, or empirical, these studies have confirmed and, in most cases, demonstrated the presumed or inferred positive relationship between SSCM practices and firm performance. However, there have been a few exceptions (*e.g.* Esfahbodi, Zhang, Watson & Zhang, 2017; Wang, Zhang & Goh, 2018). This means that whether the study focused on the integrated approach to SSCM or approached the question through an exploration of the individual components of SSCM (*i.e.*, the environmental, social, and economic supply chain management) (TBL), the findings have generally suggested a positive effect of SSCM on performance with rather few opposing views. With this, it can be suggested that the successful implementation of SSCM practices would contribute significantly to improving a firm's performance. Thus, the question that must be addressed now is: what mechanisms define the SSCM practices and firm performance relationship, particularly from a global supply chain standpoint considering a TBL perspective? This question, directly or indirectly (via mediating and moderating variables), remains unclear (Wang et al., 2018). This critical gap in literature needs to be filled and understood to create a better appreciation of SSCM practices to ensure the long-term viability of organizations and the sustainability of firms and the globe at large.

It is against this background, as well as observations of numerous disruptions to global supply chains, such as the recent COVID-19 pandemic, that this study seeks to investigate the mediating effect of supply chain integration, which considers the dynamic relationships between a company (internal stakeholders), its suppliers, and customers, in understanding the complex relationship between SSCM practices and firm performance.

LITERATURE REVIEW

Theoretical Foundation

The 'political economy' theory serves as the primary theoretical framework in this study. The theory states that "society, politics, and economics are inextricably linked, and that economic issues cannot be examined meaningfully without taking into account the political, social, and institutional context in which economic activity occurs" (Gray, Owen & Adams, 1996, p. 47). This implies that the economic viability of any activity cannot be scrutinized meaningfully without considering the socioeconomic, sociocultural, and institutional contexts in which economic activity occurs. Legitimacy, Institutional and Stakeholder theories are all inferred from the Bourgeois Political Economy Theory (Gray et al., 1996).

This study employs the ethical (moral) or normative branch of stakeholder theory. This is because the perspectives of all stakeholders within the economic, social, and environmental groups are considered equally important when implementing SSCM practices, particularly from a TBL perspective. Institutional theory is a concept that explains how and why firms act in certain ways. This notion is essentially a sociological view of businesses' operational activities, emphasizing the relationship between entities and the settings in which they operate (Powell & DiMaggio, 2012). Corporate policy and practice, such as SSCM practices, are context-dependent because they respond to institutional and social demands to preserve legitimacy and stakeholder participation (Deegan, 2009).

SSCM practices

SSCM has several literary meanings with no definite consensus. However, in this study, SSCM is defined as "the strategic, transparent integration and achievement of an organization's social, environmental, and economic goals in the systemic coordination of key inter-organizational business processes for improving the long-term economic performance of the individual company and its supply chains" (Carter & Rogers, 2008, p. 368). From this definition, SSCM is thought to comprise the TBL dimensions, i.e., economic, environmental and social supply chain management (Brandenburg et al., 2019). The term "environmental supply chain management" is used in the study to refer to the practices and policies that a business uses to minimize significant environmental impacts associated with its operations over a product's or service's lifecycle (Famiyeh et al., 2018).

Supply Integration

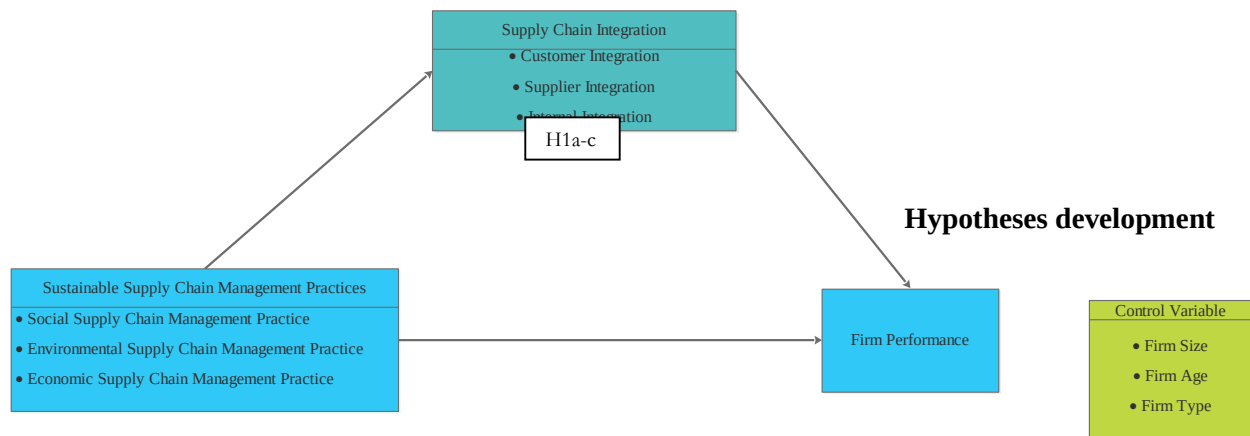
Supply chain integration (SCI) is a well-researched topic in the supply chain management literature. This study defines SCI as the degree to which suppliers collaborate tactfully with their supply chain partners and collectively manage intra- and inter-organizational processes (Ataseven & Nair, 2017). SCI has been classified as a three-dimensional construct consisting of supplier, internal, and customer integration (Jaija et al., 2018). Supplier integration is a broad term that refers to the process by which focal firms integrate with their suppliers through the sharing of critical characteristics and close collaboration that enables collaborating firms to develop a set of unique characteristics that are frequently hard to emulate and are occasionally indispensable (Zimmermann & Foerstl, 2014). Supply chain integration and its mediating effect on the SSCM – firm performance relationship is best illustrated by the political economy theory in the sense that, in order to properly implement sustainable practices across supply chains and their effect on firm performance, the perspectives of stakeholders such as customers, suppliers, and internal departments are critical, as these stakeholders lend legitimacy to the firm, ensure the integration of stakeholder perspectives and, in a broader sense, ensures compliance with institutional policies and requirements (Liu et al., 2018; Mekhum, 2020; Sessu, Sjahrudin & Santoso, 2020). The three dimensions of supply integration, namely suppliers, internal processes, and customers, are used to evaluate the underlying factors that facilitate the relationship between SSCM and firm performance.

Firm Performance

Central to strategic management is measuring firm performance (Venkatraman & Ramanujam, 1986). Because of its complexity and multi-dimensional nature, there is no universally accepted definition for firm performance (Kaplan & Norton, 1996). However, since there is no definite operational term for firm performance, it has been synonymous with various definitions and interpretations. Financial performance, which quantifies the achievement of a business's objectives in a financial sense, is one of the most widely used measures of firm performance and is therefore used in this study. Accounting-based metrics such as return on equity (ROE), return on assets (ROA), increase in sales, return on sales (ROS), and so on, as well as market-based metrics such as market returns and Tobin's Q, have been widely used by organizational researchers (Hult et al., 2008; Combs et al., 2005). Researchers commonly consider accounting metrics as indicators of past and/or short-term financial success.

Following the literature review, the study proposed the conceptual framework (see Figure 1). The framework's logic is that sustainable supply chain practices will directly impact firm performance. Nonetheless, supply chain integration will mediate between SSCM practice and firm performance.

Figure 1: Proposed Conceptual Framework



It has been established that a socially sound community can positively contribute to the advancement of firms. Any firm that successfully meets the societal needs of its stakeholders (as defined by the stakeholder theory) obtains the approval of its operational community and stakeholders at large, improving its performance. McGuire et al. (1988) conducted one of the earliest studies on the effect of social supply chain practices on corporate performance. The study discovered that entities that fail to perform CSR earn a lower return on their assets. According to Govindan, Shaw and Majumdar (2021), incorporating environmental and social practices into supply chains benefits firms across all economies and industrial sectors in terms of operational and financial performance.

Furthermore, socially responsible practices improve firm performance by significantly reducing supply chain risk and raising stakeholder engagement (Gualandris et al., 2015; Fahimnia & Jabbarzadeh, 2016). The activities of external stakeholders, such as non-profit organizations (NGOs), have also been found to improve a company's brand image, environmental, social, and financial performance (Chen & Kitsis, 2017). Based on the findings of the preceding studies, the following hypothesis was thus proposed:

H1a. Social Supply Chain Management has a direct positive effect on firm performance.

The justification for adopting environmental management practices (EMP), particularly in supply chains, may be traced back to the results of various studies (e.g. Famiyeh et al., 2018; Klassen & Whybark, 1999; Porter & Linde, 1995; Saruchera & Asante-Darko, 2021). Effective environmental management practices implemented throughout the supply chain can help firms improve their performance through product recovery, which ensures that toxic or hazardous materials are properly managed, and their negative environmental impact is mitigated; hence carbon emissions and associated taxes and a deterrent penalty for pollution (Dong, Liu & Shen, 2019). According to Paulraj et al. (2017), SSCM practices significantly positively affect a firm's EPR and financial performance. Corporations can improve their performance by focusing on pollution avoidance, sustainable development, and product stewardship as their primary strategic capabilities. Based on the above research findings, the following hypothesis was proposed:

H1b. Environment Supply Chain Management has a direct positive effect on firm performance.

According to political economics theory, the economic dimension of SSCM is viewed as an internal stakeholder necessity of the focal firm to ensure prudent resource management. Effective deployment and management of these resources is also a competitive advantage frequently replicated by organizations without the necessary know-how and expertise but aspiring to be as relevant. The study by Santiteerakul et al. (2015) indicates a significant positive relationship between economic supply chain management and firm performance from the institutions and systems perspective. Sustainable procurement also addresses proper raw material sourcing and waste reduction through hazardous material waste minimization (Min & Galle, 2001), despite the challenges (Tukuta & Saruchera, 2015). When correctly integrated into a firm's operations, this approach has positively improved firm performance, particularly financial (Esfahbodi et al., 2017; Mefford, 2011). Several studies have demonstrated the effective implementation of waste reduction programs for economic gains to have a considerable positive effect on firm performance, particularly from an SSCM perspective (Ochiri et al.,

2015; Namagembe, Ryan & Sridharan, 2019). Based on the above research findings, the following hypothesis was proposed:

H1c. Economic Supply Chain Management has a direct positive effect on firm performance.

Mediating effects

Customers

From the political economy theory perspective, firms continue to copy organizations that have successfully incorporated their consumers' perspectives. As a result, political economy demonstrates the need to include clients in a business's operations. When a business promotes a sense of integration with its customers, it is willing to exchange resources and information to better understand one another's requirements, reducing opportunistic behaviour and increasing firm profitability (Fernando & Lawrence, 2014; Koch & Mont, 2016; Sabau, 2020). The structural analysis of Hooshangi et al. (2017) & Wang et al. (2018) discovered that customer integration is a mechanism for protecting firm investments from various opportunists, obtaining employee commitment, and improving organizational performance. Therefore, this research asserts the importance of customer integration on SSCM practices from a TBL perspective and firm performance; hence the following hypotheses were proposed:

H2a. Customer Integration mediates the positive relationship between Social Supply Chain Management and Firm Performance.

H2b. Customer Integration mediates the positive relationship between Environmental Supply Chain Management and Firm Performance.

H2c. Customer Integration mediates the positive relationship between Economic Supply Chain Management and Firm Performance.

Suppliers

A firm that integrates with its suppliers gains more insight into its key suppliers' capabilities, processes, and constraints. This insight allows firms to plan and forecast, engage in product and process design, and manage transactions more effectively (Schoenherr & Swink, 2012). Knowledge of your suppliers, their activities, and the orientation of their products has been found to instil confidence in consumers, employees, and society (Bozzetto et al., 2020; Setyadi, 2019; Zimon et al., 2020). Supplier integration has been recommended for businesses to integrate environmental management systems, social supply chain management practices, and economical supply chain management practices (Turkulainen et al., 2017). This research asserts the importance of supplier integration on SSCM practices from a TBL perspective and firm performance hence proposing the following hypotheses:

H3a. Supplier Integration mediates the positive relationship between Social Supply Chain Management and Firm Performance.

H3b. Supplier Integration mediates the positive relationship between Environmental Supply Chain Management and Firm Performance.

H3c. Supplier Integration mediates the positive relationship between Economic Supply Chain Management and Firm Performance.

Internal

The political economy theory best illustrates internal integration and its application from an SSCM firm performance relationship (Arndt, 1983; Chen et al., 2018). Mekhum (2020) discovered that efficient integration of an organization's internal activities increases the long-term sustainable performance of manufacturing enterprises from an (economic, environmental, and social) standpoint. Internal integration was deemed a critical component of SSCM practice application in the Kwamega et al. (2018) study. This research asserts the importance of internal integration on SSCM practices from a TBL perspective and firm performance and therefore proposed the following hypotheses:

H4a. Internal integration mediates the positive relationship between Social Supply Chain Management and Firm Performance

H4b. Internal integration mediates the positive relationship between Environmental Supply Chain Management and Firm Performance

H4c. Internal integration mediates the positive relationship between Economic Supply Chain Management and Firm Performance

METHODOLOGY

The study's population was obtained from the Integrated business establishment survey (IBES) and divided into three clusters (i.e., northern, southern, and middle Ghana). A sample size of 655 firms was used for this study. Data was collected through self-administered questionnaires. This study reviewed the literature to define relevant measures before adapting existing scales to assess SSCM practices (i.e., economic supply chain management practices, social supply chain management practices, and environmental supply chain management practices), supply chain integration (i.e., internal integration, customer integration, and supplier integration), and firm performance. All measures were rated on a seven-point Likert scale of agreement, with 1 indicating "strongly disagree", and 7 indicating "strongly agree".

Firm size, age, and industry type were the three variables used as control variables as pertinent in the management literature (Andi, Isnaeni & Widiyanti, 2019).

RESULTS AND DISCUSSION

Out of the 655 questionnaires distributed, 505 were returned. However, 455 responses were deemed usable for this study's data analysis, reflecting a 69.47% effective response rate. Exploratory and confirmatory factor analysis techniques were conducted to determine the constructs' reliability and validity. Second, structural equation modelling (SEM) was utilized for the hypothesized relationships to determine the path coefficients and their respective significance. The bootstrapping method proposed by Preacher and Hayes (2004) was used to conduct the mediation tests in this study. The EFA solution derived using Promax rotation's maximum likelihood extraction method showed that most of the communality values exceeded 0.50, indicating that the derived variables explain most of the variance in the items. The component factor loading and Cronbach's alpha coefficient ranging from (0.855 to 0.941) both exceeded the recommended thresholds of 0.50 and 0.70, respectively. The results demonstrated a strong model fit, with 30 (2%) non-redundant residuals with an absolute value greater than 0.05. Reliability and convergent validity was achieved across all constructs with AVE > 0.5, CR > 0.7, CA > 0.7 and indicator loadings > 0.708.

Structural Equation Modelling

After establishing a satisfactory measurement model, the next task was to examine the study's structural model in light of the study's various hypotheses (H1a-c – H4a-c). The variance-based structural equation model (PLS-SEM), SmartPLS 3.3.3, was used to explore the relationships among the constructs in the study. The structural model analysis began with evaluating Pearson's coefficients R^2 . R^2 reflects the proportion of variance accounted for by the endogenous variables, thus, Consumer Integration, Supplier Integration, Internal Integration, and firm performance. It also indicates the modified model's efficiency. R^2 has a value between 0 and 1, according to Hair et al. (2014). R^2 of 0.25 indicates a weak effect, R^2 of 0.5 indicates a moderate effect, and R^2 of 0.75 indicates a substantial effect. According to the findings, the research model explained 0.62, 0.544, 0.571, and 0.721 of the variances in Customer Integration, Supplier Integration, Internal Integration, and firm performance. This implies that the model clarified a moderate effect on Customer Integration, Supplier Integration, Internal Integration, and firm performance.

To examine the significance of the path coefficients in the model, particularly for the first objective (H1a, H1b and H1c), the bootstrapping method in SmartPLS 3.3.3 was used with 5,000 re-samples (Hair et al., 2014). Most hypothesized relationships were significant when the effect of the control variables was taken into account (i.e., firm type, firm age and firm size). Hypothesis 1 suggested that social, economic, and environmental supply chain management practices all positively affect firm performance. The results showed that *Social supply chain management practices* are positively and directly related to *firm performance* ($\beta = 0.184$, $p < 0.001$), providing support for H1a., *Environmental supply chain management practice* is also positively related to *Firm performance* ($\beta = 0.217$, $p < 0.00$) among manufacturing and service firms, thus supporting H1b. Likewise, *Economic supply chain management practice* is also positively related to *Firm performance* ($\beta = 0.185$, $p < 0.001$), thus also supporting H1c.

Mediation Analyses (Indirect Effect)

The PLS-SEM analysis was used to ascertain whether supply chain integration (i.e., internal, customer and supplier integration) positively mediated the SSCM practices and firm performance relationship, as asserted in the second objective of this study. Mediation occurs when a variable acts as a link between two other related constructs. By examining the strength of the mediator variable, the mechanisms that underpin or define the cause-effect relationship between an exogenous and endogenous construct can be substantiated. This exercise aimed to conduct a series of mediations to understand the underlying mechanisms that define the positive relationship between SSCM practices and firm performance. Nine mediation analyses (H2a-H2c, H3a-H3b, and H4a-H4c) were conducted.

The Mediating effect of Internal Integration on SSCM Practice and Firm Performance

Internal integration was a mediating factor in the relationship between environmental, social, and economic supply chain management and firm performance, supporting hypotheses H4a-c. The standardized regression coefficient between Environmental Supply Chain Management and internal integration and the standardized regression coefficient for the internal integration and Firm performance relationship was statistically significant. $(0.223)(0.181) = 0.040$ was the standardized indirect effect. The results showed that the standardized regression coefficient between Social Supply Chain Management and internal integration and the standardized regression coefficient for the internal integration and Firm performance relationship was statistically significant. $(.190)(.181) = 0.034$ was the standardized indirect effect. The results also showed that the standardized regression coefficient between Economic Supply Chain Management and Internal integration and the standardized regression coefficient for the internal integration and Firm performance relationship was statistically significant. $(.201)(.181) = 0.036$ was the standardized indirect effect.

The Mediating effect of Customer Integration on SSCM Practice and Firm Performance

Customer integration was a mediating factor in the relationship between environmental, social, and economic supply chain management and firm performance, supporting hypotheses H2a, H2b, and H2c. The standardized regression coefficient between Environmental Supply Chain Management and customer integration and the standardized regression coefficient for the customer integration and Firm performance relationship was statistically significant. $(.223)(.195) = 0.043$ was the standardized indirect effect. The results also demonstrated that the standardized regression coefficient between Economic Supply Chain Management and Internal integration and the standardized regression coefficient for the customer integration and Firm performance relationship was statistically significant. $(.223)(.195) = 0.043$ was the standardized indirect effect. The estimated ranges of the confidence intervals for H2a, H2b and H2c at 95% were 0.029 - 0.046, 0.005 - 0.013, and 0.024 - 0.046, respectively. The three unstandardized indirect effects were found to be 0.043, 0.010, 0.043 and statistically significant.

The Mediating effect of Supplier Integration on SSCM Practice and Firm Performance

Supplier integration was a mediating factor in the relationship between environmental and economic supply chain management and firm performance, supporting hypotheses H3b and H3c. However, supplier integration did not mediate the Social Supply Chain Management and Firm Performance relationship, thus not supporting hypothesis H3a. The standardized regression coefficient between Environmental Supply Chain Management and supplier integration and the standardized regression coefficient for the supplier integration and Firm performance relationship were statistically significant. $(.173)(.126) = 0.022$ was the standardized indirect effect. Bootstrapping results also showed that the standardized regression coefficient between Economic Supply Chain Management and supplier integration and the standardized regression coefficient for supplier integration and Firm performance relationship were statistically significant. $(.142)(.126) = 0.018$ was the standardized indirect effect. Lastly, the results showed that the standardized regression coefficient between Social Supply Chain Management and supplier integration and the standardized regression coefficient for supplier integration and Firm performance relationship were statistically significant. $(0.093)(0.126) = 0.012$ was the standardized indirect effect. The estimated ranges of the confidence intervals for H4a, H4b and H4c at 95% were 0.013 - 0.025, 0.010 - 0.021, and - 0.009 - 0.014, respectively. It can be observed that for H3a, the unstandardized indirect effect was found to be 0.012 contained in an interval that was

statistically not significant. Hence, the unstandardized indirect effect for H3a and H3b was 0.022, 0.018 and statistically significant.

Summary of Mediation Analyses

All mediation analyses, except for one, were statistically significant at $p < 0.05$ (see Table 1).

Table 1: Indirect Effect of Economic, Social and Environmental SCM and Firm Performance as Mediated by Internal Integration, Customer Integration, and Supplier Integration

Path Relationship	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Social Supply Chain Management -> Customer Integration -> Firm Performance	0.010	0.003	3.250	0.002
Environmental Supply Chain Management -> Customer Integration -> Firm Performance	0.043	0.005	8.697	0.000
Economic Supply Chain Management -> Customer Integration -> Firm Performance	0.043	0.005	8.697	0.000
Social Supply Chain Management -> Supply Integration -> Firm Performance	0.012	0.016	0.732	0.305
Environmental Supply Chain Management -> Supply Integration -> Firm Performance	0.022	0.006	3.633	0.001
Economic Supply Chain Management -> Supply Integration -> Firm Performance	0.018	0.005	3.578	0.001
Social Supply Chain Management -> Internal Integration -> Firm Performance	0.034	0.008	4.299	0.000
Environmental Supply Chain Management -> Internal Integration -> Firm Performance	0.040	0.009	4.485	0.000
Economic Supply Chain Management -> Internal Integration -> Firm Performance	0.036	0.007	5.197	0.000

Robustness checks

Financial statements of firms retrieved from the Ghana Revenue Authority (GRA) were analyzed to extract the accounting-based financial measures such as Market Share (MS), Return on Equity (ROE), the overall profitability of businesses (OVP), and an increase in sales (SAI). Using Principal Component Analysis (PCA), composite scores for SCSSCM, ENSSCM, and ECSSCM were generated using Principal Component Analysis (PCA). The natural log of the number of employees and the number of years a business has been in operation were used to determine the size and age of the business. One (1) and zero (0) were used as dummy codes for firm types. Manufacturing/extractive firms were coded one (1), while service firms were coded zero (0). Four (4) empirical models were constructed for this robustness test in order to estimate the study's hypothesized relationships as follows:

$$MS = \beta_0 + \beta_1 SCSSCM_i + \beta_2 ENSSCM_i + \beta_3 ECSSCM_i + \sum_{j=4}^k \beta_j X_j + \varepsilon_i \quad (1)$$

$$ROE = \beta_0 + \beta_1 SCSSCM_i + \beta_2 ENSSCM_i + \beta_3 ECSSCM_i + \sum_{j=4}^k \beta_j X_j + \varepsilon_i \quad (2)$$

$$OVP = \beta_0 + \beta_1 SCSSCM_i + \beta_2 ENSSCM_i + \beta_3 ECSSCM_i + \sum_{j=4}^k \beta_j X_j + \varepsilon_i \quad (3)$$

$$SAI = \beta_0 + \beta_1 SCSSCM_i + \beta_2 ENSSCM_i + \beta_3 ECSSCM_i + \sum_{j=4}^k \beta_j X_j + \varepsilon_i \quad (4)$$

Where: MS_i is the firm's market sales, ROE_i is the firm's return on equity, $OVPI$ is the firm's overall profitability, SAI_i is the firm's sales increase, $SCSSCM_i$ is the firm's social supply chain management practices, and $ENSSCM_i$ is the firm's environmental supply chain management practices. $ECSSCM_i$ is the firm's economic supply chain management practices. Variable X_j , a collection of $\{k\}$ variables, accounts for the controlling effect of Firm Size, Age, and Type. The error term is ε_i while the parameter vectors are β 's.

The study results showed that the implementation of social, environmental, and economic supply chain management will have a positive direct impact on firm performance as shown by MS, that is social supply chain management ($\beta=0.105$, S.E = 0.047, $\rho = 0.037$), environmental supply chain management ($\beta=0.117$, S.E= 0.048, $\rho = 0.020$) and economic supply chain management ($\beta=0.251$, S.E = 0.047, $\rho = 0.000$). The finding hold true for other firm-level performance indicators, namely ROE, OVP, and SAI, social supply chain management ($\beta= 0.107$, S.E = 0.013, $\rho = 0.000$), environmental supply chain management ($\beta= 0.201$, S.E = 0.013, $\rho = 0.000$) and economic supply chain management ($\beta= 0.101$, S.E= 0.013, $\rho = 0.000$), social supply chain management ($\beta= 0.205$, S.E = 0.013, $\rho = 0.000$), environmental supply chain management ($\beta= 0.102$, SE= 0.013, $\rho = 0.000$) and economic supply chain management ($\beta= 0.106$, S.E= 0.014, $\rho = 0.000$), social supply chain management ($\beta= 0.303$, S.E= 0.026, $\rho = 0.000$), environmental supply chain management ($\beta= 0.101$, S.E= 0.036, $\rho = 0.000$) and economic supply chain management ($\beta= 0.212$, S.E= 0.046, $\rho = 0.000$) respectively. R^2 percentages range between 56.19 and 54.22 per cent.

DISCUSSIONS

This study sought to establish the causal links and relationships between SSCM practices and firm performance from a TBL perspective. The first objective of this study sought to examine the effect of SSCM practices on firm performance from a TBL perspective. Stemming from this objective, three hypotheses were developed (H1a, H1b and H1c). All three hypotheses were confirmed as postulated. The study found that for hypothesis 1a, social supply chain management practices involving incentive policy, employee turnover management, absenteeism management, ethnic and cultural diversity policy, health and safety policy and social compliance policy have a positive effect on firm performance, thereby confirming the earlier studies (*e.g.* Chen et al., 2018; Hutchins & Sutherland, 2008; Pagell et al., 2004; Paulraj et al., 2017; Zhu et al., 2016). For hypothesis 1b, economic supply chain management practices involving cost savings through material management, waste reduction, energy consumption management, and pollution management have a positive effect on firm performance, as postulated by various authors (Kulangara & Henderson, 2018; Mefford, 2011; Rajeev et al., 2017; Zhu et al., 2016). Finally, for hypothesis 1c, environmental supply chain management practices involving the use of ISO certifications, supplier environmental policy, environmental management policy, and reduction of environmental pollution has a positive effect on firm performance, and this validates earlier findings (*e.g.* Dong et al., 2019; Ortas et al., 2014; Porter & Linde, 1995; Saruchera & Asante-Darko, 2021).

The results of hypotheses H1a, H1b, and H1c are consistent with the political economy theory (Gray et al., 1996). Thus, the political economy theory provides the necessary context, rationale, and knowledge for managers to make decisions, such as the adoption of SSCM practices from a TBL perspective (Glover et al., 2014; Morali & Searcy, 2013; Powell & DiMaggio, 2012; Zimon et al., 2020). With the adoption of SSCM initiatives, particularly from the TBL standpoint, stakeholders' satisfaction is obtained, allowing the organization to be recognized as legitimate. The adoptions of these practices are also due to corporations imitating the successful qualities of competitors, which essentially demonstrates the effect of institutions on firms. From the findings of hypotheses H1a, H1b, and H1c, the implementation of SSCM practices, particularly from a TBL perspective, is a strategic tool for advancing a firm's legitimacy,

enhancing its competitive advantage, and maximizing its performance, as earlier confirmed by Govindan et al. (2021), Das (2018) and Chen et al. (2018).

The study also sought to investigate the effect of supply chain integration (i.e., customer integration, supplier integration, and internal integration) in mediating the relationship between SSCM and firm performance. Nine hypotheses were postulated (H2a-c, H3a-c and H4a-c). Eight of the nine hypotheses proposed in this study (H2a-c, H3b-c and H4a-c) were verified, while one (H4c) was rejected. The study discovered that for hypotheses H2a-c, Customer Integration mediates the positive relationship between social supply chain management, environmental supply chain management, economic supply chain management and firm performance. For hypotheses H3b-c, the study revealed that supplier integration, which includes strategic partnerships with suppliers, information sharing with major suppliers, inventory sharing with major suppliers, design specification sharing with suppliers, and ensuring that suppliers improve their processes to meet the needs of our operations, mediates the positive relationship between environmental supply chain, economic supply chain management and firm performance.

The results of hypothesis 3a contradict the findings of studies such as Marshall et al. (2015). However, it is demonstrated in this study that, from the perspective of a developing country, that supplier integration is incapable of acting as a medium for social supply chain management and its resultant positive effect on firm performance. This disparity in findings is most likely due to the institutional setting of developing countries (Turkulainen et al., 2017). Suppliers of companies in most developing economies are not residents, so the social system of the operating environment finds it difficult to relate to such suppliers' activities and is thus unable to appreciate the role that suppliers play in social supply chain management and firm performance relationships.

In addition to the foregoing, the findings of hypotheses H4a, H4b, and H4c support the past studies' findings (Graham, 2018; Kwamega et al., 2018; Liu et al., 2021; Mehdikhani & Valmohammadi, 2019; Mekhum, 2020; Mello et al., 2017). Internal integration activities are recognized as an essential component of the SSCM firm performance relationship, and organizations should take note of them to achieve superior performance.

CONCLUSIONS

The primary aim of this study was to explore the mechanisms by which the relationship between SSCM practices from a TBL standpoint and firm performance is established. Specifically, the role of supply chain integration in SSCM practices and firm performance relationships was examined using data from Ghanaian service and industrial firms. The study concludes that the relationship between SSCM practices from a TBL standpoint and firm performance is, in most cases, mediated by the effective integration of customers, suppliers, and internal structures. However, the study revealed that supplier integration which includes strategic partnerships with suppliers, information sharing with major suppliers, inventory sharing with major suppliers, design specification sharing with suppliers, and ensuring that suppliers improve their processes to meet the needs of our operations, did not mediate the social supply chain management-firm performance relationship. From a theoretical standpoint, this study concludes that the implementation of SSCM practice thrives in an environment that considers the role of stakeholders, institutions, and the legitimacy of the firm, collectively known as the political economy theory.

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THE EFFECT OF INSTITUTIONAL LEVEL ON EMBEDDED AGENCY AMONG INSTITUTIONAL ENTREPRENEURS

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ABSTRACT

The paradox of embedded agency has received considerable attention since the rise of institutional entrepreneurship literature brought attention to the work of individuals to change the institutional environment within which they operate. However, we argue that the structural forces that determine the embeddedness of an actor vary considerably across William's four-level institutional hierarchy, which implies that the relationship between structure and agency is not paradoxical. We interviewed a sample of institutional entrepreneurs in the blockchain industry in Kenya and Nigeria and found that embeddedness varied depending on the institutional level at which changes were being made.

Key Words: Institutional embeddedness, agency, hierarchy, entrepreneurship.

INTRODUCTION

Institutional entrepreneurs – change agents who initiate and actively participate in the implementation of changes to existing institutional environments (Battilana, Leca, & Boxenbaum, 2009) – have received considerable scholarly attention since DiMaggio (1988) introduced the term. Building on the work of Eisenstadt (1980), institutional entrepreneurship research has done much to shift the focus of institutional theory from a top-down perspective, where institutions affect the homogenous and isomorphic behavior of organizations (DiMaggio & Powell, 1983; Meyer & Rowan, 1977), to a perspective that recognizes the agency of individuals to alter the institutional environment (Greenwood & Suddaby, 2006; Kraatz & Moore, 2002; Sherer & Lee, 2002). This perspective created a theoretical puzzle which scholars refer to as the paradox of embedded agency: how can embedded actors shape their institutional environment, while simultaneously being shaped by said environment (Seo & Creed, 2002)?

This paradox has driven an ongoing discussion aimed at resolving the tension between agency and institutional determinism (Cardinale, 2018). After a period of oscillating between the primacy of agency and the primacy of structure, institutional theory seems to be converging on the view that both agency and structure matter, but we have only begun to understand the complex interplay between these forces and how they affect the behavior of nascent institutional entrepreneurs. Recent theoretical work has begun to examine the micro-foundations of institutional theory from this perspective (Cardinale, 2018), but work on institutional entrepreneurship remains largely siloed into two streams, one stemming from sociology-based institutional theory and the other from economics-based institutional economics (Bruton, Ahlstrom & Li, 2010; Pacheco, York, Dean & Sarasvathy, 2010).

For the institutional entrepreneur in the field, no such paradox exists: the institutional environment is there with its rules and norms and, when their interests are not met by the current arrangement, institutional entrepreneurs set a course of action to change one or more of those rules or norms. In this study, we use both sociology-based and economics-based thinking to show that embeddedness varies across institutional levels (Williamson, 1998, 2000). The 'paradox of embedded agency' may ring true for institutional entrepreneurs working to effect change at the higher institutional levels (culture and the rules of the game) where institutional structures are stronger, but individuals have much greater agency at the lower levels (rule enforcement and resources allocation). How can there be a paradox of embedded agency if embeddedness varies across levels?

To explore the relationship between institutional level and nascent institutional entrepreneurial behavior, we interviewed a sample of forty-five entrepreneurs in the blockchain industry in Kenya and Nigeria. Some of these individuals were acting at Williamson's lowest level, allocating resources to effect change in the market, while others were operating at Williamson's highest levels, working to change the rules of the game, or even the perspectives of their society. We found that opportunity identification, perceptions of risk, perceptions of likelihood of success, and resource allocation varied based on the level at which the individual endeavored to change the institutional environment.

Our study contributes to theory on institutional entrepreneurship by using Williamson's (1998, 2000) institutional hierarchy to better understand the effect of embedded agency on nascent institutional entrepreneurial behavior. We answer Pachecho, York, Dean and Sarasvathy's (2010) call for research merging institutional theory and institutional economics perspectives to deepen our understanding of institutional entrepreneurship. In doing so, we combine data from the field, with our best understanding of sociological and economic theory, to develop a framework for leveraging an emerging institutional innovation. Consequently, our study suggests a number of practical applications for institutional entrepreneurs in the blockchain industry, since aligning their agentic actions with their institutional level increases the likelihood of effecting change at that level.

INSTITUTIONAL ENTREPRENEURSHIP

When Seo and Creed (2002) introduced the phrase 'paradox of embedded agency', they did so to describe the current theoretical state of affairs, before moving on to focus on the practical matter of contradictions within institutional environments, and how and when people engage in change-oriented behavior to resolve these contradictions (Holm, 1995; Lok & Willmott, 2019). The study of institutional entrepreneurship grew largely out of a dissatisfaction with the portrayal of individuals within institutional theory as limited to actions prescribed by existing norms (Battilana et al., 2009). This perspective limited institutional change to the effect of exogenous shock and failed to account for purposeful actions by embedded actors (Emirbayer & Mische, 1998). The behavior of these actors, or institutional entrepreneurs, has received significant attention from a sociological perspective (i.e., Battilana et al., 2009; Beckert, 1999; Cardinale, 2018; Fligstein, 1997; Greenwood & Suddaby, 2006; Kraatz & Moore, 2002; Lok & Willmott, 2019; Qureshi, Kistruck & Bhatt, 2016; Sherer & Lee, 2002), but has also gained the attention of institutional economists (Coase, 1974; North & Thomas, 1970). In the institutional economics literature, these actors are sometimes identified as institutional entrepreneurs (Anderson & Hill, 2004), but more often as political entrepreneurs (Olson, 1982) or property rights entrepreneurs (Anderson & Hill, 2004), or as engaged in public entrepreneurship (Schneider, Teske & Mintrom, 1995), institutional design (Ruttan, 2006) or institutional innovation (North & Thomas, 1970).

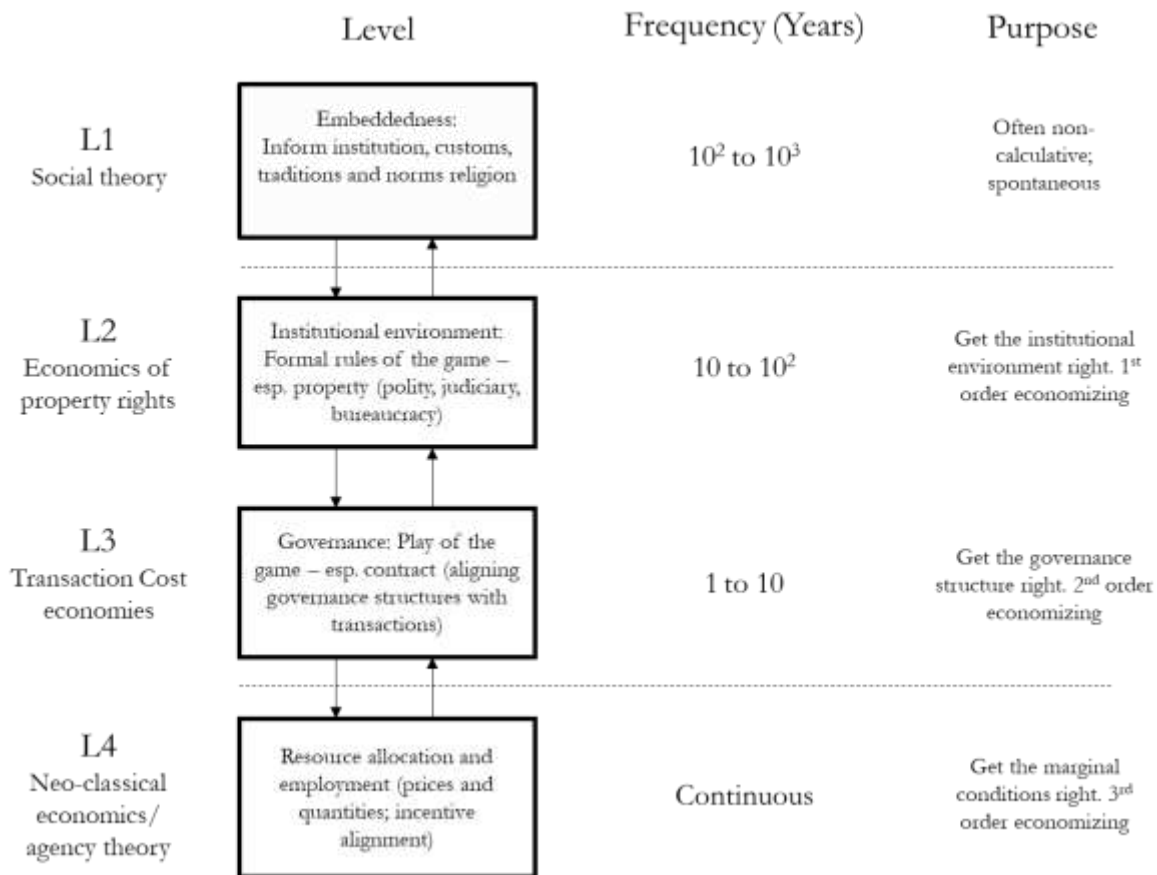
In both literatures, the institutional entrepreneur is an individual who puts effort and resources into affecting institutional change, although the institutional economics literature emphasizes the rational actor's intention to exploit economic opportunities that are not present within the current institutional status quo (Dean & McMullen, 2007; North, 1990). The entrepreneur is not only an institutional innovator but is also alert to profit opportunities that may arise from new institutional arrangements (Anderson & Hall, 2000; Pachecho et al., 2010). Institutional theory takes a wider perspective, where entrepreneurs may be driven by a variety of motivations to challenge rules and practices or to institutionalize alternative rules and practices (Dacin, Goodstein, & Scott, 2002; Garud & Karnøe, 2003). Neither stream has extensively adopted conceptualizations from entrepreneurship research (Battilana et al., 2009; Pachecho et al., 2010), but all entrepreneurship is relevant to the development of institutional frameworks. Entrepreneurs who abide by the existing order reinforce institutions, entrepreneurs who evade existing institutions challenge their effectiveness, and entrepreneurs who take altering actions aim to change existing institutions (Bylund & McCaffrey, 2017; Coyne & Leeson, 2004). For those who wish to change the existing order, Pachecho et al. (2010) have identified three categories of change: practices, standards and policies. Practices are the

day-to-day activities that occur within firms, government offices, or even within work groups. Practices are relatively easy to change and may even evolve over the course of a few variations in an ongoing collaboration (Lawrence, Hardy & Phillips, 2002). The development of standards involves organization practices into a standardized set of rules that comes to be recognized at the industry or government department level, even though they may stem from the firm or office level, trade associations (King & Lenox, 2000) activist stakeholders (King & Soule, 2007) and industry watchdog groups (Rao, 1998) are often catalyst for changing standards. Policies can be understood as the formal recognition of standards, or sets of standards, at the government level, but policies may also arise in response to social movements, such as the ongoing efforts to shape global environmental policy (Wijen & Ansari, 2007).

Institutional Level

Williamson proposed a four-level framework that can be used to understand the interplay between institutions, resources, and actors (Bylund & McCaffrey, 2017; Misangyi, Weaver & Elms, 2008; Williamson, 2000). It may be helpful to think of these levels as the market (Level 4), the play of the game (Level 3), the rules of the game (Level 2), and the culture of the nation (Level 1). Effecting change is increasingly difficult, with longer time horizons moving up institutional levels (see Figure 1). Further in-depth commentary on Williamson's framework can be found in the findings section, where we discuss how our data analysis relates to each level.

Figure 1: Williamson's institutional framework



Blockchain Technology and Its Manifestations

Blockchain, the distributed ledger technology underpinning cryptocurrencies, has many potential uses outside of currency exchange. Blockchain technology's potential to support, or even replace, institutional actors has captured the attention of scholars and policy makers, and this potential would seem to be particularly significant in developing nations where functioning institutions are not always present. Previous research has identified a number of factors limiting blockchain's adoption as an institutional change agent in developing nations. For instance, lack of technical capacity limits the ability to create and implement solutions and prevents large swaths of the population from accessing solutions that are developed. Lack of regulation prevents long-term investment in blockchain solutions. Perhaps most importantly, the decentralized nature of blockchain solutions runs counter to the power structure associated with traditional, centralized governance, suggesting that there is a paradox inherent in developing decentralized solutions to the problems of central government (Sydow, Sunny & Coffman, 2020).

Blockchain is a public or private distributed ledger technology that facilitates crypto-secured, peer-to-peer transactions without the need for an intermediating party (Allen, Berg, & Novak, 2018). This technology is based on a consensus protocol, which is a computer algorithm that uses the Internet to provide transaction history, that is shared, immutable, time-stamped and permanent (Swan, 2015; Pilkington, 2016). Prior to the development of blockchain technology, it was necessary to rely on trusted third-parties, such as corporations or governments, to verify transactions, wherever relational contracting was not possible (Swanson, 2014). These institutions consolidate decision-making through top-down coordination modes using hierarchical structures that can be expensive to maintain and inefficient when the number and complexity of transactions is high.

There are three main types of blockchains: private, permissioned and public. In a private blockchain, there is sole record keeper who has complete control over the records on the ledger, while other groups, or network nodes, have different privileges to read the data and report any anomalies or divergent behavior from the ledger's rules. In a permissioned blockchain, a ledger's write privilege is extended to a consortium of entities who govern the rules of the blockchain and verify transactions. In a public blockchain, both read and write privileges are completely unrestricted. Here all the users are typically anonymous, meaning identity management is necessary to ensure that a small quantity of the nodes cannot pretend to represent a majority of the network and authenticate transaction chains that are not valid. The form of identity management most often stipulated by blockchain networks is to require record keepers to complete a computationally difficult task before they are permitted to write on the ledger; a method known as proof-of-work, which is used by popular cryptocurrency blockchains such as Bitcoin and Ethereum (Abadi and Brunnermeier 2018).

Blockchain in Institutional Environments

Institutional actors have a somewhat vexed relationship with blockchain technology given that they are both supportive of technology that improves government functions and wary of potential disruption to existing functions. Some may even fear loss of power or relevancy resulting from blockchain innovations. From its origins as an anti-government technology, the relationship between blockchain and government has been complicated. There is significant uncertainty about its potential and the nature of future uses, which has led to a range of responses from hostility to active support (Berg et al, 2018). Yet government support is integral to developing the enabling conditions – sufficient technical capacity and appropriate regulatory measures – necessary to leverage blockchain technology to solve institutional challenges (Sydow, Sunny & Coffman, 2020).

Although research on institutional uses for blockchain is still in its infancy, several perspectives have emerged. Viewed through a Schumpeterian lens, we might see blockchain as a general-purpose technology that improves efficiency, or reduces inefficiencies, leading to multifactor productivity gains (Bresnahan & Trajtenberg 1995). Viewed through a Coasian lens, we might see blockchain as reducing transaction costs, rather than production costs (Coase, 1937). Finally, recent work has suggested that blockchain be added to Williamson's (1985) 'economic institutions of capitalism' – alongside markets, hierarchies, and relational contracting – as a new institutional technology (Davidson, de Filippi & Potts, 2018). As such, blockchain would represent a new mode of economic coordination and governance.

METHODOLOGY

Research Setting

The context for our study was the early-stage emergence of institutional entrepreneurship in support of blockchain innovation in Kenya (and, to a lesser extent, Nigeria). Kenya is a country where major institutional voids persist (Dutt et al., 2016) and the functioning of formal institutions is in many ways deficient. At the same time, Kenya has become known as the “Silicon Savannah” (Ndemo & Weiss, 2017) because it has made great strides in supporting technological innovation. Recently, Kenya’s government established a blockchain and artificial intelligence task force consisting of various experts from the field. In 2019, they published their first report, which focused on enhancing public policies, as well as applications in the private sector (Ministry of Information, Communication and Technology, 2019). The combination of institutional voids and dysfunction paired with an emerging, transformational technology make Kenya an ideal context for examining nascent institutional entrepreneurship behavior.

Data Collection

We interviewed a selective sample of 45 leading entrepreneurs, educators and government actors in the flourishing blockchain sectors in Kenya and Nigeria. We collected our primary data in multiple rounds in 2019 and 2020 and conducted additional rounds of interviews with more specific questions with a selected number of interviewees in 2020 and 2021, which included follow-up interviews with some key respondents. The majority of our data collection took place in person, as we engaged in several field visits, but we also conducted interviews via phone and video conferencing, and asked follow-up questions via email. The length of the interviews ranged from 12 to 78 minutes. In total we recorded and transcribed more than 30 hours of audio. In the first round of data collection, we searched for key players using the following criteria: (1) expertise about blockchain, (2) active participation within the local ecosystem, and (3) focus on solving institutional challenges. We also tried to ensure some variation in terms of their role and gender, completing a total of 55 interviews.

Analysis

We used an inductive theory-building approach (Glaser and Strauss, 1967), sensitized by the literature on institutional theory (i.e., North, 1990) institutional innovation (i.e., Frolov, 2021), institutional entrepreneurship (i.e. Pachecho et al., 2010) and institutional change (i.e., Williamson, 1998). Our data analysis was guided by the analytical procedures introduced by Gioia, Corley, and Hamilton (2013), combined with a grounded theory development approach (Charmaz, 2006) resulting in a process where coding, categorizing and memo-writing led us to the theoretical constructs in our model.

Early in the process, we asked exploratory questions such as *How could you use blockchain technology to solve institutional challenges?* and *What are the key barriers and/or challenges that you need to overcome?* As we moved through subsequent interview rounds, we developed a semi-structured interview script by comparing the emerging evidence with existing literature (Miles, Huberman & Saldana, 2014). We continued using this semi-structured script for much of the study to ensure some consistency in the type of response we received, while allowing for freedom to pursue unanticipated avenues of interest (McCracken, 1988). We concluded the study by diverging in two ways, 1) using the semi-structured script in a new context by adding interviews with Nigerian institutional entrepreneurs, and 2) asking some very specific follow-up questions via email to a theoretical sample of the key players in the Kenyan ecosystems (Charmaz, 2006).

Open Coding

Throughout the data collection process, the first and second authors independently conducted an open coding process (Strauss & Corbin, 1998) using in vivo codes to develop a dataset of short descriptions that summarized the meaning of different portions of the text (Gioia et al., 2013). For example, the second

author used the code ‘Lack of funding for tech education’ to synthesize ‘The biggest gap is capacity building. Developers are missing here in Kenya. And we know that such an education is expensive. It is impossible that entrepreneurs can do that on their own.’ (Respondent #7). Once each author established a list of codes, they independently engaged in a process of merging, splitting and dropping codes (Grodal, Anteby & Holm, 2021) to develop first-order categories that mirrored respondents’ ‘concepts-in-use’ (Gephart, 2004). For instance, ‘Lack of funding for tech education’ and ‘Not enough people with the required skills’ were merged into the first-order category ‘Lack of qualified human capital.’ The third author then engaged in a similar process taking the two sets of first-order categories and merging, splitting and dropping to combine the first and second authors findings into a single version.

Axial Coding

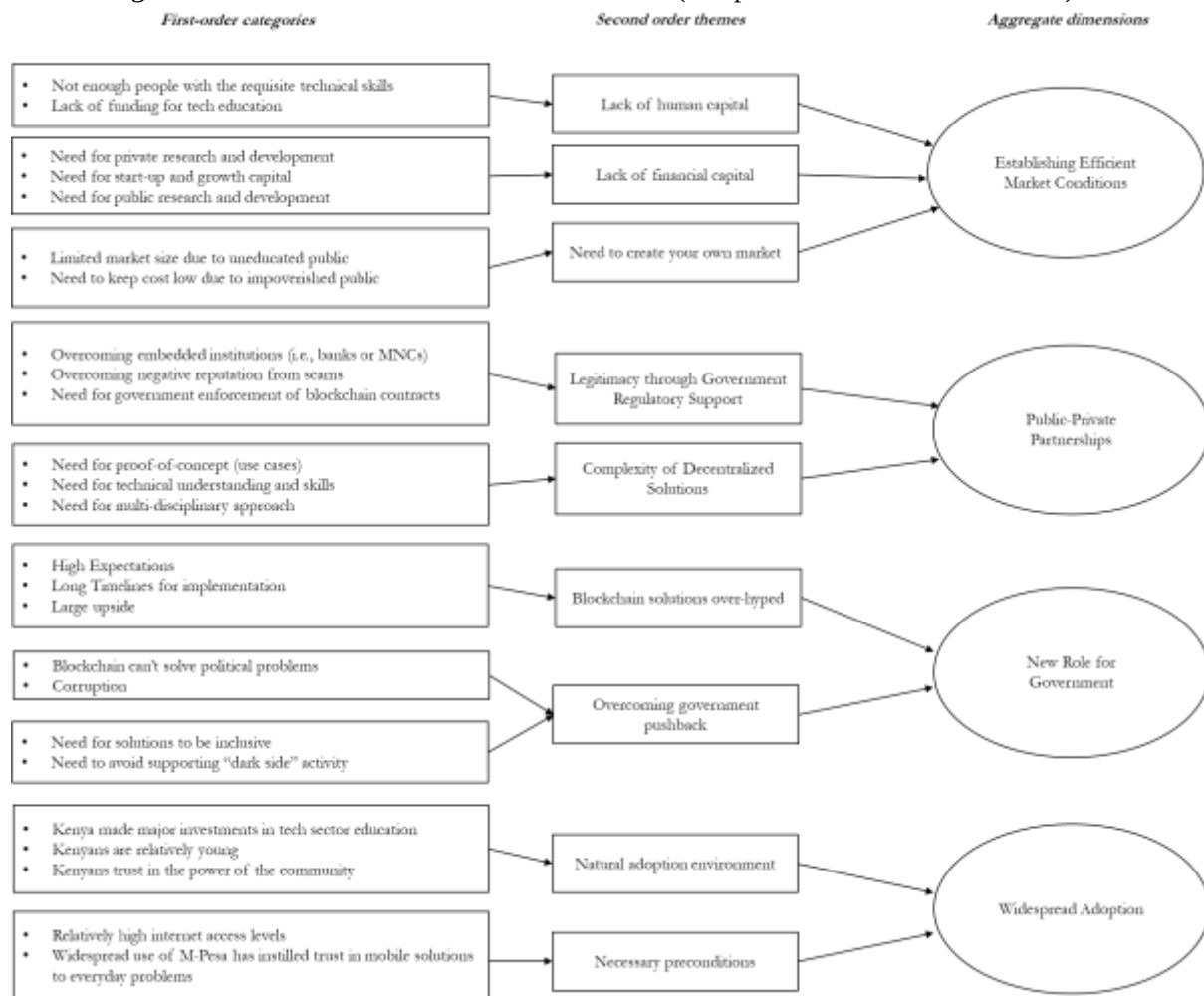
Our open coding and categorization process preceded our final rounds of data collection – with Nigerian institutional entrepreneurs and specific email questions to key Kenyan players – and informed our decision to add these theoretical samples. Several respondents indicated the importance of the Nigerian context. For instance, Respondent #6 stated that ‘also Nigeria is very advanced.’ and many of our participants were working closely with actors in the Nigerian blockchain ecosystem. Adding a Nigerian sample also served to enhance the generalizability of our findings (Osbeck & Antczak, 2021). Our follow-up emails to key Kenyan players were driven by our initial findings that there seemed to be a paradox in applying decentralized solutions to central government’s problems (Sydow, Sunny & Coffman, 2020). We asked them to provide focused response to questions such as *Can you see a path forward, where government actors might allow decentralized solutions? If so, what steps would be necessary to get there?* and *What government or institutional challenges would be easier to address using blockchain technology? What government or institutional challenges would be more difficult to address using blockchain technology?* This process is consistent with the theoretical sampling approach that Charmaz (2006) recommends for filling theoretical holes in late-stage qualitative research.

We triangulated these additional responses with direct observation of networking events and team meetings, and business documents we collected to enhance the trustworthiness of our findings (Lemon & Hayes, 2020), before working as a team to combine our first-order codes into meaningful second-order themes (Lofland & Lofland, 1995). This iterative process of constant comparison between data and existing theory led us to identify nine second-order themes (Strauss & Corbin, 1990).

Aggregate Dimensions

Our goal in this final step was to create theoretical linkages among our second-order themes to bring them to a higher level of theoretical abstraction representative of the underlying codes. This, too, was an iterative process, moving between second-order themes and existing literature on institutional entrepreneurial behavior to form aggregate dimensions. All three authors participated in this process until we identified stable aggregate dimensions that clearly represented our findings. We also asked the six respondents with whom we had the strongest rapport, to view our findings and offer any suggestions (Lincoln & Guba, 1985). After some minor adjustments, we settled on the four aggregate dimensions shown in Figure 2.

Figure 2: The Role of Blockchain in Institutions (Adapted from Williamson, 2000)



FINDINGS

In interpreting and applying the results from our study, we began by mapping the different uses of blockchain – as a production technology, an exchange technology or a institutional technology – across Williamson’s institutional levels. We then overlaid our aggregate dimensions onto this framework. Our final framework, informed by institutional economics, institutional innovation and institutional theory perspectives, allows us to better understand nascent institutional entrepreneur behavior embedded at each

level. Rather than arguing that blockchain is a specific type of technology – production technology, exchange technology or institutional technology – we recognize that blockchain can serve in all three of these capacities depending upon the institutional level at which the technology is being applied.

Increasing Production and Market Efficiency

In approaching the question of institutional change using Williamson's framework, we begin at Level 4 (L4), the level of resource allocation and employment. This is the level at which agency theory addresses efficient incentive alignment, and neoclassical analysis seeks to explain the nearly continuous adjustments to price and output in response to changing market conditions (Williamson, 1998). Blockchain's impact at this institutional level is best understood if framed as a new general-purpose technology, in the same vein as electricity or the internet or mobile phones (Pilkington, 2016). Like these general-purpose technologies, we would expect blockchain technology to have broad, transformative applications across multiple sectors of the economy (Bresnahan & Trajtenberg, 1995). According to the neoclassical model, blockchain adoption would be factor augmenting, in that it economizes on scarce resources by making existing factors more productive. Thus, at L4, blockchain innovations increase total factor productivity by reducing production costs and improving efficiencies.

Minimizing Transaction Costs

As we move up to Level 3 (L3), we find the institutions of governance, what Williamson calls the play of the game. Contracting and law enforcement take center stage, and transaction cost analysis seeks to align governance structures with transactions. Still, court enforcement is costly and much of the contract management and dispute settlement action occurs directly between parties through private ordering. Changes at this level occur on one- to ten-year time frames (Williamson, 1998). It is at this level where blockchain as an exchange technology, rather than a production technology, is more impactful, through costless verification and by reducing the incidence of costly intermediation (Catalini & Gans, 2016). This focus on transaction cost harkens back to Coase's (1937) work explaining why many transactions occur within firms (hierarchies). Just as Coase demonstrated that some transactions are conducted more efficiently within a hierarchy rather than a market – to manage uncertainty, asset specificity, and incomplete information – so blockchain economizes on transaction costs by creating a transparent and immutable record of economic activity. Thus, at L3, blockchain innovations increase total factor productivity by reducing transaction costs and mitigating conflict (Davidson et al., 2018).

A New Institutional Technology

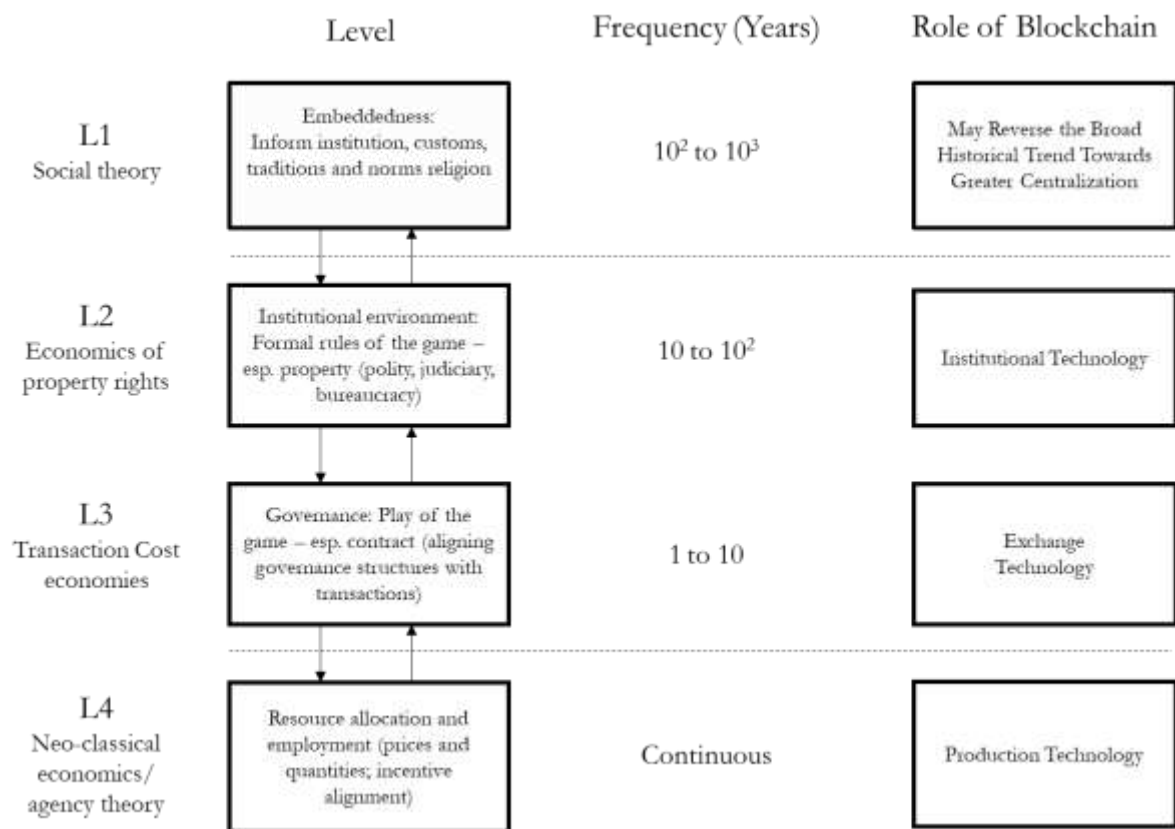
At Level 2 (L2) we find the institutional environment – the polity, judiciary, bureaucracy, etc. – what Williamson calls the formal rules of the game. The laws regarding property rights feature prominently at this level, with modern institutional economics focused on governing the acquisition and transfer of property rights, the right to use an asset, the right to financial return generated from an asset, and the right to change an assets form or location (Bromley, 1989). Change at L2 happens on the order of decades unless major disruptions such as war or financial crises lead to a sharp change in the institutional environment. It is at this level that we see blockchain's potential as a new institutional technology, in that it introduces a new mode of economic coordination (Davidson et al., 2018) and governance (Atzori, 2015) to the lists of such institutions as firms, markets, commons, clubs, relational contracts, and governments. Thus, at L2, blockchain innovation provides organizational efficiency gains by removing layers of activity that are no longer needed (i.e., third-party verification, court-ordered contract enforcement, centralized reconciliation of consensus on a ledger, representative governance, expectation of repeated exchanges in relational contracting, etc.).

May Reverse the Broad Historical Trend Toward Greater Centralization

Level 1 (L1) consists of the informal institutions, customs, religions, and norms of a society. The institutions of governance are shaped by societal forces but, while some economic historians and social scientists work at this level, most economists take L1 as a given (Williamson, 2000). Change at this level

occurs on the order of centuries or millennia. While we might postulate that blockchain technology could reverse the broad historical trend towards greater centralization – larger corporations, deeper hierarchies, coalitions of nation states (i.e., the European Union or the North Atlantic Treaty Organization), etc. – by decentralizing things like currency, markets and even governance, an in-depth analysis of blockchain's potential effect on L1 institutions is outside the scope of this study. In Figure 3, we overlaid the different roles blockchain may play, onto Williamson's (1975) four-level institutional framework.

Figure 3: The Role of Blockchain in Institutions (Adapted from Williamson, 2000)



Establishing Efficient Market Conditions

We found that many of the institutional entrepreneurs in our sample were already acting as change agents at L4. They focused on building technical capacity through training programs, seminars and lobbying government for education support at the secondary and tertiary levels. Many of our respondents were partnering with blockchain organizations abroad to mobilize financial resources. While there was a broad understanding of the need to build supply, some of the forward-thinking institutional entrepreneurs in our

sample recognized that there was also the need to build demand. Most of the respondents we interviewed were active in allocating resources and building employment in support of an efficient market at L4.

Lack of human capital.

One of the most consistent responses we heard was that there was a major shortage of qualified people to build out blockchain technology. As one member of the National Task Force (#7) put it, the biggest gap is capacity building. Developers are missing.’ Respondent #6 said, ‘Technical capacity for blockchain is still missing.’ and Respondent #31 added, ‘It is definitely one of our biggest challenges as entrepreneurs.’ The community manager of a technology accelerator (#4) argued that ‘The first player to be involved is the education system is government. They need to train people on how to build on the top of a blockchain platform.’ Our later interviews in Kenya revealed that the efforts of institutional entrepreneurs, particularly those who served on, or consulted for, the National Task Force, seemed to have met with some success, as government support for blockchain education was increasing. In the Nigerian context, government support for blockchain education was not forthcoming. Respondent #45 reported that people were even reluctant to teach on the subject given that the government has reservations about the legitimacy of blockchain technology, and is instead focused on developing its own cryptocurrency, the eNaira. Respondent #44 did not see the government as hindering blockchain education, but he agreed that they were not promoting it. He was working with universities directly to provide this education. Many of our respondents had pivoted their ventures into providing education privately, through classes, conference, seminars, and on-the-job training, a process that Respondent #6 referred to as ‘upskilling people’. Respondent #9, a politician from the ICT ministry department (#9) recognized that “there is no adequate education for certain technological jobs. So, entrepreneurs prefer doing it on their own... to fill this tremendous gap.”

Lack of financial capital.

Respondent #6, the founder of a blockchain accelerator, indicated that ‘Another thing that is missing is capital. In Europe, Asia and America, we saw there is a lot of capital floating around the blockchain environment. So, is easier to build, to invest and to create something.’ Respondent #1 added that ‘access to funding for some of the startups and entrepreneurs in our space is strongly needed.’ because ‘it becomes very hard to count on banks and the financial institutions.’ African ventures are chronically under-capitalized, so it was not surprising to hear that insufficient capital was available to blockchain entrepreneurs. However, the respondents in our study were not looking for startup capital from the government; instead, they were lobbying for research support, which is ‘very capital-intensive’ (#3). Respondent #27 and Respondent #2 summed up the need for research and development capital as follows:

Because in theory you might say yes ok, you have this new technology, and it enables decentralization of power and everybody can now sort of start afresh and be equal. In reality, it's not that simple. (#27)

Yes, it can help in certain circumstances, but it's not like a magic bullet that can suddenly solve all your problems. First, we need to understand it better. We need to do research, which as you can imagine is super expensive. (#2)

There is some evidence of improvement with regard to accessing private capital, as Respondent #2 recently received startup capital from a Singapore-based angel investor, but public research and development funding is still extremely limited.

Need to create your own market.

While all of our respondents were cognizant of supply-side challenges in creating market solutions using blockchain technology, developing the demand side of the market may pose an even greater challenge. Respondent #41 emphasized that ‘there is no point in developing a blockchain business if there is no market for the product or service.’ He was angry with fellow entrepreneurs who were not contributing to the public education effort. He felt that they were neglecting their duty and leaving others with the market

development costs. Respondent #26, the founder of a cryptocurrency application, agreed, although he would prefer to focus directly on his ‘core competence, instead of trying to play the teacher.’ The chairman of the blockchain association in Kenya (#5), who has a blockchain startup, explained that his focus has had to shift towards educating the public: ‘I am working on a blockchain philosophy section and education. I decided I am going deep into blockchain education because I feel education is the main gap to fill.’

Public-Private Partnership

Among the institutional entrepreneurs in our sample, public-private partnerships were seen as one of the most promising avenues for meaningful change. Many of the Kenyan respondents previously consulted with the government’s task force (the chairman of the Task Force was among our interviewees) which found that ‘While regulating the effect of technology, the government should consider a collaborative cross-industry partnership between the public and private sectors in Kenya and with global partners to effectively identify potential issues and implement the best-in-class policies.’ These partnerships are beneficial for entrepreneurs in that, as Respondent #28 said, ‘It is certainly useful to learn more about regulations they are colliding with and the underlying reasons why they exist.’ He added, ‘It is a great stamp of approval of their work and a great way to get ahead of competitors in the marketplace. It also has the positive effect of working favorably with investors, as it is a clear sign of traction and reduction of regulatory risk.’ On the other hand, according to Respondent #29, the co-founder of a blockchain co-working space, ‘the government itself probably lacks the required expertise to build up those blockchain systems.’ There are examples of successful public-private partnerships to draw on. For instance, ‘Safaricom, the local mobile network operator and has benefited greatly from the large government ownership.’ and she added, ‘I think they would be looking to replicate such gains in a public private partnership- direct gains from ownership, bigger tax base, increased foreign direct investment, and increased employment.’ We posit that much of the excitement around public-private partnerships can be attributed to the institutional level at which these partnerships occur. L4 changes, as outlined above, are viewed as necessary costs for facilitating a functioning market, and changes at L2, as we discuss below, can be daunting. But these partnerships occur at L3, where institutional entrepreneurs can effect changes in the play of the game, over one- to ten- year timelines.

Legitimacy through government regulatory support.

Although blockchain entrepreneurs would prefer to circumvent government intervention altogether, there was an understanding that a ‘legitimacy made by the government’ (#29) could promote adoption of the technology. Respondent #22 revisited the case of M-Pesa: ‘The government has a huge opportunity to increase the financial inclusion space. M-Pesa is a successful idea because the government supported it. If we want to see something similar with blockchain start-ups, we cannot do it without the government’ (#22). This support is integral to overcoming embedded institutions that are threatened by new technology. For instance, the central bank in Kenya ‘issued a circular campaign against cryptocurrency. It was addressed to the banks warning them to be very careful because it’s [cryptocurrency] not legal.’ This ‘created a chilling effect in the crypto- and blockchain space. So even if it was related only to cryptocurrencies, it affected the whole blockchain space. And in fact, some investor had to move out from the country.’ (#33). On the other hand, cryptocurrency scams are rampant in both Kenya and Nigeria, and government efforts to identify and punish scammers may lend legitimacy to the industry.

Government support is also essential for enforcement. While blockchain can guarantee transfer of ownership, it does not ensure transfer of possession. Similarly, blockchain can record obligations, but cannot punish those who default on their obligations. Government is a necessary complement to blockchain ledgers, but reliance on government to execute these functions exposes an underlying challenge: government actors may still enforce blockchain contracts selectively (Abadi & Brunnermeier, 2018). The chairman of the blockchain association in Kenya has stressed the importance of government buy-in: ‘The point is, if you really want to change something, you need to have the back up from the government. Otherwise, you just start to record something super transparent, but people still do not trust in the quality and truth of your data.’ (#5).

Complexity of decentralized solutions.

In theory, blockchain technology provides solutions to many of the problems faced by developing nation governments, but implementation is remains complex for a number of reasons. To begin with, it requires trust in whomever enters the original information. Respondent #25 explains this problem in terms of land registry:

It also requires that you get the current state of land titles into the blockchain in the first place. And that means that everybody has to agree on who owns what. There are some serious issues, because I think that, after colonialization ended and the whole independence fight, there was a lot of shuffling around. Some of these cases are still not yet resolved. So, it might not be clear who is the rightful owner. If that is not clear, then you cannot put it on the blockchain, or at least not everybody will agree to it.

He added that there must then be a mechanism for controlling who adds to a blockchain since ‘decentralized systems where control and responsibility are distributed among participants, rather than being concentrated at a single party’ lack vetting authority.

Here we see a major limitation to decentralization; legal ownership of land must be enforced by the government, but a decentralized platform allows buyer and seller to ‘interact/transact without a central authority or a middleman; ensure distributed copies of identical records that are immutable and traceable’ (Task Force Report, p. 33). There must be some mechanism for verifying that recorded transactions were entered with the consent of both buyer and seller. Permissioned blockchains, where only select individuals are allowed to add to the chain, may be the best available solution, but a manager from the health sector argued that ‘talking about blockchain solutions that aren't decentralized, isn't talking about blockchain anymore.’ (#39). Thus, ‘a major headache for the community is about how to structure this governance in a decentralized way’ (#4) while ensuring the legitimacy of transactions recorded on decentralized ledgers, in the eyes of government officials.

As a result, calls for proof-of-concept were common among the institutional entrepreneurs in our sample. A cofounder of a blockchain accelerator (#1) argued, ‘What we need to see in blockchain are many proof-of-concepts.’ especially for the high-potential sectors such as ‘land registration, insurance, health care data and transportation’ (#3). One suggestion from Kenya’s Task Force Report was the development of regulatory sandboxes in which entrepreneurs can test and prototype their blockchain applications. ‘It provides them a space for trying new kind of technology-based solutions’ (#7). This proposal was met with widespread approval: ‘I think regulatory sandboxes are a good idea’ (#25), and ‘I feel privileged to be part of a team that reviewed the regulatory sandbox’ (#40). There is hope that some of the use cases that are vetted through government-sponsored ‘sandbox’ programs can be scaled to solve institutional challenges. However, some respondents continued to worry that ‘the regulator will put his interests as priority’ (#15) and that, in creating an artificial environment, important perspectives are not being included. ‘We need the prospective from different people! I think we need people to be specialized about blockchain but in their own context, as tech entrepreneurs, as lawyer, as government, as a regulator. I think blockchain is multidisciplinary.’

A New Role for Government

While blockchain has the potential to reshape many aspects of institutions, and may even be considered an institution unto itself (Frolov, 2021), this study gives special attention to its uses in government. Decentralizing governance is by no means a new concept (Cheema & Rondinelli, 2007). Increasing international trade and investment in the early 1980s had already begun to change perceptions about the purpose and functions of the nation state, prompting calls for decentralization, defined as the transfer of authority, responsibility and resources, through delegation or devolution, from central to lower-level administration (Rondinelli, 1981). In the 1990s, with the dissolution of the Soviet Union and the fall of authoritarian regimes in central and eastern Europe, decentralization efforts refocused on opening governance to wider public participation (Cheema & Rondinelli, 2007). In Africa, with Cold War powers no longer supporting dysfunctional regimes, there was growing discontent with central government’s

inability to deliver even rudimentary services, leading to widespread calls for decentralizing of power back to traditional local, often tribal, governance structures (Smoke, 1994). The technological innovations of the 21st century, most notably widespread internet access on personal computers and smartphones, are creating the capacity to implement these decentralized solutions. This potential has led to high expectations, but change at L2 is difficult, often taking decades to manifest, or resulting from revolutionary disruptions such as war or famine.

Blockchains solutions over-hyped.

While dissatisfaction with current political systems has led blockchain's supporters to call for new systems of governance, where centralized, coercive hierarchies are replaced by distributed consensus (Artzori, 2015), institutional entrepreneurs working to implement these changes have identified them as largely over-hyped. According to Respondent #9, 'The talk is far ahead of the industry'. Respondent #7 said, 'You know the hype makes it look like blockchain is the beginning and the end of the world. But it is not... now the real critical phase of adaptation and implementation in our context begins. Some respondents were cautiously optimistic – 'Although my expectations are not that high, I am super glad that at least they started to support us.' (#26) – while others were more skeptical – 'Truly decentralized solutions are necessarily going to be built on public blockchains. Not many of the top protocols satisfy all the properties that I would consider necessary as a government.' (#29). "I just think it will take a very long time to build these things centrally" (#39). "Blockchain is so young." it may take "...ten, fifteen years until blockchain is fully introduced and accepted" (#22).

Despite the skepticism, enthusiasm for blockchain solutions has been high due to the significant upside that they have in Kenya and Nigeria. The Task Force report states, 'Africa missed the first, second and third industrial revolution. Consequently, the continent has an opportunity to "leapfrog" to the fourth phase to take advantage of the rapidly emerging technologies.' (p., 28). Our respondents added that 'We have so many institutions that are not working' (#22) and 'that are not performing their job as they are supposed to do' (#9). There is a strong consensus in Kenya that blockchain has a great potential to 'enable certain faults in the system to be overcome' (#25) such as '...land registry, government tax collection, processes, and elections' (#1). One entrepreneur argued that that 'transparency would be beneficial for the whole society. America may not need blockchain. Europe may not need blockchain. But Africa needs blockchain' (#42). 'Starting from behind leaves us more room for improvement' (#21).

Overcoming government pushback.

While there are many legitimate reasons to limit blockchain innovation, less civic-minded government officials may fear loss of power, or loss of ability to generate revenue through graft. Whatever the reason, reluctant officials must address pressure from the public and from recent research touting blockchain technology's potential to solve institutional problems (Chen, 2018; Hughes et al., 2019). According to the respondents in our sample, decentralization may 'eventually erode the control and responsibility of our local government' (#10) and once information is on a decentralized platform 'it might exist completely outside of governmental control' (#24). Effecting a change of this magnitude is as much a political problem as it is a technological one. As Respondent #44 put it, 'A lot of people with selfish interests wouldn't want the process to be transparent'.

While the institutional entrepreneurs in our sample were more inclined to cite nefarious resistance from government actors, there are also legitimate reasons for government officials to resist blockchain innovation. They may hope to allow other governments to bear the cost of determining appropriate policy settings for a new technology (Berg, Davidson & Potts, 2018). They may be concerned with ensuring that technological innovation does not lead to greater disparity between the haves and have nots. The current rules of the game (L2) place responsibility for the ledger technology that underpins society's most important economic interactions in the hands of the government. Respondent #26 stated in a business presentation, 'We are here to provide access for everyone, even the poorest, to be part of our digital community,' but 'it is not that easy, as it is not an automatism. The different blockchain technologies, for example, they require a lot of computing power for actually running this network. And the people who are able to benefit from

that are the ones that can afford the power in the first place’ (#25). As Respondent 18 stated, ‘You must be sure that your costs are low. That is actually one of the biggest challenges: we need to keep the prices very low, while at the same time we need to guarantee that we have a profitable business model’ (#18). Lack of education may also limit access, because ‘they are not able to understand new technologies like artificial intelligence and blockchain’ (#23). Governments may also wish to take appropriate measures to support citizens whose livelihoods are disrupted as a result of the creative destruction often associated with new technologies. The National Task Force report highlighted this issue: ‘As new technologies can be both transformational and disruptive, care must be taken to ensure that governments can effectively protect their citizens without hindering any innovation in the private sector’. Finally, blockchain-enabled programs may be used for illicit activities such as drug sales or money laundering, which governments would seek to limit (Foley, Karlsen & Putniņš, 2018).

Widespread Adoption

We have illustrated some of the challenges associated with change at L2, but change at L1, the level at which the customs and norms of a society are found, is even more difficult, typically occurring on the order of centuries. Fortunately, Nigeria and Kenya are both well-suited for blockchain adoption. The cultural, demographic, and technological components necessary to support decentralized, blockchain solutions are largely present. We argue that much of the optimism at L3 and L2 can be attributed to the relatively favorable conditions found at L1.

Natural adoption environment.

In the last decade, Kenya has gained a reputation as the ‘Silicon Savannah’ of Africa (Ndemo & Weiss, 2017), as it has made great progress in supporting technological advancements. Having such a supportive stance toward technology has been shaped by success stories, such as M-Pesa, but also by the fact that the Kenyan population is disproportionately composed of ‘young people who are exposed to technology’; a ‘very innovative young people’ that are ‘hungry to learn new things’ (#24). Respondent #11 added, ‘About 60% of the population in Africa is youthful, providing an informed workforce and community of users.’ As Respondent #6 explained, ‘if you are a young person like my age, and if you are Kenyan, you have very limited options. You can do trading, farming if you are in a village, or technology. So almost everyone wants to do technology. That’s why there is a huge pool of people that, by default, are going to be digital and/or tech’. It also seems that Kenyans ‘are quite collaborative by nature’ (#25). For instance, female Kenyan entrepreneurs are known for building ‘chamas’ (Kitetu, 2013), which are groups that provide financial support to single women so that they can start their own businesses (Sydow & Michaels, 2021). Kenyans ‘are very communal people who transact based on trust in a group of people. This is exactly the method used in blockchain. It is based on trust’ (#23).

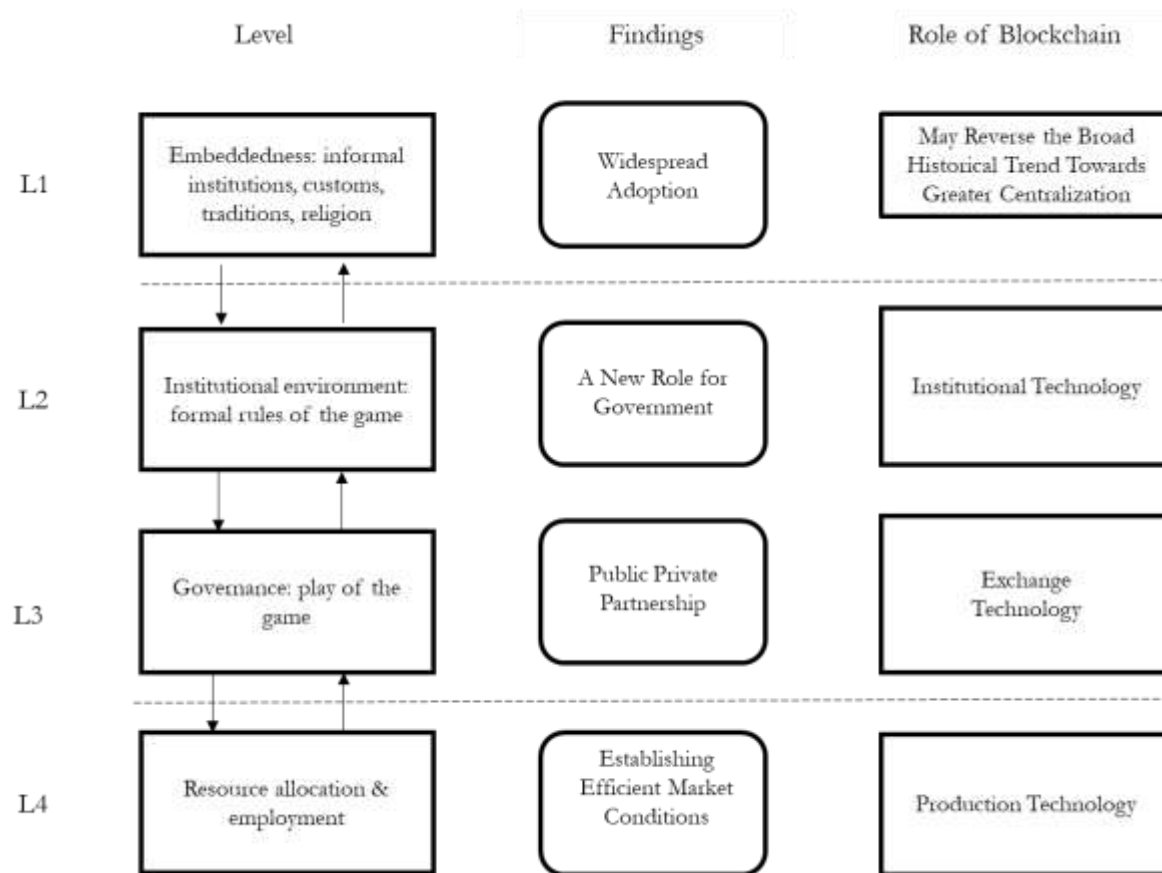
Necessary preconditions.

During our interviews, respondents highlighted some additional factors that make Kenya and Nigeria ideal environments for blockchain adoption. One community manager (#11) argued that ‘Nairobi provides the right environment to question, grow and prosper. There is a free flow of information, easy access to global investors and industry players with interests in Africa, massive infrastructure development in technology, with internet access and device availability.’ Respondent #42 indicated that Africa is already among the top users of cryptocurrencies in the world, and mobile money providers have created a model for technology adoption on the continent. ‘Kenyans are very open to new innovation. Look at what happened with M-Pesa’ (#38). The combination of relatively high levels of internet access, and familiarity with digital solutions, has set the scene for widespread blockchain adoption.

In Figure 4, we overlay the aggregate dimensions derived from our data analysis and the different roles that blockchain may play, onto Williamson’s (2000) institutional framework. This framework illustrates the different types of outcomes an institutional entrepreneur in the blockchain industry may pursue, depending on the institutional level at which they seek to effect change. As has been discussed, the

timelines for change at each level are increasingly long, and the risk of failure is consequently higher. However, the impact of change at higher levels is greater, and is passed down to lower levels.

Figure 4: Aggregate Dimensions Across Institutional Levels (Adapted from Williamson, 2000)



DISCUSSION

The primary purpose of this study was to examine nascent institutional entrepreneur behavior using Williamson's (1998, 2000) institutional hierarchy and, in doing so, to better our understanding of embedded agency. That the structure inherent in institutions can constrain (makes some actions difficult or even impossible) and enable (makes some actions possible) institutional entrepreneurs is well accepted (Barley & Tolbert, 1997; Battilana et al., 2009; Lawrence & Suddaby, 2006; Powell & Colyvas, 2008), but the nature of embeddedness is still much debated (Cardinale, 2018; Harmon, Haack & Roulet, 2019; Lok & Wilmott, 2019). While previous literature on institutional change has argued that there is an inherent paradox between agency and institutional determinism, recent literature has theorized that both are significant, and that this apparent paradox can be overcome by better understanding the micro-foundations of institutional theory (Cardinale, 2018). We have expanded upon this argument by showing how institutional level affects perceptions and outcomes for institutional entrepreneurs.

Our study contributes to theory on institutional entrepreneurship by using Williamson's (1998, 2000) institutional hierarchy to show that structural forces are stronger at higher institutional levels than at lower levels, while individuals have greater agency at lower levels than at higher levels. This suggests that embeddedness can vary significantly. If embeddedness varies across levels, "the paradox of embedded agency" can hardly be considered a paradox. We would not argue that embeddedness is slightly paradoxical at L4 and significantly paradoxical at L1. This finding began to emerge when we answered Pacheco et al.'s (2010) call for research merging institutional theory and institutional economics perspectives to deepen our understanding of institutional entrepreneurship. Applying Williamson's institutional economics lens

immediately raised the question of whether embeddedness would vary across institutional levels. Our interviews with nascent institutional entrepreneurs help to illustrate the constraints felt at higher levels and the agency felt at lower levels.

Our respondents felt that blockchain entrepreneurs would be integral to the development and adoption of blockchain solutions to institutional challenges, but their perceptions of various solutions ranged from seeing these solutions as inevitable to seeing them as implausible. When we asked about blockchain's potential to improve productivity and lower transaction costs, they were excited to discuss their projects, their efforts to make cryptocurrency more mainstream, and the various educational programs they were running. Within the four years in which we collected data, the central banks in Nigeria and Kenya shifted from discouraging cryptocurrency, to actively participating in its dissemination, perhaps one of the more noteworthy changes we witnessed at L3. We also found that nearly every nascent institutional entrepreneur in our study was allocating resources to education; education of employees, but also education of the public in support of a viable market. As we have discussed, changes at L4 happen continuously, and changes at L3 happen on the order of 1 to 10 years, so it was unsurprising to see these changes within the span of our study.

Proposition 1: Institutional entrepreneurs report greater agency when operating at lower institutional levels compared to operating at higher institutional levels.

When asked about blockchain's potential as a new economic institution, respondents discussed land registry, elections, and other applications at L2, but they were skeptical that these applications would be implementable. 'I'd have to see some use cases' was a common refrain. They doubted that government actors would be willing to risk losing control over these processes and, in some cases, had tried to implement these types of applications themselves and experienced government pushback. Many of our respondents suggested that these changes could be possible, but on a 10- to 20- year timeline, which is consistent with other changes at L2 which normally happen on the order of decades.

Proposition 2: Institutional entrepreneurs report great structural constraints when operating at higher institutional levels compared to operating at lower institutional levels.

While the primary focus of our study was the effect of embeddedness on nascent institutional entrepreneurs, we also offer some practical implications for blockchain applications. Blockchain technology potentially allows individuals to redesign business, politics and societal norms based on unprecedented levels of decentralization. Some scholars have even posited that representative governance might be replaced by distributed consensus (Atzori, 2015). Although the benefits of such sweeping changes could be enormous, innovation in institutional technologies are uncommon. The joint stock company came about in the seventeenth century and representative democracy was developed in the nineteenth century (Allen, Berg, Markey-Towler, Novak, & Potts, 2020). Our findings suggest that institutional entrepreneurs would be better served by focusing first on effecting change at L4 by assigning resources to technical education and research and development funding, and at L3 by advocating for standardized policy for blockchain applications beginning with cryptocurrencies. These changes are necessary prerequisites for change at L2, and also serve to normalize the use of blockchain technology in institutional settings.

For policymakers, gradual operationalization of blockchain-related policy, based on best practices developed through 'technological sandboxes' and through observation of early-adoption institutions, mitigates risk without forfeiting the benefits of crypto-friendly policy (Novak, 2019; Tarko and Farrant, 2019). An important role of effective governance is providing high-quality, trusted ledgers for property, titling, contracts, etc., and blockchain technology affords the opportunity to improve ledger functionality while greatly reducing the cost (Davidson et al., 2018). In this regard, the technology should be highly attractive to government actors. However, the complexity of the technology and the problem of retaining

control over these functions, may reasonably stymie adoption. Our study suggests that public-private partnerships may be a key strategy for developing blockchain solutions to institutional challenges. Permissioned blockchains, which can be administrated by one or more known agents, may serve as an ideal compromise for early iterations given that they are immutable and transparent, but would still allow government actors to vet content before it becomes official (Abadi & Brunnermeier, 2018). Governments may also facilitate adoption by supporting or compensating citizens who are negatively affected by this new technology (Berg, Davidson & Potts, 2018).

Like all studies, ours comes with a set of limitations, but these limitations may also be opportunities for future research. In an effort to better understand complex new behavior, we employed a semi-structured interview process. While this method yields rich data and allowed us to pursue new streams of thought as they arose, it is highly susceptible to researcher bias, in that interviewers will naturally pursue their interests with greater tenacity. Our coding method is also susceptible to researcher bias, in that researchers are likely to emphasize points with which they agree, and disregard points that do not support the desired narrative. We used a variety of interviewers and conducted initial coding independently, in an effort to mitigate these effects, but future research could use a survey design, or a similar standardized approach to address these issues. In adding the Nigerian sample, we hoped to improve the generalizability of our findings, but future research would certainly benefit from adding samples from other countries and cultures. In both of our research contexts, the institutional environment at L1 was well-suited for blockchain innovation, so we were unable to observe the challenges faced by institutional entrepreneurs seeking to effect change at this most difficult of levels. Future research designs could identify contexts where change at L1 was also a priority to the institutional entrepreneurs in the sample. Finally, individuals in the blockchain industry, with its anti-government roots, may lean toward less recognition of structure forces and greater emphasis on individual agency. As such, institutional entrepreneurs in this population may not constitute a representative sample of institutional entrepreneurs in general, and especially as it pertains to the relationship between agency and structure. Future research could identify a sample more representative of the standard relationship between agency, structure, and institutional entrepreneurs.

While we recognize that blockchain institutional entrepreneurs may not be representative of the overall population of institutional entrepreneurs, we would argue that blockchain innovation is potentially transformative in a way that may reshape our understanding of the relationships between agents and institutions, agency and structure. We have demonstrated that the level of embeddedness experienced by institutional entrepreneurs varies significantly across institutional levels, which further undermines the ‘paradox of embedded agency’ framework, but our more noteworthy finding may be that blockchain technology has the potential to increase agency across institutional levels. Such a shift would significantly increase the importance of institutional entrepreneurship research, given the potential for more frequent and impactful changes resulting from increased agency and less rigid structural forces. We have gone as far as to suggest that blockchain could reverse the broad, historical trend towards centralization, which would necessitate a fresh look at established institutional theory to account for increasingly decentralized institutions. We hope this study encourages future work on the changing nature of embeddedness, and its effect on institutional entrepreneur behavior.

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THE ROLE OF RELIGIOUS BELIEFS, INSTITUTIONAL SUPPORT, AND PERCEIVED LUCK ON ENTREPRENEURIAL INTENTION

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ABSTRACT

We examine how formal and informal institutional forces may impact entrepreneurial intention in a study involving potential entrepreneurs in developing economies (Kenya and Nigeria) and a developed – United States of America (USA) one. Using Theory of Planned Behavior, we examined the role of formal institutional support, religious beliefs, and perceived luck on entrepreneurial intention. Our results show that institutional support was more salient in the USA, a developed country. In contrast, perceived luck was significant only in the emerging economy—Kenya and Nigeria. Our results also show that religious beliefs influenced entrepreneurial intention in positive ways in all countries. We discuss our findings and conclude with future research directions.

Key words: Theory of Planned Behavior, entrepreneurial intention, perceived desirability, perceived feasibility, religious beliefs, institutional support

INTRODUCTION

As the first step in the pursuit of an entrepreneurial endeavor, entrepreneurial intention (EI) has received scholars' attention since the 1980s (e.g., Bird, 1988; Douglas, Shepherd, & Venugopal, 2021; Krueger Jr., Reilly, & Carsrud, 2000; Shapero & Sokol, 1982). The idea behind the study of intentions is that if one does not want to play a game, s/he can never win one (Wu, Matthews, Dagher, 2007). Despite the importance of EI, the theme faces several concerns and limitations (Fayolle & Linan, 2014), although EI remains as a promising field that can contribute to entrepreneurship research and practice (Krueger, 2017). Our research addresses some of those concerns described by Fayolle and Linan (2014), and hence

makes contribution to the research stream. Specifically, we examine the “role context and institutions play in the configuration of entrepreneurial intentions” (Favolle & Linan, 2014, p. 664) by implementing a comparative study of EI among potential entrepreneurs in distinct institutional contexts – the developing economies of Kenya and Nigeria, and the USA.

To start a business, entrepreneurs need to pass two tests: perceived desirability and perceived feasibility (e.g., Sivarjah & Achchuthan, 2013; Krueger, 2017). Perceived desirability, defined as willingness to carry out entrepreneurial activities, is concerned with internally driven factors including attitude to entrepreneurship (Henley, 2017), human capital (education) (Bae, Qian, Miao, & Fiet, 2014), risk taking (Zhang, Wang, & Owen, 2015), and social capital (Mahfud, Triyono, Sudira & Mulyani, 2020). People who become successful entrepreneurs tend to have control on such forces. However, perceived feasibility, defined as whether one considers him/herself as personally capable of performing entrepreneurial activities (Ozaralli & Rivenburgh, 2016), can be influenced by forces that are externally determined such as governments, financial institutions, and the opportunities offered by one’s immediate environment (Hockerts, 2017). Such forces are out of the control of an individual entrepreneur. Prior research on feasibility thus far has primarily focused on the role of formal institutions in supporting the decision to start a business. For example, scholars have examined how governmental support (Sivarjah & Achchuthan, 2013), financial resource availability (Chen, Shen, Naznin, Wang, and Wu, (2014), and university environment and support systems (Bazan, et al., 2020) affect EI. However, the impact of informal institutional support has not been well explored. Our paper extends previous research by studying the effect of two additional feasibility factors on EI: religious beliefs and belief in luck. Both religion and luck, including associated beliefs in them, have been discovered to influence entrepreneurial outcomes (e.g., Audretsch, Boente, & Tamvada, 2013; Soto-Simeone, Sirén & Antretter, 2021). To our knowledge, the current study is the first to examine how informal institutional support relate to EI across developed and developing countries.

Another challenge of EI research we intend to address is the influence of contextual factors, especially the role of culture (Moriano, Gorgievski, Laguna, Stephan, & Zarafshani, 2012). Thus far, research on the role of cultural context of EI has focused on country differences. For example, Chen and associates (2014) examine how different types of poverty affect EI in Bangladesh, while Abebe and Alvarado (2018) analyzed how social institutions can enhance EI in the USA. Other studies compare intentions and behaviors across countries. For instance, a study showed that students in Turkey were more willing to own their businesses than those in the USA (Ozaralli & Rivenburgh, 2016). However, such research often has an implicit assumption that people from different nations diverge in their entrepreneurial intentions due to cultural differences, but countries also differ in other contextual and institutional factors, such as economic development and associated entrepreneurial support to small businesses. In fact, Moriano and associates (2012) failed to find differences in EI between collectivistic and individualistic nations. Our research is based on the institutional voids perspective (Khanna, Palepu, & Sinha, 2005) to examine two different economies, African countries (Kenya and Nigeria) versus the USA. We argue that formal institutions may be helpful in encouraging entrepreneurship in developed countries like US while informal institutions may be more useful for emerging economies.

We draw from Ajzen’s Theory of Planned Behavior (TPB) to develop our theoretical perspective. TPB is a psychological perspective to a person’s beliefs and behavior (Ajzen, 1991). It states that a person’s attitude and perceived controls can affect that his or her intentions. Using the theory, researchers have proposed various models to explain why entrepreneurs start their own businesses (e.g., Krueger et al., 2000). Because both formal institutional support, as well as informal support such as religious beliefs and perceived luck, govern an individual’s attitude and perceived controls, the theory is pertinent to our study. We intend to make a few contributions to EI research with our study. First, we answer calls by scholars to address rarely discussed important contextual issues in entrepreneurship, specifically, luck and religion (Audretsch et al., 2013; Liechti, Loderer, Peyer, & Wälchli, 2017). Second, we extend EI research by refining the concept of perceived feasibility. Specifically, we classify institutional support as two types: formal and informal. Third, we propose and test that different institutional supports may have a distinct impact on EI across distinct countries with varying cultural and institutional backgrounds

Theory of Planned Behavior and Entrepreneur Intentions

The Theory of Planned Behavior (TPB) theorizes there are relationships among people's beliefs, attitudes, and their intent to act. Choosing entrepreneurship as a career can be a deliberate decision that requires planning (Baron, 2004; Krueger et al., 2000;). Therefore, the TPB framework can be applied to the entrepreneurial endeavor (Bird, 1988). According to Ajzen and Fishbein (1975), the TPB integrates two key elements: individual attitudes and perceived control of one's plan and behavior (Douglas, et al., 2021). The TPB also postulates that people's beliefs about certain behavior and its potential outcome determine how people evaluate behavior and the probability that they may act accordingly. The theory predicts that positive evaluations of a behavior tend to lead to a high intention to act while negative evaluation leads to the opposite. This prediction also relates to perceived control because a positive evaluation can also enhance a person's optimism and to a feeling that everything is in control (Chen, Liao, Redd, & Wu, 2013; Hmieleski & Baron, 2009).

Entrepreneurial intention refers to the intention of an individual to start a new business. Nascent entrepreneurs who see starting a business as a viable option develop this intention before they engage in such an activity (Krueger et al., 2000). Some potential entrepreneurial intent antecedents identified in earlier works include the role of personal characteristics, abilities, and experiences, risk taking, self-efficacy, optimism, age, education level, work experience and gender as well as social desirability and personal feasibility (e.g., Bazan, et al., 2020; Bird, 1988; Kolvereid, 1996; Shapero & Sokol, 1975; Verheul, Uhlaner, & Thurik, 2005). For example, when a nascent entrepreneur has high self-efficacy, s/he may be more likely to begin his/her entrepreneurial journey (Hockerts, 2017). The same can be said for education. Highly educated people may believe they have the needed skills to start a business. Therefore, the likelihood of founding a company increases (Chen, Su, & Wu, 2012). Overall, desirability factors have been well explored, and that is why some scholars argue that EI research is "dead" (Krueger, 2017).

EI theorists looking at antecedents to starting a venture have proposed that successful entrepreneurs have to pass two tests, perceived desirability and perceived feasibility (Krueger et al., 2000). Desirability is present when an entrepreneur considers starting a new business as a desirable state to achieve. However, research on factors needed to pass the perceived feasibility test has been scant. Further, EI can be a staged action, that is, even though a nascent entrepreneur may have a very strong desire to start a business, if s/he finds it not feasible, the venture will not take place (Douglas, et al., 2021). Perceived feasibility therefore is more important than perceived desirability in predicting EI. Our research focuses on the aspect of perceived feasibility.

Perceived feasibility refers to the situation when entrepreneurs hold the belief that they are able to explore and exploit an opportunity they find (Stevenson & Jarillo, 2007). In general, perceived desirability contains both internal and external factors. However, perceived desirability is primarily a factor of uncertainty and the perception of controllability of a situation (Kuehn, 2008). While previous experience and a general sense of self-confidence in one's skills and abilities to successfully execute tasks have been found to relate to this belief in one's abilities (Henley, Contreras, Espinosa, & Barbosa, 2017), perceived controllability of the external forces has repeatedly been identified as the most critical antecedent to feasibility perceptions (Chen, Greene, and Crick, 1998; Douglas, et al., 2021). Thus far, scholars studying external forces have primarily focused on the formal institutional supports from banks, government, universities and other agencies (e.g., Bazan, et al., 2020; Chen et al., 2014). We propose that both formal and informal external forces should be investigated. Specifically, we argue that there are three external forces that may influence a nascent entrepreneur's behavior: divine forces (religion), supernatural forces (luck) and institutional forces (financial institutions). We examine how they may relate to EI.

Hypothesis Development

Institutional Support and EI

Institutional support plays a critical role in fostering entrepreneurship (Bowen, & De Clercq, 2008; Busenitz, Gomez, & Spencer, 2000). Different studies have reached varying conclusions as regards to the effect of institutional support and EI (Linan & Fayolle, 2015). Institutions such as government policies and regulations, political systems culture affect enterprise creation and development, particularly among potential entrepreneurs who belong with social groups with traditionally lower resources, as well as among potential entrepreneurs in developing economies. Abebe (2012) and Abebe, Gangadharan, and Sutanonpaiboon, (2014), however, found no support for a role of micro level institutional factors - financial systems on EI among Hispanic, Caucasian and minority populations in the USA. Other literature on minority entrepreneurs has indicated that access to financial capital was a challenge in establishing new business (Coleman, 2005; Tienda, & Raijman, 2004). Financial institutions require collateral which some nascent entrepreneurs may lack.

The experience is nascent entrepreneurs in developing economies is also plagued by a lack of resources. Nascent entrepreneurs in developing countries experience institutional challenges especially due to lack of institutions or institutional voids (Chowdhury, Audretsch, & Belitski, 2019). The lack of robust political and economic institutions that can support entrepreneurial activity has been identified as a major impediment to economic growth in sub-Saharan Africa (George, Corbishley, Khayesi, Haas, & Tihanyi, 2016; Kiggundu, 2002; Mbaku, 2004), where pervasive corruption and undue regulatory mandates often create significant barriers to aspiring entrepreneurs to start a business (Mbaku, 2004; Zoogah, Peng, & Woldu, 2015). Given the conspicuous lack of robust institutional support, African entrepreneurs rely more on their social network ties and other mechanisms (Sydow, Cannatelli, Giudici, & Molteni, 2022) to foster their entrepreneurial ventures. These social networks are often based on political and ethnic ties. In the African context, Abebe, Getachew and Kimakwa, (2022) found that political and ethnic identity alignment to a political regime facilitates access to government resources. Where entrepreneurs political and ethnic identity align with the regime leaders, there is likely to be entrepreneur intentions because of easy access to government support through their political and ethnic ties. Further, Ge, Carney, M., & Kellermanns, (2019) found that family ties are used to secure resources to start a venture in absence of robust institutions. Thus, we propose the following hypothesis.

Hypothesis 1: *There is a positive relationship between perceived institutional support and entrepreneurial intentions.*

Religion and EI

Religion promotes values of people which influence attitude and behavior towards life including entrepreneurship (Block, Fisch, & Rehan, 2020). Religious values, beliefs, and religion overall have been shown to influence entrepreneurship (Balog, Baker, & Walker, 2014; Block et al., 2020). Religion influences entrepreneurial behavior (Henley, 2017). Entrepreneurs are influenced by personal convictions on their actions, and as such, their religious beliefs cannot be separated from their entrepreneurial behavior. A person's way of life is influenced by their personal beliefs and deep convictions. Religion shapes one's life to look at events as being organized and orchestrated by a higher supernatural being (Williams, 2010). For instance, they may see their entrepreneurial success or failure as divinely led. Thus, belief in religion or a supernatural power are likely to influence entrepreneurial behavior differently from people who lack such beliefs or values or who do not think or feel that entrepreneurial success or failure depends on the will of such divine power. Studies have shown that religious beliefs influence one's life's choices, including decisions to engage in business. Religion plays an important role in shaping an individual's worldview and has been tied to interpretations of environmental uncertainty and entrepreneurial success (Bellu & Fiume, 2004; Linan, Rodriguez-Cohard & Rueda-Cantuche, 2005). Past research in religion and spirituality has shown that religion is linked to entrepreneurship, stemming from Weber's concept of the Protestant work ethic, such would link Protestantism to higher entrepreneurial intention and activity, to recent scholarly research on the field (Dodd & Seaman, 1998). Studies at the macro level show that religions such as Christianity (Carswell & Rolland, 2004) and Islam (Rehan, Block, & Fisch, 2019) are supportive of entrepreneurship, while others such as Hinduism are inhibitive (Audretsch, Boente & Tamvada, 2007).

Dodd and Seaman (1998) and Galbraith and Galbraith (2007) determined that Christianity influences entrepreneurship through the mechanism of environmental munificence factors. Religion can also influence EI due to social capital resources associated with being a member of a religious organization (Dodd & Gotsis, 2007). Moreover, Parboteeah, Walter and Block (2015) found that Christianity influences entrepreneurship due to the nascent entrepreneur's country's investment into knowledge. In other words, Christian countries were found to engage in more technological innovation that created entrepreneurial opportunities for potential entrepreneurs to discover, develop, and exploit.

This research suggests that religiosity is positively related to entrepreneurial intentions. College students could have many career options, but those who have religious beliefs that supports entrepreneurship, they are more likely to have entrepreneurial intentions relative to students with lower religiosity. Given that people's entrepreneurial activity is based on their intentions, this suggests that those with greater entrepreneurial intentions are more likely to start a new business in the future. Consequently, we hypothesize the following:

Hypothesis 2: *There is a positive relationship between religiosity and entrepreneurial intentions.*

Belief in luck and EI

Luck can be defined as the idea that “good or bad things that happen to you by chance, not because of your own efforts or abilities” (Liu & de Rond, 2016, p.413). Previous research has approached luck and beliefs in luck from several angles. First, luck is related to certain outcomes that can be good or bad. For example, the hot hand fallacy results from a few successful shots of a basketball player. It is a good outcome (Ayton & Fischer, 2004). The fallacy lies in that even when evidence shows that the player is simply lucky, people may believe that they can predict that the player can make the next few shots. Second, people vary in the extent in which they believe that luck determines their valued outcomes (Liu & de Rond, 2016). Some people believe there is luck determining such outcomes, while some do not (Maltby, Day, Pinto, Hogan, & Wood, 2013). Further, the extent to which a person believes in luck, that is, to be either unlucky or lucky, has an impact on his or her emotion and cognition (Day & Maltby, 2005). Third, luck may be situational and hence subjective. Being lucky or not depends on how the person feels at the time when a certain event happens, and such feelings can influence a person's behavior. For instance, a person feeling lucky tends to be more hopeful and confident about their competence, whereas a person who does not feel lucky may experience cognitive difficulties (Maltby, et al., 2013). Because EI depends on attitude and belief of controllability, we study belief in luck as an antecedent to EI.

Luck is important to entrepreneurs. First, entrepreneurship is at the nexus of individuals and opportunities. Some argue that opportunity recognition is the most important step of entrepreneurship because good opportunities attract financial and human resources to the new startup (Stevenson & Jarillo, 2007). Stevenson even states that people don't start a business because they do not have a good idea. Research has found that people who consider themselves to be lucky unintentionally find and even create new opportunities than those who consider themselves to be unlucky would not (Maltby, Day, Gill and Colley & Wood, 2008). There is also evidence supporting the idea that belief in good luck is more than just a positive illusion but can result in realistic expectations and ambitions on individuals (Maltby, et al., 2013, p. 655). This implies that belief in good luck can have an influence on cognition, which can affect decision making and planning goals. Second, entrepreneurs tend to be optimists (Busenitz & Barney, 1997) and likely to overestimate their abilities (Cooper, Woo, & Dunkelberg, 1988). Festinger (1954) argues that people evaluate themselves more positively than others. That is, they tend to attribute positive outcomes of their behavior to their capabilities even when such positive outcomes are the result of luck. This tendency is likely to have detrimental effects, as people who believe that they are lucky are more likely to develop confidence after a lucky event (Darke & Freedman, 1997).

Hypothesis 3: *There is a positive relationship between belief in luck and EI.*

The Role of National Context: Africa and the USA

As stated above, scholars have called for inquiry into how contextual factors influence EI (Fayolle & Linan, 2014). One such stream of research examines country differences in EI antecedents based on

cultural aspects. Nonetheless, the findings have not been consistent. For example, Mariano and associates (2012) propose that entrepreneurs in countries with individualism orientation may be more willing to embark on the entrepreneurship journey than those in those high in collectivism. However, the analyses do not find significant differences between the two cultural orientations. In contrast, Ozaralli and Rivenburgh (2016) argue and find that both Turkish and American entrepreneurs tend to have positive attitudes and perceived control. We argue that institutional contexts rather than cultural differences may be more powerful predictor for EI in different countries.

Unlike developed countries with well-established institutional contexts, emerging economies are often faced with institutional voids (Khanna et al., 2005). Therefore, entrepreneurs in poor economies may have to overcome difficulties that business owners in developed countries do not experience. For instance, emerging economies may have a corrupt government, social disparities based on ethnicity or social class rather than capabilities, and unstable political environments (Abebe et al., 2022; Sachs, 2005). Hence, institutional support can be more important for emergent entrepreneurs in emerging economies relative to their counterparts in developed nations such as the U.S. Further, entrepreneurs in emerging economies may rely on informal institutions more than those in developed countries.

Entrepreneurs are creative people who discover deficiency in the economy and fix it (Shane & Vanketaraman, 2000). When they find a good opportunity, they would pursue it even in the absence of institutional support (Stevenson & Jarillo, 2007). In emerging countries with institutional voids, entrepreneurs turn to informal institutions in lieu of formal institutions (Chen, Joardar, & Wu, 2017; Xin & Pearce, 1996). In Turkey, for instance, students take more entrepreneurial courses than students in the USA (Ozaralli & Rivenburgh, 2016). Chinese entrepreneurs use guanxi connections to overcome the voids of formal legal support (Xin & Pearce, 1996). These differences are likely to manifest in the role of EI antecedents. In our case, we argue that informal institutional forces such as religious beliefs and belief in luck may be more salient in encouraging EI in African countries, whereas formal institutional supports may be more important in U.S.

Hypothesis 4a: *In Africa, religious beliefs and belief in luck are significantly associated with EI.*

Hypothesis 4b: *In USA, institutional support is significantly related with EI.*

METHODOLOGY

Data Collection

A survey questionnaire was designed to test our hypotheses. We distributed the survey to college students in three universities in three countries, U.S., Kenya and Nigeria – one college was religious based. A total of 678 usable surveys were used for our analysis. We ran a t-test to compare the Kenya and Nigeria students and we found the student samples are very similar in demographic variables such as gender, age, income. Therefore, we combined the two samples from the two countries.

Dependent Variable: *Entrepreneurial intention (EI)*: EI was measured using an instrument from Abebe (2012) study. The instrument contains four statements on a 7-point Likert scale. We asked participants to evaluate using a 7-point Likert scale to state how interested they are in setting up a new business using, a) I am interested, b) I have considered it, c) it is likely I am going to, and d) I am interested in building up a high growth business. We calculated EI as the average of the four ratings above.

Independent Variables: We measured *institutional support* using a scale by Abebe (2012). It consists of three items on availability of bank loans, a) business loans from banks will be difficulty to get, b) banks are not likely to help me get a business loan, and c) I have limited chances of getting business loans. We first reversed the scale and then the average of the three items was used to calculate perceived institutional support. *Religious beliefs* was measured using a scale from the work of Hoge (1972). Based on factor analysis, we selected six items from Hoge's survey, a) my faith involves all of my life, b) one should seek God's guidance when making decisions, c) I experience the presence of divine, d) my faith sometimes

restricts my actions, e) nothing is as important to me as serving God, and f) my religious beliefs are my whole approach to life. We reversed item d) and then calculated the average as religious belief. Lastly, we used the scale from Darke and Freedman (1997) to measure **belief in luck**. Three items were used, a) I mostly have bad luck, b) I am not lucky and c) Bad luck happens to me often. The scale was reversed and then the average was calculated as the measure of perceived luck.

Control Variables: We controlled the following variables because they have been cited as important factors leading to EI for college students: age (less than 18-20=1, 21-30=2, 31-40=3 41-50= 4 and others = 5), gender (male=1 and female=2), living conditions (own house =1, renting=2 and living with parents=3), enrollment status (fulltime=1, parttime =2), job status (fulltime=1, parttime=2 and unemployed=3), personal income (less than 15,000=1, 15000-24,999=2, 25,000-34999=3, 35000-49000=4, 50,000 or more=5), and lastly country (African countries=0 and USA=1).

Data Analyses and Results

Table 1 shows descriptive statistics and the correlations of the variables. Table 2 provides factor loading for dependent variable and independent variables. The factor analysis used principal method with varimax rotation. The loading and Cronbach alpha values are all acceptable. We tested our hypotheses using regression analysis.

First, we used the combined samples from three universities in three countries to test if religious beliefs, perceived luck and institutional supports are positively related to EI. Table 3 shows that Hypotheses 1 to 3 are all fully supported. Another interesting finding is that students in African countries are much more likely to start their own businesses. Previous research has found similar patterns (Ozaralli & Rivenburgh, 2016).

Table1: Descriptive statistics and correlations

	Mea n	ST D	EI	Gend er	Age	LS	ES	Jobs Stat us	Inco me	Lu ck	religio sity
EI	3.63	2.3 3									
gender	1.49	0.5 0	- 0.03								
age	1.83	0.9 5	- 0.13	-0.08							
LC	2.50	0.7 7	0.08	0.05	-0.31						
ES	1.10	0.3 0	0.03	-0.01	0.24	-0.13					
JS	2.30	0.7 7	0.23	0.04	-0.27	0.18	-0.20				
Income	3.13	1.4 8	0.07	-0.07	0.06	0.13	0.06	0.01			
Perceived Luck	2.96	1.7 4	0.37	-0.04	-0.17	0.08	-0.05	0.16	0.04		
Religiosity	4.18	1.9 3	0.45	-0.08	-0.14	0.07	-0.03	0.20	0.13	0.3 4	

Institutional Support	3.87	1.40	0.23	0.04	-0.02	0.04	-0.01	0.15	0.01	0.10	0.14

N = 678. EI = Entrepreneurial intentions. LC = Living conditions. ES = Enrolment Status. JS = Job Status

Table 2: Factor Analysis Results and Reliabilities

Statements	Alpha	Loadings
Regarding setting up your own business - I am interested	0.88	0.73
Regarding setting up your own business - I have considered it		0.88
Regarding setting up your own business It is likely that I am going to		0.88
Regarding setting up your own business - I am interested in setting up and building a high-growth business		0.90
I believe business loans from banks - will be difficult to get	0.90	0.64
I believe business loans from banks - Banks are not likely to help me get a business loan		0.75
I believe business loans from banks - I have limited chances of getting		0.83
My faith involves all of my life	0.88	0.78
One should seek Gods guidance when making every important decision.		0.84
In my life I experience the presence of the Divine.		0.85
My faith sometimes restricts my actions		0.68
Nothing is as important to me as serving God as best as I know how.		0.90
My religious beliefs are what really lie behind my whole approach to life.		0.84
I mostly have bad luck	0.89	0.91
I am not lucky		0.86
Bad luck happens to me often		0.67

Table 3: Regression analysis (combined samples: N=678)

Variable	Parameter	Standard	t Value	Pr > t
	Estimate	Error		
Intercept	4.16	0.50	8.39	<.0001
Gender	0.15	0.11	1.35	0.18
Age	0.10	0.06	1.59	0.11
Living Conditions	0.13	0.07	1.76	0.08
Enrollment Status	-0.05	0.19	-0.29	0.77
Job Status	0.05	0.08	0.61	0.54
Income	-0.06	0.04	-1.60	0.11
Country	-3.48	0.15	-22.95	<.0001
Religiosity	0.10	0.03	2.88	0.00
Institutional support	0.10	0.04	2.64	0.01
Perceived luck	0.08	0.04	2.21	0.03

Second, to test hypothesis 4, we analyzed the two subsamples, African and U.S. Table 4 shows the results of the African sample. As predicted, students who are highly religious and who believe they are lucky had greater EI, meaning they would be more likely to start their own businesses. This supports hypothesis 4a. Table 5 analyzed the U.S. sample. Consistent with our prediction, institutional support is significantly related to EI thus providing support for 4b. However, it is surprising to find that religious belief can positively affect EI also in the U.S.

Table 4: Regression Analysis (African countries: N=183)

Variable	Parameter	Standard	t Value	Pr > t
	Estimate	Error		
Intercept	3.52	1.16	3.03	0.00
Gender	-0.05	0.24	-0.23	0.82
Age	0.24	0.23	1.05	0.29

Living Conditions	0.30	0.20	1.46	0.15
Enrollment Status	-0.26	0.38	-0.68	0.50
Job Status	-0.09	0.20	-0.45	0.65
Income	-0.15	0.07	-2.07	0.04
Religiosity	0.20	0.09	2.22	0.03
Institutional Support	0.15	0.09	1.61	0.11
Perceived Luck	0.19	0.08	2.48	0.01

Table 5: Regression analysis (USA sample N=495)

Variable	Parameter	Standard	t Value	Pr > t
	Estimate	Error		
Intercept	0.73	0.49	1.50	0.14
Gender	0.22	0.12	1.76	0.08
Age	0.05	0.07	0.72	0.47
Living Conditions	0.06	0.08	0.77	0.44
Enrollment Status	0.09	0.22	0.39	0.70
Job Status	0.06	0.08	0.68	0.50
Income	-0.01	0.04	-0.23	0.82
Religiosity	0.08	0.04	2.19	0.03
Institutional Support	0.10	0.04	2.34	0.02
Perceived Luck	0.03	0.04	0.68	0.49

DISCUSSIONS

Past research has suggested that to come to fruition, an entrepreneurial endeavor needs to pass two tests: perceived desirability and perceived feasibility. While there are substantial research addressing the desirability issue, research on perceived feasibility has been scant, even though the latter is more important in leading to entrepreneurial activities (Douglas, et al., 2021). Also, those exceptions have primarily focused on the impact of the formal institutions such as governments and banks (Hockerts, 2017). Our research extends EI research by examining the effect of both formal and informal institutions in both developed and emerging economies.

We argue that three forces may make an individual's entrepreneurial endeavor feasible, institutional force (banks), divine force (religious beliefs) and supernatural force (belief in luck). We proposed that all three forces are positively associated with EI. Our analyses of the combined sample with college students in both USA and Kenya support our prediction. Further, we postulated that formal force like financial institutional support may be salient in developed countries, whereas the effect of the informal forces such as perceived luck and religious beliefs may be more apparent in emerging countries. For this prediction, we received mixed support. Indeed, formal institutional support makes entrepreneurial efforts more likely while informal force of belief in luck is positively related to EI. However, contradicting to our prediction, the divine force, religious beliefs, is positively related with EI for both emerging and developed countries.

Scholars are increasingly paying attention to how institutions can influence EI (Fayolle & Linan, 2014). The implicit assumption from past research is that forces such as institutions can influence EI universally. For example, everyone needs the support from financial institutions like banks (Chen, et al, 2014). Our findings show that this assumption may be half true. We found that some of the factors may be powerful predictors of EI in all types of economies, in our case, religious beliefs. However, some forces may be only useful in emerging countries like belief in luck while formal institutional force can be indicator of EI in developed countries.

CONCLUSION

Our research makes important contributions to EI research by distinguishing formal and informal institutions and how they exert influence in different economies, in our case, USA and two African Countries (Kenya and Nigeria). We also theorized on the role beliefs in luck and religion, which are relatively underexplored in the field, play on EI.

Our research does have several limitations. First, we collected data from college students, who may not be a representative of potential entrepreneurs. Future research should be conducted using general population or entrepreneurs as their study sample. Second, the notion of informal and formal forces can be refined. For example, belief in luck was found to affect EI in the current research. However, people differed not only in the extent in which they are lucky or unlucky, but also in the importance of luck to achieving their desired outcomes. Future research may investigate how both belief in the role of luck as well as whether one is lucky or unlucky influences entrepreneurial behavior.

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EFFECTS OF GENDER EQUALITY AND SOCIAL COSTS OF FAILURE ON ENTREPRENEURSHIP ACTIVITY AND HIGH GROWTH ASPIRATIONS

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ABSTRACT

By using a study across 35 different countries, we found that the disadvantaged position of women in terms of economic participation and opportunity, educational attainment, health and survival, and political empowerment has a negative influence on their early-stage entrepreneurship activities and high growth aspirations as business owners. In addition, we discovered that the high social cost of failure had played a role in the reinforcement of those negative relationships. The significance of these findings lies in the fact that recent studies have presented policy arguments for the high social costs of failure, and these arguments suggest that high-growth entrepreneurship activity will increase if particular criteria pertaining to instructional frameworks are satisfied. The findings of our research, on the other hand, draw attention to the negative moderating effects that gendered institutions have on the positive outcomes that are anticipated as a result of such institutional demands being placed on women entrepreneurs.

Keywords: entrepreneurship, gender equality, social costs of failure, high growth aspirations, global entrepreneurship monitor.

Goals Without equal inclusion of half of the world's talent, we will not be able to deliver on the promise of the Fourth Industrial Revolution for all of society, grow our economies for greater shared prosperity, or achieve the U.N. Sustainable Development.

(World Economic Forum, Global Gender Gap Report 2020: 4)

INTRODUCTION

Societal perception and judgment (Bitektine, 2011) of illegitimacy play essential roles in the decisions of entrepreneurs to start new firms (Zimmerman & Zeitz, 2002). Judgments of illegitimacy impact success (Shneor et al., 2016), cultural fit (Spigel, 2017), and formal rules and regulations (Wang, Li, & Long, 2019). First, society punishes illegitimacy based on behaviors (Shepherd & Patzel, 2017; Simpson & Willer, 2015). In many societies, business failure is associated with illegitimacy and can be a barrier to failed entrepreneurs seeking reentry (Simmons, Wiklund & Levie, 2014). Interestingly, societal judgments of business failure also affect the decisions and aspirations of novice entrepreneurs considering starting a new venture for the first time (Lee et al., 2020). Second, society punishes illegitimacy based on status and roles (Shepherd & Patzel, 2017; Simpson & Willer, 2015). In many societies, the under-representation of women in economic, political, educational, and health institutions has negatively impacted women entrepreneurs' legitimacy and startup intentions (Brush, Ali, Kelley, & Greene, 2017). Negative social judgments and gender disparities are essential concerns for countries focused on stimulating wealth and job creation through entrepreneurship activity (Acs, Parsons, & Spencer, 2008; Shane, 2009; Lerner, 2010; Terjesen et al., 2016).

We, therefore, question: *How do the social costs of failure interact with gendered institutions to affect entrepreneurship activity, especially high growth aspirations?* We address this question by employing institutional theory (Scott, 1987; 1995; Suchman, 1995) and a unique dataset of 286,989 entrepreneurs across 35 countries. We frame the institutional conditions of the negative social judgment of business failure and the nonconformity of women's participation (Calza, Cannavale & Nadali, 2020) using the two multi-dimensional constructs of social costs of failure and gender equality. We reason that gender equality across varied socialization contexts will result in a larger pool of talent engaging in entrepreneurial activities and high growth aspirations (Phillips & Zuckerman 2001; Scott, 1986). We further reason that the social costs of failure (Lee et al., 2020) weaken the relationships between gender equality, entrepreneurial activity, and high growth aspirations.

Our study contributes to several scholarly conversations on the effects of legitimacy and socialization contexts on entrepreneurship activity. First, by incorporating the multi-dimensional constructs of the social costs of failure and gender disparity, we answer the call to move beyond single or piecemeal measures of the institutional drivers of early-stage and high-growth entrepreneurial activity (Lee et al., 2020). Second, we extend studies that call for more research on the legitimacy of women as entrepreneurs (Dheer, Li & Treviño, 2019). For instance, Brush, Bruin, and Welter (2009) make the theoretical argument that in institutional contexts where women are unable to socialize or engage equally in the economy, they have limited decision choices, search processes, and perceptions about the existence or accessibility of entrepreneurial opportunities. Building on these arguments, Brush et al. (2009) call for future research on the effects of national and regional level policies, culture, laws, economy, and support services on the exercise of choice for women entrepreneurs. Our study answers this call.

Lastly, our approach of moderating gender equality with social costs of failure informs the quality versus quantity debate on whether societies should motivate productive entrepreneurship activity using tactics that punish business failure (Lee et al., 2020) or by excluding groups of individuals from the demand for entrepreneurial talent (Simmons, 2012). The relationship between the institutional environment and the rate and types of entrepreneurship activity that emerges or succeeds has been of interest for well over a century (Weber, 1904). The effects of institutions on the entry and growth decisions of women entrepreneurs (Simmons et al., 2019). Theories used in earlier studies to explain the participation of women entrepreneurs vary but generally center around

institutional economics (see, e.g., Autio & Acs, 2010; Estrin, Korosteleva, & Mickiewicz, 2013) and cultural psychology (see, e.g., Autio, Pathak, & Wennberg, 2013). Collectively, these prior studies find that systematic variation across cultures and social structures impacts entrepreneurship (Cheraghi, Afsar, Wickstrom & Klyver, 2019; House et al., 2004; Hofstede, 1980, 2011; Klyver, Hindle, & Meyer, 2008; Simmons et al., 2019; Thomas & Mueller, 2000). An implicit assumption of prior studies, however, is that the individual entrepreneurs embedded within a specific institutional environment will have equivalent opportunities to start and grow ventures (Brush et al., 2019). Although studies of women, immigrants, and minority entrepreneurs have attempted to address this assumption (Fairlie, 2013), many of these studies focus on market, money, and management ("3Ms") (Brusch et al., 2019) and do not provide a full portrait of the macro environment. This study provides a comprehensive portrait by including the framework conditions of education, healthcare, and political power (World Economic Forum, Global Gender Gap Report 2020).

THEORY AND HYPOTHESES DEVELOPMENT

Over the years, the entrepreneurship literature has moved away from 'gender as a variable' (Cromie, 1987) toward studying 'gender as an influence' (Foss & Ahl, 2016; Marlow, 2002). According to Brush, Edelman, Manolova, & Welter (2018), gender can influence entrepreneurial ecosystems at the institutional level by setting boundaries for behaviors and actions (Welter & Smallbone, 2011; Smallbone & Welter, 2012). For instance, regulations prohibiting women from owning property (Hampel-Milagrosa, 2010) or moving freely about some countries (Estrin & Mickiewicz, 2011) can make collateralizing and establishing a business especially difficult. The same is true of informal institutions, often expressed as gender stereotypes and biases (Eddleston et al., 2016; Marlow & Swail, 2014).

Gender Equality and Entrepreneurship Activity

To a limited extent, the effects of gender equality as an independent variable on the dependent variable of entrepreneurship activity has been studied using the Hofstede (1980; 2011) masculinity/ femininity, and Globe (House et al., 2004) gender egalitarianism measures. The World Economic Forum (2020) Gender Gap Report also identified gender gaps in economic participation and opportunity, educational attainment, health and survival, and political empowerment as detrimental to the economic growth and development of a country because of the underutilization of the skills and productivity of the entire labor base (Baloch et al., 2016). On the flip side, engagement in entrepreneurship has been shown to increase in institutional settings (Bönte & Piegeler, 2013; Bosma, 2013; Kelley et al., 2016) where assistance for childcare services and family leave is provided (Terjesen, Hessels, & Li, 2016), as well as in contexts with gender-blind regulatory frameworks and government policies (Wang et al., 2019).

To better understand how prior studies have identified and addressed the effects of gender and social costs of failure on early-stage entrepreneurship activity and high growth aspirations, we adopt an institutional perspective (Biniari et al., 2015; Scott, 1995; Suchman, 1995; Meyer & Rowan, 1977). A weakly held assumption of the current literature that argues for high social costs of failure to promote productive entrepreneurship activity is that all individuals in the society are equal in status to "social, political, and economic affairs" (Young & Makhija, 2014: 676). However, egalitarianism is not axiomatically universal. Society rewards some groups and punishes

others based on their status, roles, and behaviors (Shepherd & Patzel, 2017; Simpson & Willer, 2015). Another weakly held assumption is that the punishments assigned to status in society have resource impacts that reward other groups (Goffman, 1963).

From a societal perspective, entrepreneurs can appear to *not fit* (Hsu et al., 2019) into entrepreneurial economies that lack gender parity. Because conformity to social roles impacts the level of stakeholder trust (Dheer et al., 2019), gender equality will influence entrepreneurial behaviors (Eddleston & Powell, 2008; Gupta et al., 2009). In particular, when social roles allocate different responsibilities, women will have different career perceptions (e.g., Lent, Brown, & Hackett, 2002). Women will also have different perceptions of their ability to navigate selection pressures (Fisher et al., 2016; Miner, Amburgey, & Stearns, 1990) and attract human, financial, and social capital (Garud, Schildt, & Lant, 2014) needed for firm growth (Canning et al., 2012; Greene et al., 2003). As such, we suggest:

H1: *Gender equality at the national level is positively associated with the likelihood of individuals engaging in the early-stage entrepreneurship.*

Depending on the framework conditions of the institutional environment, women's entrepreneurship activity can take the form of necessity entrepreneurship to provide for basic needs or high-growth entrepreneurship that pursue opportunities that elevate their social and economic status (Hechavarria et al., 2019). The institutional framework conditions that drive this choice are not yet well understood. As Hechavarria et al. (2019) state, the extant entrepreneurship literature presently focuses more on the decision making of male entrepreneurs, ignoring the unique challenges faced by women in gendered institutions (Jennings and Brush, 2013).

While measured differently in various studies, Guzman and Santos (2001) illustrated that in order to be a high-growth firm or "gazelle" (Hechavarria et al., 2019), there is a need for individuals to have high growth aspirations (Giotopolous, Kontolaimou, and Tsakanikas, 2017) even though high growth is a product of individual as well as firm and environment attributes (Gilbert, McDougall and Audretsch, 2006). In other words, entrepreneurs must make the cognitive choice to grow (Wiklund, Davidsson, and Delmar, 2003) in order to achieve a prospect size or scope for the business operations (Hechavarria et al., 2019).

In society, women desire high growth just as much as men (Kuschel et al., 2018), however, some highly skilled women may self-select out of high growth entrepreneurial activities because of a perceived lack of fit to an institutional context (see e.g., Kanze et al., 2020). For instance, Yacus, Esposito and Yang (2019) found that women entrepreneurs facing barriers to third-party financing may need to rely on retained earnings and personal saving to fund their growth. The researchers also found women to be more likely to achieve high growth in segments of the market dominated by other women-owned businesses (i.e., segments with gender equality). Gupta, Weiland, and Turban (2019) present an example of the relevance of this fit in their experiment, which provides evidence that the social exclusion of women from gendered institutions is a factor that women consider in their cognitive choice to pursue high-growth entrepreneurship activity.

Several scholars studying high-growth women's entrepreneurship have called for future studies of context-specific decision-making that seek to explain how biases on the national level can promote or constrain intentions, aspirations, and actual growth of women-led ventures (Hechavarria et al., 2019; Ngosong and Kimbu, 2019; Gupta, Weiland and Turban, 2019). We concur that further study is needed. Building on fit theory espoused in earlier studies, we hypothesize:

H2: *Gender equality at the national level is positively associated with the likelihood*

of individuals engaging in the early-stage entrepreneurship with high growth aspirations.

Moderating Effects of Social Costs of Failure

Societal pressures of cultural norms can steer women away from different types of businesses, industries, or entrepreneurship altogether (Lee, et al., 2020). Cultural norms set behavioral expectations for women entrepreneurs (Marlow & Martinez, 2018). One crucial cultural consideration that spans both formal and informal aspects of the institutional environment is the social costs of failure.

In institutional environments, failed entrepreneurial behaviors and outcomes can be informally or formally sanctioned (Lee et al., 2020). Examples of informal sanctions include negative social judgments about whether entrepreneurs who fail should be given a second chance (EOS Gallup Europe, 2010) and negative stakeholder judgments about engaging in future transactions with failed entrepreneurs (EOS Gallup Europe, 2010). Examples of formal sanctions include bankruptcy laws with unfriendly consequences (McMullen, Bagby & Palich, 2008) and credit reporting regulations constraining access to credit (Kanze et al., 2020).

High social costs of failure signify a societal intolerance for entrepreneurs with spoiled social identities (Goffman, 1963) and for entrepreneurial behaviors that deviate from expected social norms (Lee, Peng, & Barney, 2007; Simmons et al., 2014; Sutton & Callahan, 1987; Ucbasaran et al., 2013). Independently, high social costs of failure have been shown to have a negative effect on early-stage entrepreneurial activity (Lee et al., 2020), affecting the decision-making processes of aspiring entrepreneurs. We argue that there will be gender differences in the effects of social costs of failure on entrepreneurial behavior because women and men have different concerns to social stigmas (Simmons et al., 2019; van der Zwan et al., 2016) and risk preferences in competitive environments (Bönte & Piegeler, 2013). Accordingly, we suggest:

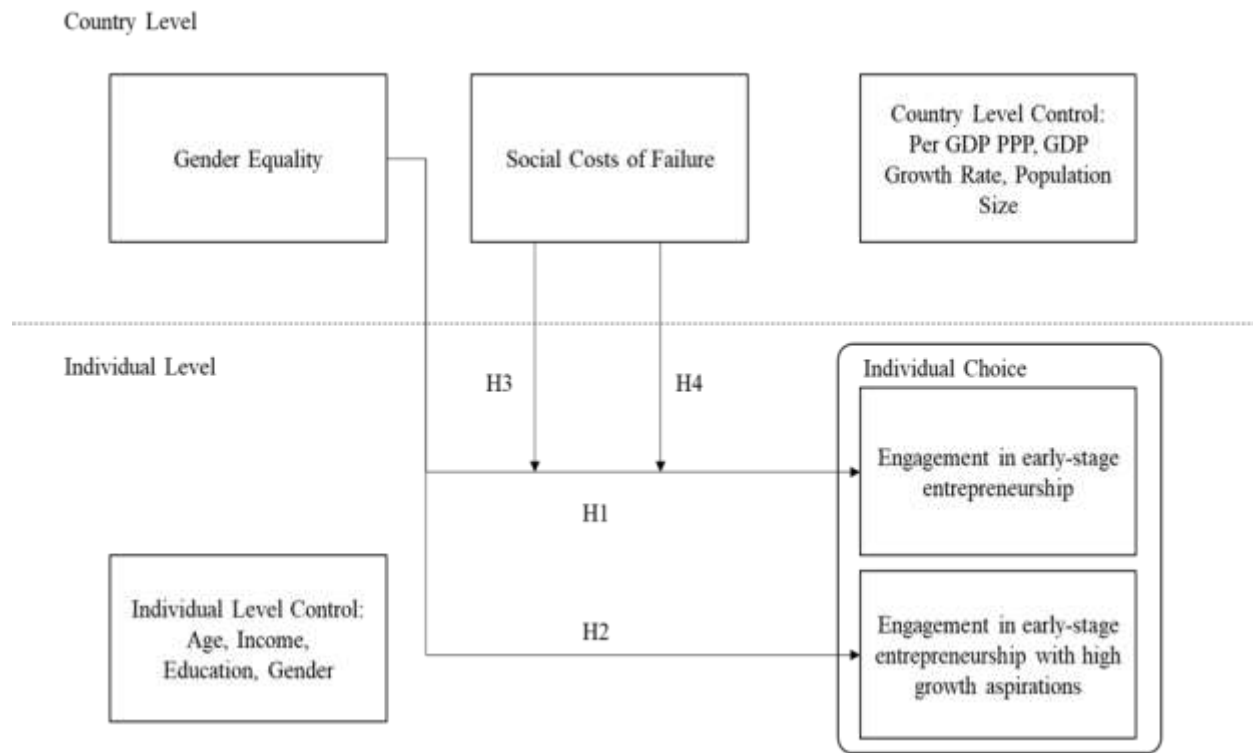
H3: *The impact of nation-level gender equality on the likelihood of individuals engaging in early-stage entrepreneurship is positively moderated by nation-level social costs of failure, such that individuals are most likely to engage in early-stage entrepreneurship where gender equality and social cost of failure are high.*

Although high social costs of failure have been found to negatively impact early-stage entrepreneurial activity, Lee et al. (2020) found this dimension of culture to have positive effects on the high-growth aspirations of entrepreneurs. High social costs of failure signal a stringent selection process for inclusion into the entrepreneurial ecosystem. In such contexts, conflicting views about the roles, status, and capabilities of entrepreneurs are likely to be magnified (see i.e., Lent, Brown & Hackett, 2002; Dheer et al., 2019). To navigate societal judgments, for example, women with prior business failures who do enter into entrepreneurship in institutions with high social costs of failure may engage in low-growth activities requiring fewer resources and draw less attention to their legitimacy concerns. This argument aligns with prior research which shows that entrepreneurs with less favorable perceptions of their institutional environment are less likely to be an opportunity (i.e., growth-oriented) versus necessity (i.e., basic needs) focused entrepreneur (van der Zwan et al., 2016). These hypothesized relationships are modeled in Figure 1. Thus, we suggest:

H4: *The impact of nation-level gender equality on the likelihood of individuals engaging in early-stage entrepreneurship with high growth aspirations is positively moderated by nation-level social costs of failure, such that individuals are most*

likely to engage in early-stage entrepreneurship where gender equality and social cost of failure are high.

Figure I: Conceptual Model



METHODOLOGY

Research Design and Sample

To test our hypotheses, we use a multi-level modeling analysis that nests individual entrepreneurs within countries. To capture individual and country-level variables, we constructed a unique dataset that combines data from the Global Entrepreneurship Monitor (GEM), European Flash Barometer (EUFB), World Bank Development Indicator (WDI), World Bank Doing Business Report (WBDB), and World Economic Forum (WEF).

Individual-level data was taken from the GEM Adult Population Survey (APS). The GEM project conducts an ongoing cross-national survey to measure entrepreneurial activities across countries (Bosma, 2013). The GEM project randomly selects survey respondents from the general population of the participating countries. At least 2,000 individuals from each participating country are drawn from the working-age population and interviewed about their entrepreneurial attitude, intentions, activities, and information on individual characteristics, such as gender, education, age, and household income. To increase the stability of the measures, we pooled the GEM data across the four-year period of 2009 – 2012 and included only the working population between the ages of 18 and 64.

Country-level variables were drawn from the EUFB, WDI, WBDB, and WEF. The EUFB #283 and #354 reported public attitudes towards entrepreneurship, such as entrepreneurial education, risk-taking, obstacles to entrepreneurship, and business failure for European countries and beyond (EOS Gallop Europe, 2010 & 2013). The WDI database is a public dataset published by the World Bank organization, which shows national development indicators, including GDP per capita, GDP growth, and population size (World Bank Group, 2018). The WBDB provides institutional variables of business regulations over 190 countries, using ten criteria, such as starting a business, getting electricity, getting credit, paying taxes, enforcing contracts, dealing with construction permits, registering property, protecting minority investors, trading across borders, and resolving insolvency (Doing Business, 2019). The World Economic Forum (WEF), a Swiss non-profit international organization, provides various data regarding the issues of world economy to business leaders, global political leaders, and intellectuals, which includes the gender gap of each country throughout the world (World Economic Forum, 2012). Our final dataset consists of 286,989 GEM respondents between the ages of 18 and 64 from 35 countries. We summarize the variables and present descriptive statistics and correlations in Tables I and II. Further, we present the list of countries for our study in Table III.

Variables

Dependent variables

Early-Stage Entrepreneurial Activity is constructed from the GEM APS (Global Entrepreneurship Monitor Adult Population Survey) dataset (Autio, Pathak, & Wennberg, 2013; Stephan & Uhlaner, 2010). *Early-Stage Entrepreneurial Activity* is a combination of nascent entrepreneurs currently involved in starting a new business and the owners of young businesses in operation for less than 42 months. The individuals included in the *Early-Stage Entrepreneurial Activity* measure are identified using the following three questions: (1) is the individual currently involved in a startup, (2) does their current job involve a startup, or (3) is the individual the owner/manager of a new business. The *Early-Stage Entrepreneurial Activity* variable is measured dichotomously, with 1 indicating that the individual is engaged in *Early-Stage Entrepreneurial Activity*

Early-Stage Entrepreneurial Activity with High Growth Aspirations is a measure of individual engagement in *Early-Stage Entrepreneurial Activity* with high job growth aspirations, consisting of the desire to hire more than 20 employees within five years. Consistent with prior studies (Autio & Acs, 2010; Estrin et al., 2013), we considered entrepreneurs that expected to hire 20 or more employees within five years to have high-growth aspirations. The variable is measured dichotomously, with 1 indicating that the individual is engaged in *Early-Stage Entrepreneurial Activity with high-growth aspirations*.

Independent Variable

Gender Equality is an institutional variable that measures gender parity at the country level. In our study, the higher *gender equality* score is indicative of, the higher level of the representation of women in economic, political, educational, and health institutions. This variable is constructed by utilizing the Global Gender Gap Index (GGGI) from the WEF Gender Gap report for 2009 to 2012. This report contains standardized country data published at a national level or by international organizations, as well as data collected from the WEF Opinion Survey (Nagy, 2006). The GGGI focuses on measuring gaps in access to resources and opportunities in countries independent of the country's development level. The index's indicators relate to the outcomes of country-specific policies, rights, culture, or customs. In addition, the GGGI ranks countries in

relation to their proximity to gender parity.

The GGGI variable from the WEF report has four dimensions: economic participation and opportunity, educational attainment, health and survival, and political empowerment. Economic participation and opportunity measure labor force participation, wage equality for similar work, and estimated earned income (World Economic Forum, 2020). Educational attainment measures literacy and enrollment in primary education, secondary education, and tertiary education. Health and survival measures sex ratio at birth and healthy life expectancy data from the United Nations, Department of Economic and Social Affairs, and World Health Organization (World Economic Forum, 2020). Political empowerment measures women in parliament, ministerial positions, and head of state data from the Inter-Parliamentary Union, 2019 (World Economic Forum, 2020). Prior studies have utilized gender gap variables from the WEF report in the entrepreneurship context (Brush, Ali, Kelley, & Greene, 2017; Rouse et al., 2013).

Moderating Variable

Social Costs of Failure is a measure representing the cost of entrepreneurial failure in the social dimension (Lee et al., 2021). Followed by a method given in previous research (Lee et al., 2021), the social cost of failure variable is constructed as a multi-item measure by combining the standardized score of the stigma of failure and the standardized score of the depth of credit information. This variable integrates both the informal institutional norm of the stigma of business failure and the formal institutional regulation of getting credit because different levels of formal and informal institutions coexist in a society (Lee et al., 2022; Simmons et al., 2014). Stigma is constructed from survey data collected by the European Commission. We utilized the EUFB #283 (EOS Gallop Europe, 2010), which survey was circulated in 2009, and #354 (EOS Gallop Europe, 2013), which survey was collected in 2012 and measured country-level attitudes toward entrepreneurship in the European Union between 2009 and 2012. The EUFB questions measure societal attitudes about doing business with entrepreneurs who experience business failure. The formal institutional variable constructed for the depth of credit information to capture the visibility of entrepreneurial failures is an indicator in the WBDB Report (World Bank Group, 2013, 2018; See Lee et al., 2021). "Depth of credit information index measures rules affecting the scope, accessibility, and quality of credit information available through public or private credit registries. The index ranges from 0 to 8, with higher values indicating the availability of more credit information, from either a public registry or a private bureau, to facilitate lending decisions" (World Bank, Doing Business project, doingbusiness.org).

Control Variables

This study controls for variables on two levels: individual and institutional. Individual differences can influence entrepreneurial decisions (Shepherd et al., 2015); thus, we control for *Age*, *Education*, *Gender*, and *Household Income* at the individual level. *Age* of the entrepreneur is measured as a continuous variable between 18 and 64 since age may influence entrepreneurial activity (Liang, Wang & Lazear, 2018). As prior literature suggests that human capital has a positive relationship to new venture growth (Baum & Bird, 2010) and the effectiveness of institutional policies aimed at reducing barriers to high-growth entrepreneurship (Eesley, 2016), we control for the entrepreneur's *Education*. It is measured in four categories: (1) no secondary degree, (2) secondary degree, (3) post-secondary degree, and (4) greater than the graduate-school degree. As financial capital determines entrepreneurial decisions, we control for *Household Income*, a categorical variable assessing whether a respondent belongs to the lower, middle, or higher tier of the country's distribution of household income, provided by the GEM APS dataset. In addition, we control for *gender*, a binary variable; 1 represents male, whereas 0 represents

female.

This study also controls for the effects of several institutional-level factors. The degree of a country's development influences the rate of entrepreneurial entry (Acs, Desai, & Hessels, 2008). Hence, we control the economic development of a country by using a natural log of *per capita GDP at purchasing power parity (GDP PPP)*. Second, as a country's GDP growth rate is correlated to entrepreneurial intention (Acs et al., 2008; Estrin et al., 2013), we include *GDP Growth Rate*. Finally, we control for *Population Size*, as the size of the market can be influenced by the population size of each country, which can play an essential role as an institution for entrepreneurial activities (Sato, Tabuchi, & Yamamoto, 2012).

Statistical Approach

To test the effect of country-level gender equality on the individual level propensity of engagement in early-stage entrepreneurship and early-stage entrepreneurship with high growth aspirations, along with the moderating effect of the social costs of failure, we conducted a series of multi-level random effects logistic regressions. This method is appropriate, given that individuals within countries share common experiences that differ from those living in other countries (Davidsson & Wiklund, 2001; Estrin et al., 2013; Stephan, Uhlaner, & Stride, 2015).

Table 1: Definitions of Variables

Level	Variable	Definition	Source
Country	Gender Equality	The level of Gender Equality	WEF Gender Gap Report (2009-2012)
	Social Costs of Failure	Stigma of Bankruptcy + The Depth of Credit Information (=Coverage, Scope and Accessibility of credit information)	Flash Euro Barometer #257 (2009) & #354 (2012) + World Bank Doing Business (2008-2011)
	per capital GDP ppp(t-1)	per capital GDP at purchasing power parity at 2005 USD (Natural Log)	World Bank WDI (2008-2011)
	GDP Growth Rate (t-1)	GDP growth rate per year	World Bank WDI (2008-2011)
	Population Size (t-1)	Total number of population (Log)	World Bank WDI (2008-2011)
Individual	Early-Stage Entrepreneurship	1: individuals engaged in nascent entrepreneurial activity or operating a venture less than 42 months; 0 otherwise	GEM APS (2009-2012)
	Early-Stage Entrepreneurship with High Growth Aspirations	1: Nascent or new entrepreneurs who expect to employ twenty or more individuals within five years; 0 otherwise	GEM APS (2009-2012)
	Age	Age of Respondents (Min=18, Max=64)	GEM APS (2009-2012)
	Income	Household income level 1 (lowest 33%), 2 (middle 33%), 3 (top 33%)	GEM APS (2009-2012)
	Education	Respondents' education: 4 (graduate experience), 3 (post-secondary), 2 (secondary), 1 (no secondary degree)	GEM APS (2009-2012)
	Gender	Respondent's gender: 1 (male), 0 (female)	GEM APS (2009-2012)

Table 2: Descriptive and Correlations for Individual- and Country-Level Variables (Completed as of 04 May 2022)

Individual level correlations									
		Mean	Std. Dev.	(1)	(2)	(3)	(4)	(5)	(6)
(1)	Early-Stage Entrepreneurship	0.07	0.25	1					
(2)	Early-Stage Entrepreneurship with High Growth Aspirations	0.01	0.08	0.31	1				
(3)	Age	41.91	12.93	-0.06	-0.02	1			
(4)	Income	2.20	0.80	0.05	0.04	-0.03	1		
(5)	Education	2.20	1.01	0.04	0.03	-0.1	0.28	1	
(6)	Gender	0.48	0.49	0.07	0.05	-0.03	0.09	0.01	1

Country-level correlations										
		Mean	Std. Dev.	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1)	Early-Stage Entrepreneurship	0.07	0.25	1						
(2)	Early-Stage Entrepreneurship with High Growth Aspirations	0.01	0.08	0.31	1					
(3)	Log GDP PPP	9.99	0.80	-0.08	-0.04	1				
(4)	GDP Growth rate	0.52	3.90	0.08	0.04	-0.41	1			
(5)	Population Size	17.32	1.57	0.04	0.01	-0.36	0.35	1		
(6)	Social Costs of Failure	-0.15	1.11	-0.06	-0.01	0.45	-0.14	-0.2	1	
(7)	Gender Equality	0.27	0.04	-0.03	-0.01	0.59	-0.24	-0.36	0.04	1

Note: All significant at 0.05 level

We first conducted an intra-class correlation (ICC) analysis to justify using a multi-level regression model. Multi-level techniques are recommended if the ICC estimates reside within the normal range (i.e., between 5% and 20%) (Bliese, 2000). Our results indicate that 5.6% of the total variance for general entrepreneurial activities resided at the country level, with 13.6% for high-growth aspirations. These results justify the application of multi-level regression techniques for this study. In our multi-level regression model, we also examine the Variance Inflation Factor (VIF) statistics to control the possibility of strong multi-collinearity influencing our results. We find that all VIF scores are below 10, suggesting that multi-collinearity is not a concern for our analysis (Hair et al., 1998).

To aid interpretation, we present our results with odds ratios (OR) in lieu of log-odds coefficients. The baseline category is that an individual does not engage in startup activity. Thus, an OR>1 means a variable increase the likelihood of engagement in entrepreneurship. We first tested the effect of individual and country-level control variables on the dependent variables. We then added a country-level independent variable for gender disparity and examined the moderating effect between the social cost of failure and gender disparity on early-stage entrepreneurial activity and high growth aspirations.

RESULTS

Before testing our hypotheses, we first ran regressions with only control variables. Model 1 in Table III shows that a higher probability of individual-level engagement in early-stage entrepreneurship activity is positively associated with an individual who is more likely to be younger, wealthier, or has a higher level of education. Further, we find a country's wealth level is negatively associated with the probability of individual-level engagement in early-stage

entrepreneurship activity. Similarly, Model 4 in Table III reveals a similar effect of individual-level and country-level variables for the probability of individual-level engagement in early-stage entrepreneurship with high growth aspirations. We did not hypothesize the direct effects of social costs of failure on early-stage entrepreneurial entry or high-growth aspirations because these relationships have already been tested and supported in the prior literature (Lee et al., 2020).

Table 3. Country Sample Description

Country	OECD Membership	Gender Equity	Social Cost of Failure	% Early-stage Entrepreneurship (TEA) out of Total Population	% Early-stage Entrepreneurship with High Growth Aspirations out of TEA
Austria	Yes	0.74	0.80	9.58	10.14
Belgium	Yes	0.75	0.09	4.52	15.79
Brazil	No	0.67	-1.72	15.79	12.27
China	No	0.69	-1.21	17.51	23.08
Croatia	No	0.70	0.35	6.14	30.22
Czech Republic	Yes	0.68	0.91	7.64	34.97
Denmark	Yes	0.77	0.37	4.35	22.02
Estonia	Yes	0.70	-0.22	14.26	32.44
Finland	Yes	0.83	-0.15	5.78	14.70
France	Yes	0.71	-0.45	5.27	25.01
Germany	Yes	0.75	1.03	4.81	19.85
Greece	Yes	0.68	-0.70	7.19	8.04
Hungary	Yes	0.67	1.41	7.94	28.29
Iceland	Yes	0.84	1.36	11.02	29.25
India	No	0.64	1.16	10.69	5.60
Ireland	Yes	0.78	-0.61	6.72	31.21
Israel	Yes	0.70	0.70	5.87	28.62
Italy	Yes	0.68	0.56	3.46	11.76
Japan	Yes	0.65	1.35	3.94	29.87
South Korea	Yes	0.63	1.10	7.01	21.77
Latvia	Yes	0.75	-1.24	10.68	32.18
Lithuania	Yes	0.71	0.11	8.98	37.66
Netherlands	Yes	0.75	1.10	8.23	16.46
Norway	Yes	0.84	0.33	7.49	17.49
Poland	Yes	0.70	0.41	9.20	30.44
Portugal	Yes	0.71	0.16	6.54	15.05
Romania	No	0.68	-0.47	6.40	28.65
Russia	No	0.70	-0.39	4.18	23.35
Slovakia	Yes	0.68	-0.10	12.21	28.59
Slovenia	Yes	0.71	-0.60	4.55	27.74
Spain	Yes	0.74	0.13	5.23	11.77
Sweden	Yes	0.81	-0.90	5.71	18.22
Switzerland	Yes	0.76	0.74	6.32	15.09
United Kingdom	Yes	0.74	0.62	7.11	22.50
U.S.A.	Yes	0.73	0.46	10.18	27.43

Because we test the moderation effects of social costs of failure in Hypotheses 3 and 4, we examined the direct effects of the variable with our data to validate the consistency with the prior literature (Lee et al., 2020). We find a statistically significant negative association between the social cost of failure at the country level and the probability of individual-level engagement in early-stage entrepreneurship, as shown in Model 2 in Table IV (OR=.97, $p<0.1$). We also find a positive association between the social cost of failure and the probability of individual-level engagement in early-stage entrepreneurship activity with high growth aspirations, as shown in Model 5 at Table IV (OR=1.08, $p<0.1$). These results are aligned with Lee et al. (2021).

Hypothesis 1 states that gender equality at the country level decreases the probability of engagement in early-stage entrepreneurship activity at the individual level. As shown in Model 2 in Table IV, we find a statistically significant positive relationship ($OR=6.73$, $p<0.05$) between the level of gender equality and the likelihood of an individual engaging in early-stage entrepreneurship. The ICC change can be interpreted as an effect size for the multi-level analysis (Lorah, 2018). When comparing the ICC estimates of Model 1 and Model 2 in Table IV, gender disparity and the social cost of failure explains 16.1% of the country-level variance. This result supports Hypothesis 1.

Hypothesis 2 states that gender equality at the country level increases the likelihood of engagement in early-stage entrepreneurship activity with high growth aspirations at the individual level. We find a statistically significant negative relationship ($OR=90.5$, $p<0.05$) between the level of gender equality at the country level and the probability of engagement in early-stage entrepreneurship activity with high growth aspirations at the individual level., as shown in Model 5 in Table IV. Comparing the ICC estimates of Model 1 and Model 5 in Table IV, gender disparity and the social cost of failure explain an additional 11.3% of the country-level variance. This result supports Hypothesis 2.

Hypothesis 3 states the positive relationship between gender equality and the probability of engagement in early-stage entrepreneurship activity at the individual level is strengthened in institutional environments with high social costs of failure. The result in Model 3 in Table IV shows that there is a significant positive moderating effect of the social cost of failure on the relationship between the level of gender equality at the country level and the probability of engagement in early-stage entrepreneurship activity at the individual level ($OR=6.27$, $p<0.001$), while increasing 1.2% of additional explanation at the country-level variance. This suggests that when a higher level of social costs of failure exists in a country, the positive relationship between the level of gender equality and the probability of engagement in early-stage entrepreneurship activity at the individual level is strengthened. Thus hypothesis 3 is supported.

Hypothesis 4 states that the positive relationship between gender equality at the country level and the probability of engagement in early-stage entrepreneurship activity with high growth aspirations at the individual level is strengthened in institutional environments with high social costs of failure. Results in Model 6 in Table IV show that there is a significant positive moderating effect of the social cost of failure on the relationship between the level of gender equality and the probability of engagement in early-stage entrepreneurship activity with high growth aspirations at the individual level ($OR=26.28$, $p<0.01$), while increasing 4.1% of additional explanation at the country-level variance. This result reveals that when there is a higher social cost of failure in a country, the positive relationship between the level of gender equality at the country level and the probability of engagement in early-stage entrepreneurship activity with high growth aspirations at the individual level is strengthened. Therefore, Hypothesis 4 is supported.

Figure 2: The Moderating Effect Graph: For engagement in early-stage entrepreneurship

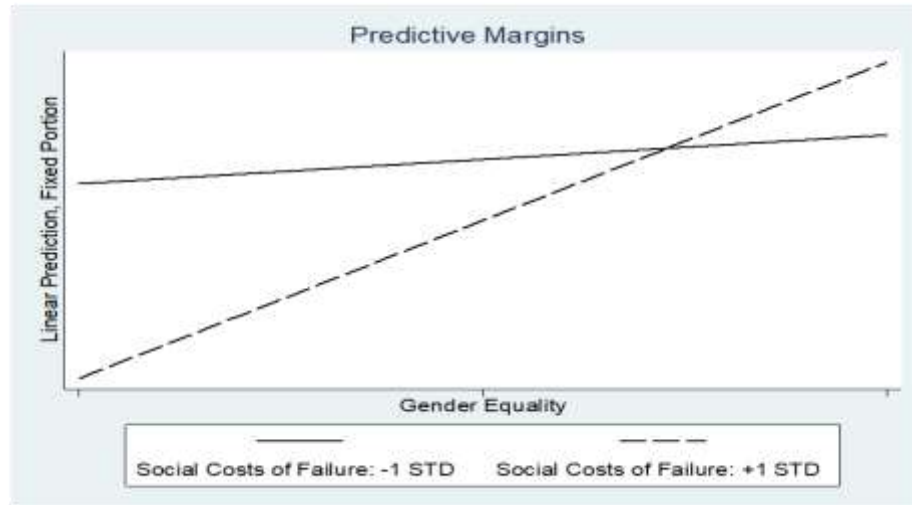
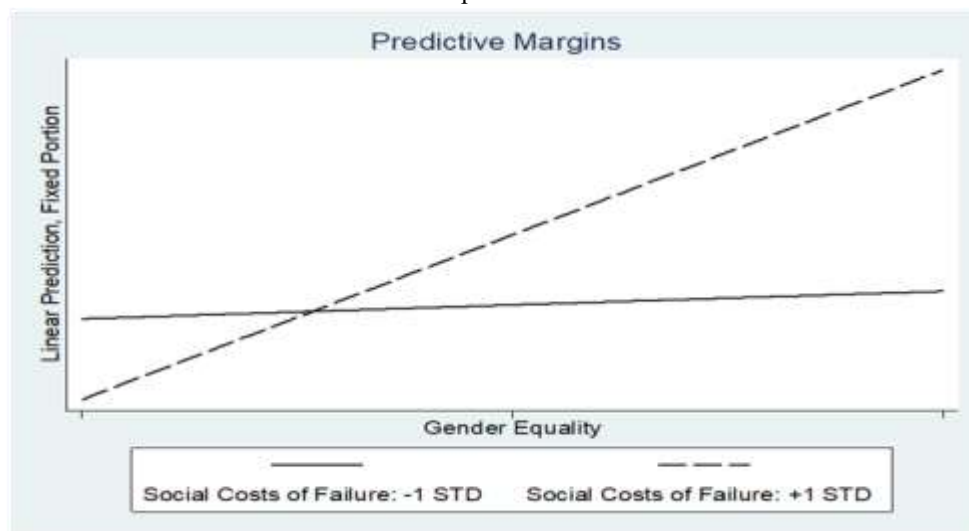


Figure 3: The Moderating Effect Graph: For engagement in early-stage entrepreneurship with high growth aspirations



Robustness Tests

We conducted additional analyses. First, we included only OECD member countries in our sample. The result of this robustness test is shown in Table V. The results are very similar to our main analysis. In addition, failure experience may influence subsequent entrepreneurial activities. Thus, we run another regression by excluding individuals who experienced business failure within a year. The result does not differ significantly from the findings of our primary analysis.

We also conducted a robustness test examining the independent effects of the four dimensions of the WEF gender equality: (1) Economic Participation and Opportunity, (2) Educational Attainment, (3) Health and Survival, and (4) Political Empowerment. This additional test provides insight into which dimension, if any, has a more significant effect on the probability of engagement in early-stage entrepreneurship activity at the individual level (Brush et al., 2017;

Mastracci, 2017). This ad hoc test shows a significant finding for the moderating effect of gender equality in economic participation and opportunity and social costs of failure on the probability of engagement in early-stage entrepreneurship activity at the individual level and the probability of engagement in early-stage entrepreneurship activity with high growth aspirations at the individual level. (See Table VI). Significant effects were not independently found for the other gender gap dimensions.

Finally, we conducted additional analyses with samples of men and women only. The result of this robustness test is shown in Table VII and VIII. The result of this robustness test for men are significant direct effects of gender equality on the probability of engagement in early-stage entrepreneurship activity at the individual level and the probability of engagement in early-stage entrepreneurship activity with high growth aspirations at the individual level. We also found significant moderating effects for the social costs of failure. For women, we found significant direct effects of gender equality on the probability of engagement in early-stage entrepreneurship activity at the individual level but not on the probability of engagement in early-stage entrepreneurship activity with high growth aspirations at the individual level. This is interesting to find that gendered institutions negatively impact the high growth aspirations of men. This finding may open the door to future gender studies of resource dependencies (Biniari et al., 2015). We also found significant moderating effects of social costs of failure on the probability of engagement in early-stage entrepreneurship activity and early-stage entrepreneurship activity with high growth aspirations at the individual level. Except for the nonsignificant finding for the direct effect on the probability of engagement in early-stage entrepreneurship activity with high growth aspirations at the individual level for the women sample, the results do not differ significantly from the findings of our main analysis.

Table 4: Results of Logistic Multi-Level Regression (Completed as of 04 May 2022)

	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
	(Early-Stage Entrepreneurship)			(Early-Stage Entrepreneurship)			(Early-Stage Entrepreneurship)			(Early-Stage Entrepreneurship with High Growth Aspirations)			(Early-Stage Entrepreneurship with High Growth Aspirations)			(Early-Stage Entrepreneurship with High Growth Aspirations)		
	OR	SE	Pvalue	OR	SE	Pvalue	OR	SE	Pvalue	OR	SE	Pvalue	OR	SE	Pvalue	OR	SE	Pvalue
Fixed Part																		
Individual Level (Control)																		
Age	0.983	0.001	0.000	0.983	0.001	0.000	0.983	0.001	0.000	0.984	0.002	0.000	0.984	0.002	0.000	0.984	0.002	0.000
Income	1.219	0.012	0.000	1.219	0.012	0.000	1.218	0.012	0.000	1.648	0.054	0.000	1.649	0.054	0.000	1.647	0.054	0.000
Education	1.169	0.010	0.000	1.169	0.010	0.000	1.169	0.010	0.000	1.413	0.037	0.000	1.412	0.037	0.000	1.414	0.037	0.000
Gender	1.729	0.026	0.000	1.729	0.026	0.000	1.729	0.026	0.000	3.199	0.159	0.000	3.198	0.159	0.000	3.198	0.159	0.000
Country Level (Control)																		
GDP PPP	0.671	0.069	0.000	0.662	0.064	0.000	0.679	0.059	0.000	0.746	0.101	0.030	0.648	0.097	0.004	0.658	0.098	0.005
GDP Growth rate	1.004	0.004	0.370	1.003	0.004	0.399	1.001	0.004	0.807	1.004	0.011	0.886	1.000	0.011	0.981	0.997	0.011	0.798
Population Size	0.899	0.044	0.031	0.918	0.044	0.072	0.949	0.041	0.231	0.867	0.061	0.042	0.898	0.066	0.144	0.919	0.066	0.249
Social Costs of Failure				0.968	0.015	0.039	0.253	0.087	0.000				1.072	0.048	0.089	0.098	0.090	0.012
Country Level (Independent)																		
Gender Equality				6.727	5.596	0.022	21.20	18.47	0.000				90.50	20.21	0.042	118.70	26.75	0.034
Moderating Effect																		
Gender Equality * Social Cost of Failure							6.267	2.961	0.000							26.28	32.96	0.009
Random Part and Model Fit																		
Intercept	13.969	21.955	0.093	2.878	4.491	0.496	0.558	0.778	0.68	0.144	0.302	0.355	0.013	0.032	0.078	0.006	0.151	0.039
Deviance	142,041.37			142,031.49			142,017.85			23,465.81			23,459.52			23,452.68		
Wald Chi2	3662.34			3673.62			3689.49			1318.5			1324.01			1329.91		
Prob>Chi2	0.00			0.00			0.00			0.00			0.00			0.00		
L.R. Test Prob < chi2	0.00			0.00			0.00			0.00			0.00			0.00		
# of Observation	286,988			286,988			286,988			286,988			286,988			286,988		
# of Countries	35 countries			35 countries			35 countries			35 countries			35 countries			35 countries		
Obs per group min	1,480			1,480			1,480			1,480			1,480			1,480		
Obs per group avg	8,199			8,119			8,119			8,119			8,119			8,119		
Obs per group max	58,128			58,128			58,128			58,128			58,128			58,128		

(*** p<0.001, ** p<0.01, * p<0.05, + p<0.1)

Table 5: Robustness Test only with OECD countries (Completed as of 04 May 2022)

	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
	(Early-Stage Entrepreneurship)			(Early-Stage Entrepreneurship)			(Early-Stage Entrepreneurship)			(Early-Stage Entrepreneurship with High Growth Aspirations)			(Early-Stage Entrepreneurship with High Growth Aspirations)			(Early-Stage Entrepreneurship with High Growth Aspirations)		
	O.R.	S.E.	P value	O.R.	S.E.	P value	O.R.	S.E.	P value	O.R.	S.E.	P value	O.R.	S.E.	P value	O.R.	S.E.	P value
Fixed Part																		
Individual Level (Control)																		
Age	0.983	0.001	0.000	0.983	0.001	0.000	0.982	0.001	0.000	0.982	0.002	0.000	0.982	0.002	0.000	0.982	0.002	0.000
Income	1.195	0.014	0.000	1.195	0.014	0.000	1.194	0.014	0.000	1.582	0.061	0.000	1.585	0.061	0.000	1.584	0.061	0.000
Education	1.250	0.013	0.000	1.250	0.013	0.000	1.251	0.013	0.000	1.365	0.042	0.000	1.365	0.042	0.000	1.366	0.042	0.000
Gender	1.939	0.035	0.000	1.939	0.035	0.000	1.939	0.035	0.000	3.648	0.224	0.000	3.646	0.224	0.000	3.646	0.224	0.000
Country Level (Control)																		
GDP PPP	0.850	0.083	0.095	0.821	0.094	0.087	0.760	0.085	0.013	0.673	0.125	0.033	0.485	0.110	0.001	0.454	0.106	0.001
GDP Growth rate	1.007	0.005	0.120	1.008	0.005	0.111	1.009	0.005	0.062	1.011	0.013	0.416	1.001	0.013	0.968	1.002	0.013	0.865
Population Size	0.924	0.037	0.049	0.935	0.041	0.120	0.977	0.042	0.583	0.898	0.067	0.154	0.909	0.079	0.702	1.014	0.088	0.873
Social Costs of Failure				0.991	0.017	0.051	0.250	0.101	0.001				1.153	0.056	0.005	0.201	0.212	0.043
Country Level (Independent)																		
Gender Equality				1.722	1.649	0.029	3.573	3.414	0.034				212.7	505.8	0.025	270.7	656.9	0.021
Moderating Effect																		
Gender Equality * Social Cost of Failure							6.506	3.562	0.001							10.72	15.31	0.093
Random Part and Model Fit																		
Intercept	0.691	0.759	0.737	0.668	0.761	0.724	0.441	0.476	0.448	0.281	0.588	0.544	0.081	0.171	0.235	0.065	0.140	0.204
Deviance	106,565.78			106,564.93			106,553.76			17,279.71			17,267.32			17,264.41		
Wald Chi2	3297.92			3298.9			3310.77			905.98			918.6			921.05		
Prob>Chi2	0.00			0.00			0.00			0.00			0.00			0.00		
LR Test Prob < chi2	0.00			0.00			0.00			0.00			0.00			0.00		
# of Observation	235,341			235,341			235,341			235,341			235,341			235,341		
# of Countries	29 countries			29 countries			29 countries			29 countries			29 countries			29 countries		
Obs per group min	1,480			1,480			1,480			1,480			1,480			1,480		
Obs per group avg	8,115			8,115			8,115			8,115			8,115			8,115		
Obs per group max	58,128			58,128			58,128			58,128			58,128			58,128		

Table 6: Robustness Test with Educational Participation & Opportunity Gender Equality (Completed as of 04 May 2022)

	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
	(Early-Stage Entrepreneurship)			(Early-Stage Entrepreneurship)			(Early-Stage Entrepreneurship)			(Early-Stage Entrepreneurship with High Growth Aspirations)			(Early-Stage Entrepreneurship with High Growth Aspirations)			(Early-Stage Entrepreneurship with High Growth Aspirations)		
	O.R.	S.E.	P value	O.R.	S.E.	P value	O.R.	S.E.	P value	O.R.	S.E.	P value	O.R.	S.E.	P value	O.R.	S.E.	P value
Fixed Part																		
Individual Level (Control)																		
Age	0.983	0.001	0.000	0.983	0.001	0.000	0.983	0.001	0.000	0.984	0.002	0.000	0.984	0.002	0.000	0.984	0.002	0.000
Income	1.219	0.012	0.000	1.218	0.012	0.000	1.218	0.012	0.000	1.648	0.054	0.000	1.649	0.054	0.000	1.647	0.054	0.000
Education	1.169	0.010	0.000	1.169	0.010	0.000	1.169	0.010	0.000	1.413	0.037	0.000	1.412	0.037	0.000	1.415	0.037	0.000
Gender	1.729	0.026	0.000	1.729	0.026	0.000	1.729	0.026	0.000	3.199	0.159	0.000	3.199	0.159	0.000	3.200	0.159	0.000
Country Level (Control)																		
GDP PPP	0.671	0.069	0.000	0.699	0.059	0.000	0.715	0.056	0.000	0.746	0.101	0.030	0.693	0.090	0.005	0.697	0.090	0.005
GDP Growth rate	1.004	0.004	0.370	1.002	0.004	0.543	1.004	0.004	0.262	1.004	0.011	0.686	1.001	0.011	0.917	1.005	0.011	0.640
Population Size	0.899	0.044	0.031	0.947	0.043	0.231	0.956	0.040	0.268	0.867	0.061	0.042	1.000	0.062	0.145	0.907	0.061	0.145
Social Costs of Failure				0.990	0.016	0.054	0.554	0.103	0.002				1.093	0.050	0.052	0.267	0.174	0.017
Country Level (Independent)																		
Economic Participation/Opportunity Equality				9.771	5.788	0.000	7.068	4.179	0.001				18.17	23.54	0.025	7.532	9.992	0.128
Moderating Effect																		
Economic Participation/Opportunity Equality * Social Cost of Failure							2.310	0.618	0.002							7.324	5.692	0.010
Random Part and Model Fit																		
Intercept	13.969	21.955	0.093	0.843	1.206	0.906	0.749	0.994	0.828	0.144	0.302	0.355	0.02	0.044	0.072	0.037	0.079	0.124
Deviance	142,041.37			142,023.24			142,013.49			23,465.81			23,458.99			23,452.33		
Wald Chi2	3662.34			3683.61			3695.13			1318.5			1325.01			1330.72		
Prob>Chi2	0.00			0.00			0.00			0.00			0.00			0.00		
LR Test Prob < chi2	0.00			0.00			0.00			0.00			0.00			0.00		
# of Observation	286,988			286,988			286,988			286,988			286,988			286,988		
# of Countries	35 countries			35 countries			35 countries			35 countries			35 countries			35 countries		
Obs per group min	1,480			1,480			1,480			1,480			1,480			1,480		
Obs per group avg	8,119			8,119			8,119			8,119			8,119			8,119		
Obs per group max	58,128			58,128			58,128			58,128			58,128			58,128		

Table 7: Robustness Test with the sample for men only (Completed as of 04 May 2022)

	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
	(Early-Stage Entrepreneurship)			(Early-Stage Entrepreneurship)			(Early-Stage Entrepreneurship)			(Early-Stage Entrepreneurship with High Growth Aspirations)			(Early-Stage Entrepreneurship with High Growth Aspirations)			(Early-Stage Entrepreneurship with High Growth Aspirations)		
	O.R.	S.E.	P value	O.R.	S.E.	P value	O.R.	S.E.	P value	O.R.	S.E.	P value	O.R.	S.E.	P value	O.R.	S.E.	P value
Fixed Part																		
Individual Level (Control)																		
Age	0.983	0.001	0.000	0.983	0.001	0.000	0.982	0.001	0.000	0.984	0.002	0.000	0.984	0.002	0.000	0.984	0.002	0.000
Income	1.244	0.016	0.000	1.244	0.016	0.000	1.243	0.016	0.000	1.730	0.067	0.000	1.731	0.067	0.000	1.729	0.067	0.000
Education	1.159	0.012	0.000	1.159	0.012	0.000	1.159	0.012	0.000	1.385	0.041	0.000	1.385	0.041	0.000	1.387	0.041	0.000
Gender																		
Country Level (Control)																		
GDP PPP	0.758	0.062	0.001	0.750	0.063	0.000	0.731	0.061	0.000	0.739	0.101	0.027	0.624	0.098	0.003	0.635	0.101	0.004
GDP Growth rate	1.007	0.005	0.187	1.006	0.005	0.216	1.004	0.005	0.387	1.004	0.062	0.723	1.000	0.012	0.966	0.997	0.012	0.792
Population Size	0.911	0.038	0.024	0.924	0.039	0.060	0.943	0.038	0.146	0.853	0.059	0.023	0.886	0.065	0.105	0.904	0.067	0.176
Social Costs of Failure				0.971	0.018	0.039	0.297	0.119	0.003				1.072	0.053	0.160	0.128	0.127	0.038
Country Level (Independent)																		
Gender Equality				6.174	6.067	0.064	12.48	12.70	0.013				169.30	411.30	0.035	191.60	479.70	0.036
Moderating Effect																		
Gender Equality * Social Cost of Failure							5.063	2.701	0.003							18.290	24.760	0.032
Random Part and Model Fit																		
Intercept	6.079	7.72	0.155	0.397	2.542	0.648	0.812	1.08	0.876	0.66	1.39	0.044	0.046	0.118	0.226	0.026	0.068	0.159
Deviance	82,887.40			82,881.76			82,873.19			16,852.80			16,846.55			16,841.84		
Wald Chi2	1376.4			1382.37			1390.73			527.11			532.43			536.24		
Prob>Chi2	0.00			0.00			0.00			0.00			0.00			0.00		
LR Test Prob < chi2	0.00			0.00			0.00			0.00			0.00			0.00		
# of Observation	140,931			140,931			140,931			140,931			140,931			140,931		
# of Countries	35 countries			35 countries			35 countries			35 countries			35 countries			35 countries		
Obs per group min	730			730			730			730			730			730		
Obs per group avg	4,027			4,027			4,027			4,027			4,027			4,027		
Obs per group max	30,746			30,746			30,746			30,746			30,746			30,746		

(***: p<0.001, **: p<0.01, *: p<0.05, +: p<0.1)

Table 8: Robustness Test with the sample for women only (Completed as of 04 May 2022)

	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
	(Early-Stage Entrepreneurship)			(Early-Stage Entrepreneurship)			(Early-Stage Entrepreneurship)			(Early-Stage Entrepreneurship with High Growth Aspirations)			(Early-Stage Entrepreneurship with High Growth Aspirations)			(Early-Stage Entrepreneurship with High Growth Aspirations)		
	O.R.	S.E.	P value	O.R.	S.E.	P value	O.R.	S.E.	P value	O.R.	S.E.	P value	O.R.	S.E.	P value	O.R.	S.E.	P value
Fixed Part																		
Individual Level (Control)																		
Age	0.985	0.001	0.000	0.985	0.001	0.000	0.985	0.001	0.000	0.981	0.004	0.000	0.981	0.004	0.000	0.982	0.004	0.000
Income	1.184	0.019	0.000	1.185	0.018	0.000	1.182	0.019	0.000	1.448	0.088	0.000	1.450	0.089	0.000	1.443	0.088	0.000
Education	1.186	0.016	0.000	1.186	0.016	0.000	1.186	0.016	0.000	1.496	0.080	0.000	1.493	0.080	0.000	1.502	0.080	0.000
Gender																		
Country Level (Control)																		
GDP PPP	0.753	0.062	0.009	0.739	0.079	0.005	0.756	0.072	0.003	0.731	0.121	0.059	0.651	0.126	0.026	0.674	0.119	0.027
GDP Growth rate	0.999	0.007	0.877	0.999	0.006	0.928	0.996	0.007	0.592	1.017	0.021	0.425	1.014	0.022	0.510	1.010	0.021	0.623
Population Size	0.936	0.053	0.246	0.957	0.052	0.425	0.818	0.047	0.928	0.932	0.077	0.399	0.956	0.080	0.592	0.975	0.073	0.741
Social Costs of Failure				0.958	0.024	0.089	0.145	0.074	0.000				1.044	0.088	0.061	0.022	0.029	0.004
Country Level (Independent)																		
Gender Equality				7.588	9.311	0.009	29.18	35.33	0.005				27.60	88.83	0.124	17.29	51.65	0.034
Moderating Effect																		
Gender Equality * Social Cost of Failure							13.230	9.339	0.000							199.730	632.400	0.004
Random Part and Model Fit																		
Intercept	2.034	3.479	0.678	0.392	0.704	0.602	0.062	0.098	0.079	0.046	0.116	0.222	0.009	0.027	0.116	0.006	0.017	0.06
Deviance	58,847.95			58,842.63			58,830.26			6,604.96			6,603.80			6,595.96		
Wald Chi2	881.07			887.56			902.18			240.05			241.51			251.32		
Prob>Chi2	0.00			0.00			0.00			0.00			0.00			0.00		
LR Test Prob < chi2	0.00			0.00			0.00			0.00			0.00			0.00		
# of Observation	146,057			146,057			146,057			146,057			146,057			146,057		
# of Countries	35 countries			35 countries			35 countries			35 countries			35 countries			35 countries		
Obs per group min	750			750			750			750			750			750		
Obs per group avg	4,173			4,173			4,173			4,173			4,173			4,173		
Obs per group max	27,382			27,382			27,382			27,382			27,382			27,382		

(***: p<0.001, **: p<0.01, *: p<0.05, +: p<0.1)

DISCUSSION

In this study, we set out to address an important research question: *How do the social costs of failure interact with gendered institutions to affect entrepreneurship activity, especially high growth aspirations?* We found that in societies with gender disparity, there are decreased levels of both early-stage entrepreneurship activity and high-growth aspirations and that these relationships are weakened by the social costs of failure. Our research contributes to academic interest in the role of legitimacy in entrepreneurship; and is of particular interest to international business scholars who seek to better understand the multi-dimensional construction of institutional

frameworks across countries.

Contributions and Suggestions for Future Research

Gender Disparity

As scholars, we have more to learn about the effects of cultural institutions on driving the engagement of women entrepreneurs in entrepreneurial projects that have high-growth potential (Shepherd & Patzelt, 2017). At present, the literature focuses more on social deterrents, such as the lack of access to childcare (Terjesen et al., 2016), or economic deterrents, such as the lack of access to external funding (Thébaud, 2010; Bird & Brush, 2002; Gupta et al., 2009). Instead, we focus on substantiating the inclusion of women in social and economic ecosystems that support and benefit both women and men entrepreneurs. Our study addresses the call in the literature for a better understanding of the institutional drivers that lead to new or heightened forms of gender inequalities (Ukhova, 2015) or that push entrepreneurs to and from entrepreneurial projects (Shepherd & Patzelt, 2017) in different countries.

High-growth entrepreneurship

The study of high-growth entrepreneurship is important due to the impact of this form of entrepreneurial activity on economic growth and job creation (Henrekson & Johansson, 2010; Shane, 2009). Prior studies demonstrate that the antecedents of high growth include inclusion in a social system that fosters high-growth entrepreneurship (Shapero & Sokol, 1982; Shneor et al., 2016). Our findings provide depth to these prior studies. Our findings also extend the Lee et al. (2020) findings that the social costs of failure have direct positive effects on high growth aspirations and address the assumption that these effects are equivalent for men and women.

Taking a wide-ranging approach, future research could consider the moderation effects of other variables at different levels of analysis. For example, at the individual level, self-efficacy (Bandura, 1997; Wood & Bandura, 198) would be a useful variable to consider in conjunction with the social costs of failure. At the firm level, scholars could consider different aspects of organizational structure, including how entrepreneurs coordinate people and tasks to meet and set high-growth goals or combat the social costs of failure (Gundry & Welsch, 2001). Other firm-level and meso-level variables that may impact high growth aspirations include firm-level strategy and expansion intentions, entrepreneurial intensity (Gundry & Welsch, 2001), financing, networks, social capital, and growth/performance outcomes (De Bruin, Brush & Welter, 2007).

Entrepreneurship and social costs of failure

In the context of cultural institutions, prior studies of social costs of failure generally either focus narrowly on the context of failed entrepreneurs or do not distinguish high-growth activities from other forms of engagement (Simmons et al. 2014). This study casts a wider net on the entry decisions of men and women entrepreneurs (irrespective of the prior experience with business failure) and provides new perspectives on the effects of social costs of failure on entrepreneurial ecosystems. Our approach informs the *quality versus quantity* debate on whether societies should deter entrepreneurs from engaging in less productive entrepreneurship activities using tactics that increase the social costs of failure.

This study indicates that high social costs of failure moderate the relationship between gender parity, early-stage entrepreneurial activity, and high growth aspirations, drawing attention to the importance of cultural context in examining entrepreneurial decision-making and outcomes.

This finding helps us to better understand the unique role that societal attitudes play in moderating entrepreneurial behavior (Meek et al., 2010). Future research could take this further by integrating the social costs of failure construct into a study of the effect of cultural dimensions on entrepreneurial activities. Scholars could explore how dimensions, such as individualism-collectivism or power distance (Hofstede, 1980; 2011; House et al., 2004), interact with the social costs of failure in different firm endeavors. This exploration could also go far beyond the realm of entrepreneurship, delving into cultural effects on firms' corporate social responsibility and sustainability efforts, knowledge transfer across subsidiaries of MNEs, or entry mode.

Practitioner and policy implications

Research has shown that public policy decisions can have gendered effects on engagement in entrepreneurship generally (Terjesen et al., 2016) and high-growth entrepreneurship specifically (Avnimelech, Schwartz, & Bar-El, 2007; Guzman & Kacperczyk, 2019). Yet, despite decades of effort on policy reforms aimed at reducing global gender gaps in economic empowerment, especially regarding women accessing necessary entrepreneurship funding (Guzman & Kacperczyk, 2019; Kanze et al., 2020), few countries have closed at least 50% of their gender gaps for economic participation and opportunity (World Economic Forum, Global Gender Gap Report 2020). Women are also persistently less present in labor markets, with only 18.2% of firms being woman-led globally and in 72 countries where some women cannot access credit or open bank accounts (World Economic Forum, Global Gender Gap Report 2020). Notwithstanding some recent success in closing the gender gap, specifically regarding education and health survival concerns (96.1% and 95.7%, respectively) (World Economic Forum, Global Gender Gap Report 2020), our findings support a strong need for policies that address institutional drivers of engagement by entrepreneurs into entrepreneurial projects that have high-growth potential (Guzman & Kacperczyk, 2019; Shepherd & Patzelt, 2017).

For example, in China, government policies increase both the quantity and quality of entrepreneurial activities by minimizing administrative responsibilities, strengthening intellectual property protection, and motivating populations less likely to opt into entrepreneurship (Wang et al., 2019). As another example, women are underrepresented in industries that appeal to male-dominated investor groups (Guzman & Kacperczyk, 2019), and female founders are more likely to engage in consumer-products, consulting, non-profit, and social-entrepreneurship ventures (Scott & Shu, 2017). Therefore, government policies that assist women in obtaining education in information technology, a high-growth industry, or that focus on providing funding to women-dominated industries may foster high growth aspirations and activity for the men and women doing business in such industries (Guzman & Kacperczyk, 2019). As a note of caution, formal policies meant to encourage engagement in entrepreneurship should not be detached from considerations of the cultural stigmas of women and men embedded in the institutional environment in which they are implemented (Dheer et al., 2019).

LIMITATIONS

Our study has two limitations, which we invite future researchers to address. First, while we examine our hypotheses with a sample of more than 286,000 individuals from 35 countries and control several country-level institutions such as GDP per capita, GDP growth rate, and population size, we limited our sample of countries to developed countries for comparability. Researchers

recognize differences between developed and less-developed countries for entrepreneurship activities (Hessels & van Stel, 2011). Future studies could replicate our research by examining a dataset of emerging economies. Second, our study focuses on the growth aspirations of entrepreneurs. However, the outcome of entrepreneurial activities with growth aspiration may not result in its actual growth. Future research could explore this issue longitudinally to fully capture growth outcomes.

CONCLUSION

This study used an institutional framework to examine the effects of gender equality and the social costs of failure on high-growth aspirations and early-stage entrepreneurial activity and found evidence that these framework conditions can affect the quantity and quality of entrepreneurship activity in a region. Just as a rising tide can lift all boats, addressing barriers to women participating in entrepreneurial activity and having high growth aspirations can benefit economies worldwide.

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Part 2: Organizational Behavior and Human Resource Management

REDEFINING HUMAN RESOURCE MANAGEMENT'S STRATEGIC ROLE IN A VUCA WORLD: A TALENT WELLNESS PERSPECTIVE

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ABSTRACT

The current challenges emanating from the internal and external environments have resulted in organizations reviewing their human resources management and wellness strategies. It is against this background that this research focused on redefining the strategic role of human resource management in a VUCA (volatile, uncertain, complex, and ambiguous) world from a talent wellness perspective. A quantitative research approach was followed, whereby a talent wellness questionnaire was administered to South African HR practitioners ($n = 210$). The findings revealed a statistically significant relationship among various constructs related to talent management (attraction, development, and retention) and employee wellbeing (social, emotional, physical, and psychological). This research contributes to professional and academic research on the strategic interlinkage of wellness and talent management in a VUCA world. The research highlights the need for HR professionals and other relevant stakeholders to create talent wellness interventions that are aligned with the organizational strategy to improve the welfare of employees, to enhance sustainable, productive work, in order for the organization to gain competitive advantage and flourish.

Keywords: South Africa, strategic human resource management, talent management, VUCA context, wellness/wellbeing

INTRODUCTION

The volatile, uncertain, complex, and ambiguous (VUCA) environment we are currently facing has ushered in an era of global chaos. Organizations must be agile in responding to rapid changes in the external environment, such as accelerated technological advancement. The past decade has seen unprecedented changes to the global market, emanating from the debt crisis in Europe, strained USA–China relations, Brexit, and climate change (Dhillon & Nguyen, 2021). Compounding the global chaos

was the surfacing of a coronavirus (Covid-19), in December 2019 which resulted in unprecedented challenges in the workplace (Dhillon & Nguyen, 2021; Howe, Chauhan, Soderberg, & Buckley, 2020; Mousa & Rami, 2019). As such, the workplace is becoming increasingly dynamic and unpredictable intensified by many employees having to work from home or hybrid due to the Covid-19.

This upheaval has affected organizations' talent management and wellness programs, particularly at the strategic human resource management (HRM) level. In the current turbulent environment, organizations find it challenging to remain competitive and build sustainable competitive advantage. In addition, literature confirms that managers need to be aware of trends in the external and internal environment, as these affect the way in which attraction, deployment, development, and retention of employees is undertaken, which affect employee wellness (Berman, Bowman, West, & Van Wart, 2019).

There is ever-increasing integration of individuals, companies, and cultures during change, and every person and business is faced with constant global pressure to achieve competitive excellence in the domain of HRM (Cascio & Boudreau, 2016; Tarique, Briscoe, & Schuler, 2015). The VUCA world is characterized as an operating environment that is continuously evolving in dramatic and relentless ways, resulting in daunting leadership and organizational challenges (Abidi, 2018; Deaton, 2018). It is widely accepted that employees are an organization's most valuable asset, and, as such, a company's HR strategy should focus on achieving employee commitment and productivity (Rius Bosch, 2019). Employers are now, more than ever, having to focus on employee talent development, as new skills and abilities are required from their employees to cope with the ever-changing VUCA environment (Tomcikova, Svetozarovova, & Coculova, 2021). The future holds considerable challenges for current organizational competencies (Lumme-Tuomala, 2017), business sustainability, and employee performance (Abidi, 2018).

From a strategic HRM perspective, the drive for individual–organization goal alignment is pivotal in ensuring productivity (Mirzapour, Toutian, Mehrara, & Khorrampour, 2019). Considering the foregoing, HRM strategies should be crafted based on employee skills, talents, and wellness to improve the performance of the organization at individual, group, and organizational level, if organizational goals are to be achieved (Muli, Muathe, & Muchiri, 2014; Stone, Deadrick, Lukaszewski, & Johnson, 2015). While talent management has been widely researched (Collings, 2014), there seems to be a scarcity of literature on the subject (Mousa & Rami, 2019), yet it remains one of the priorities of modern management in all firms (Tomcikova et al., 2021), as it is undeniably the driving force of a company's success.

The concerns of organizations about employee wellness/wellbeing (the terms are used interchangeably in this paper) have been on an upward trajectory, given the current VUCA challenges, as organizational success is now, more than ever, dependent on employee wellness and human capital in ensuring sustainable growth and performance (Ochoa, Lepeley, & Essens, 2019). Extant literature confirms that effective HRM practices could increase psychological resources in the form of self-efficacy, hope, resilience, and psychological safety (Agarwal & Farndale, 2017), which would likely increase levels of employee wellness (Agarwal, 2021). The paucity of studies on employee wellness (Steuerink, Lindenberg, Spiegel, & Nieboer, 2020) warranted an investigation to fill in the gap in knowledge regarding the relationship between talent management and employee wellness.

The problem that the current study sought to address is that the linkage between talent management and employee wellbeing in a VUCA environment has not been established from a talent management perspective. In addition, employee wellbeing is assessed mainly in terms of health benefits (Agarwal, 2021), often neglecting its value in talent management. It has been argued that employee wellbeing should be linked with talent management to be fully functional (Day & Randell, 2014). However, there is a lack of knowledge and information on the multilevel and holistic integration of talent management and employee wellbeing (Loon, Otaye-Ebede, & Stewart, 2018). All the dimensions of employee wellbeing, i.e. psychological, emotional, social, and physical, should be addressed in talent management (managing attraction, development, and retention).

This view aligns with the principles of the job demands–resources (JD-R) theory (Bakker & Demerouti, 2007), which proposes that the interaction between job demands and job resources is an important consideration in developing motivational processes aimed at enhancing work engagement and well-being. Organisations also need to guard against job strain leading to burnout (Bakker & Demerouti, 2007). HRM professionals and managers require this information and knowledge to support them in assessing talent management and employee wellbeing initiatives and make informed decisions on effectively managing employees holistically and strategically. In line with the general and specific problem identified above, the key objectives of this study were:

- a) To determine the strategic role of HRM in a VUCA world from a talent wellness perspective.
- b) To evaluate measures and strategies that can be employed by organizations to minimize the risks and challenges caused by talent wellness initiatives that are misaligned with the organizational goals.
- c) To provide management and other relevant stakeholders strategic recommendations that will enhance productivity through talent wellness.

This study contributes to the body of knowledge on the integration of employee talent and wellness in a VUCA environment, which has not been extensively studied, thus bridging a gap in the body knowledge in this domain. In fact, the dominant approaches to HRM have focused predominantly on performance, without consideration of employee wellbeing (Guest, 2017), hence the focus of the present study. The rest of the paper is organized as follows. A literature review follows, focusing on the constructs of the study, after which the methodology is presented. Thereafter, the results are reported and discussed, together with theoretical and practical implications. The paper concludes with recommendations, the limitations of the study, and areas for future research.

LITERATURE REVIEW

The VUCA context

Organizations' environment is characterized as VUCA — volatile, uncertain, complex, and ambiguous. *Volatile* refers to unstable circumstances and unexpected events, possibly of an unspecified duration (Bennett & Lemoine, 2014). Volatility could be related to sudden change, such as having to work from home.

Uncertain refers to a situation where knowledge regarding the significance of the situation is lacking (Bennett & Lemoine, 2014). For instance, there is much uncertainty regarding the extent and magnitude of the impact of Covid-19 on firm performance in the foreseeable future. Employees are experiencing job instability and financial insecurity, coupled with health- and wellness concerns (Caligiuri, De Cieri, Minbaeva, Verbeke, & Zimmermann, 2020).

Complex refers to a situation where there are many interrelated variables, the magnitude of which may make the matter difficult to handle. An example is technological advancement, which has resulted in the proliferation of information and enhanced communication systems with many interdependencies, resulting in unforeseen consequences for organizations (Gandhi, 2017).

Ambiguity refers to a lack of clarity regarding multiple possible causes of effects, and how to deal with these. HRM managers must now deal with new dimensions of employee wellbeing, due to the Covid-19 pandemic, which is further complicated by limited interaction, as many employees are now working from home (Nangia & Mohsin, 2020).

Extant literature confirms that the role of HRM in generating a sustainable competitive advantage in the VUCA environment is critical, and even of strategic importance. A workforce that is effectively selected, developed, and supported can significantly contribute to an organization's performance and in sustaining competitive advantage (Hamid, 2019; Pearse, 2017). To survive in the

VUCA environment, organizations have to select the best talent, improve their skills, and provide support and nurture employee wellness, in order to enhance employee commitment (Naznin & Hussain, 2016; Sasmal, 2019).

Talent Management

Talent is defined by Ulrich and Smallwood (2012, p. 60) as follows:

Talent = competence [knowledge, skills and values required for today's and tomorrow's job; right skills, right place, right job, right time] × commitment [willing to do the job] × contribution [finding meaning and purpose in their job.]

Talent management entails attracting, identifying, recruiting, developing, and retaining people, and is viewed as a strategic process that contributes to competitive advantage. To successfully execute the organization's strategy requires that critical positions be identified and filled with the right people, at the right time (Lumme-Toumala, 2017). Talent is thus viewed as both a strategic resource and a source of competitive advantage in the 21st century (Michie, Sparrow, Hird, & Cooper, 2015; Kontoghiorghes, 2016; Moritz, 2016), calling for strategic thinking and alignment between HRM and top management (Cascio & Boudreau, 2016). Talent requires specific management, as high-performing employees are critical for business survival in the current context of global complexity and uncertainty (Rodriguez-Sanchez, González-Torres, Montero-Navarro, & Gallego-Losada, 2020).

Ineffective talent management will not yield the desired returns on investments (De Boeck, Meyers, & Dries, 2018; Van Zyl, Mathafena, & Ras, 2017). Johnston (2018) notes challenges associated with talent management, such a lack of clarity regarding talent management in the HR field, coupled with the difficulty of measuring and quantifying its value in terms profitability. Furthermore, there is lack of unanimity on how talent management fits into the larger business structure. Considering the above, it is imperative that organizations address the considerable challenges associated with talent management systems and redesign their wellness interventions in becoming fit for the VUCA future (Ochoa et al., 2019).

Employee Wellness

The wellbeing of employees is the fulcrum of organizational success, as organizations' thriving is dependent on employee creativity, adaptability, and engagement (Ochoa et al., 2019). The World Health Organization (WHO) defines wellbeing as a state of complete physical, mental, and social well-being, not merely the absence of disease or infirmity (WHO, 1946). Gilbert and Kelloway (2014) propose that workplace wellness relies on initiatives and strategies that promote constructive behaviors in the workplace and employee health. Agarwal (2021) contends that wellbeing, a term rooted in the field of psychology, refers to subjective physical and psychological wellbeing.

Subjective wellbeing is the hedonic aspect of wellbeing, and is composed of a person's cognitive and affective evaluations of his/her life (Diener, 1984). Psychological wellbeing is the eudaimonic aspect of wellbeing (Agarwal, 2021), and includes six related yet distinct components: positive evaluation of oneself and one's past, a sense of continued growth and development, the belief that one's life is purposeful and meaningful, quality relations with others, a sense of capacity to manage one's life and the surrounding world effectively, and a sense of self-determination (Agarwal, 2021; Ryff & Keyes, 1995). Wellbeing has been confirmed in literature as a critical area of organizational focus, as it is not just an outcome, but an antecedent to various organizational outcomes, including, among others, creativity, productivity, cooperation, and increased social capital (De Neve, Diener, Tay, & Xuereb, 2013). The above assertion is supported by Abraham and White (2017), who posit that effective wellness programs strengthen employee engagement, reduce turnover, and improve profitability.

Research Framework and Hypothesis Development

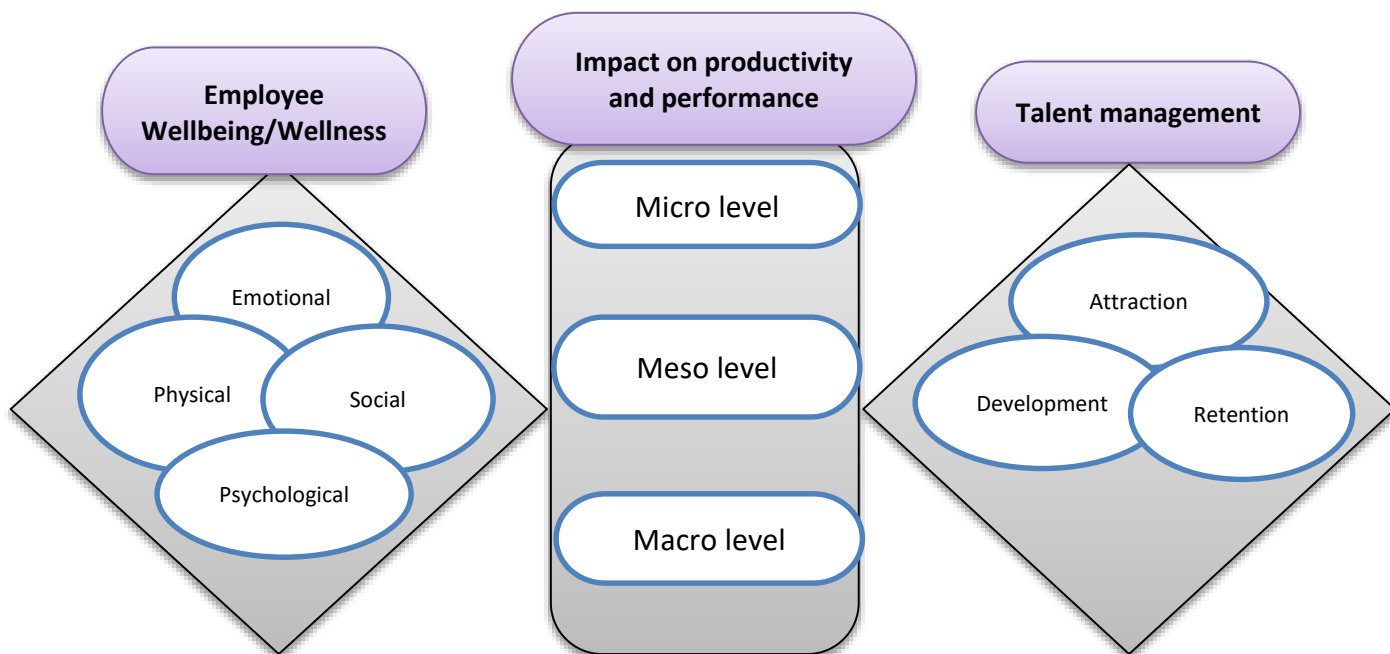
This study utilized the theoretical lenses of the JD-R theory (Bakker & Demerouti, 2007) to explicate the concept of wellbeing in organizations. The JD-R Model (Bakker & Demerouti, 2007) is premised on the notion that job characteristics can be classified into two categories — job demands and

job resources, which vary in terms of their effects. Job demands are the physical, social, or organizational aspects of the job that require sustained physical or mental effort, and are associated with certain physiological and psychological costs (Agarwal, 2021; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001).

The JD-R Model (Bakker & Demerouti, 2007) propounds that irrespective of the type of job, the risk factors associated with work pressure and can be categorized as job demands (Bakker & Demerouti, 2007). Carlson et al. (2017) aver that job demands as described by the JD-R Model (Bakker & Demerouti, 2007) relate to those aspects of the job that carry a psychological and/or physical cost, and job resources are defined as aspects that improve certain dimensions of the job, such as a flexible work schedule (Chinyamurindi, 2019).

Job demands and resources are both physical and psychological (i.e., cognitive and emotional) (Demerouti et al., 2001). One could therefore argue that wellness is a multifaceted state that is facilitated by an inner drive and a positive mind-set, which lead to fulfilment and health (Barnard, 2018; Mayer & Walach, 2018). Thus, a conducive work environment and healthy relationships enhance employee wellness(wellbeing), ultimately contributing to organizational success at the macro (strategic), meso (group), and micro (individual) level, as illustrated in Figure 1.

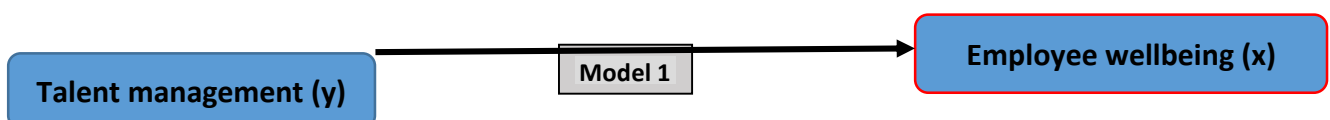
Figure 1. Key Considerations of Talent-Wellness Interventions

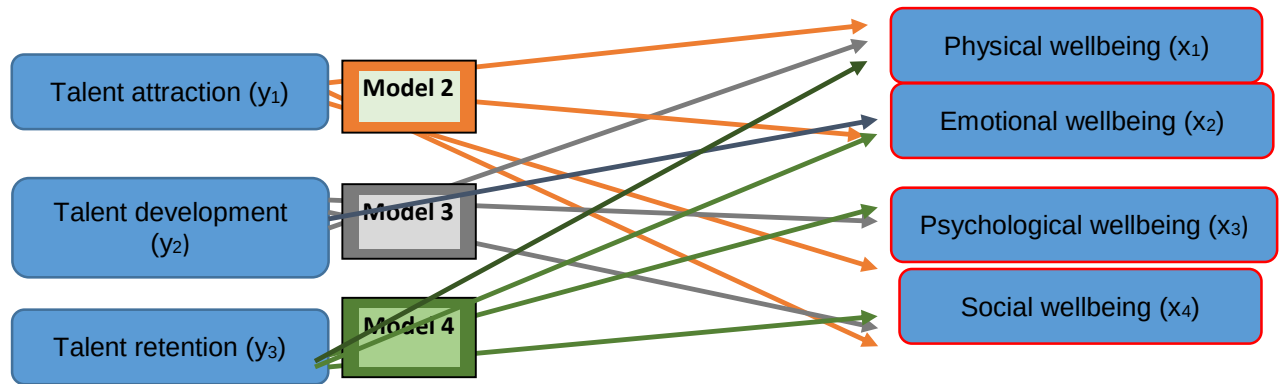


Source: Researchers' own construction

The constructs presented in Figure 1 are further discussed in the following subsections, together with hypothesized relationships between the independent and dependent variables shown in Figure 2.

Figure 2. Structural Form of the Regression Models





Source: Researchers' own construction

The macro level focuses specifically on the leadership- and organizational system variables. These variables, in turn, are related to how employee wellness practitioners should promote wellness in an organization. As the foundation for all interventions, managers need to ensure that the culture and the strategy of the organization are synchronized (Passey, Hammerback, Huff, Harris, & Hannon, 2018). However, because the contextual environment is always changing, integrating a culture of wellness into the organizational strategy is often a challenge.

Žižek, Mulej, and Čančer (2017) posit that, while leaders are responsible for designing and implementing wellness programs, the success of such programs rely on employees' full participation. Hence, leadership, employees' commitment to participate in wellness interventions, and a favorable environment are of prime importance to the successful implementation of wellness programs. While there is much interest in the concept of employee wellbeing, limited research has been conducted on overall healthy workplaces and the impact thereof on employee and organizational wellbeing (Day & Randell, 2014), particularly in the context of Africa. Berman et al. (2019) posit that managers need to continuously scan both the internal and external environment, as both impact the attraction, deployment, development, and retention of employees. As such, more research is needed on the economic, health, and psychological components of wellbeing to fully integrate research findings and the thinking of industrial psychologists (Andrews, Crosby, Carrigan et al., 2019; Giberson & Miklos, 2014). These gaps in knowledge motivated the present study.

We posit that talent management is an integrated and holistic process that focuses on, first, attracting potential employees to work in an organization; second, the deployment of employees from one work assignment to another to meet organizational needs; third, training and development to develop and enhance the knowledge, skills, and attitudes of employees; and, finally, retention practices that focus on motivating and retaining employees. Furthermore, talent management should consider the wellness of employees at the physical, emotional, psychological, and social levels (Rajesh, Ekambaram, Rakesh, & Kumar 2019). In light of the preceding, the following hypothesis were formulated:

Ha: There is a statistically significant relationship between talent management and employee wellbeing.

Regression Model 1:

$\hat{y} = \beta_0 + \beta x$; where $\hat{y}$ = estimated *Talent management*, x = *Employee wellbeing*, whilst β_0 and βx are the estimates of the y-intercept and slope, respectively.

Ha1: There is a statistically significant relationship between talent attraction and the following employee wellbeing attributes: physical wellbeing, emotional wellbeing, psychological wellbeing and social wellbeing.

Regression Model 2:

$y_1\text{hat} = \beta_0\text{hat} + \beta_1\text{ hat } x_1 + \beta_2\text{ hat } x_2 + \beta_3\text{ hat } x_3 + \beta_4\text{ hat } x_4$; where $y_1\text{ hat}$ = estimated *Talent attraction*, x_1 = *Physical wellbeing*, x_2 = *Emotional wellbeing*, x_3 = *Psychological wellbeing*, x_4 = *Social wellbeing*, whilst β_0 , β_1 , β_2 , β_3 and β_4 are the estimates of the y-intercept and the slopes for *Physical wellbeing*, *Emotional wellbeing*, *Psychological wellbeing*, and *Social wellbeing*, respectively.

The meso-level analysis focuses on the productive energy of groups and teams in improving overall productivity. Productive energy is the extent to which group effectiveness assists employees in coping with new job demands. Productive energy has either a negative or positive impact on organizational efficiency and effectiveness. Salanova, Del Líbano, Llorens, and Schaufeli (2014) conducted research on wellness among different groups of employees, and found that both job- and personal resources influence employee wellbeing. Their results show that enthusiastic employees experience significantly more positive outcomes than less enthusiastic employees. Trust and group synergy have also been confirmed as essential aspects of productive energy, as these increase employees' ability to commit and engage long term in organizational interactions, with positive organizational outcomes.

From a practical perspective, this is developmental to the employees, as it increases their capacity and propensity to effectively perform at work. Without adequately addressing workgroup concerns, organizational relationships and interactions will tend to be pervaded with deviant workplace behaviors and conflict. This will ultimately result in high levels of organizational ineffectiveness and dysfunctional behaviors, such as social loafing and conflict within and between groups. As such, employee development and wellness need to focus on all levels: physical, emotional, psychological, and social (Baruch, Singh, Halliday, & Hammond, 2021). In light of the preceding, we therefore hypothesize that:

H_{a2}: There is a statistically significant relationship between talent development and the following employee wellbeing attributes: physical wellbeing, emotional wellbeing, psychological wellbeing and social wellbeing.

Regression Model 3:

$y_2\text{hat} = \beta_0\text{hat} + \beta_1\text{ hat } x_1 + \beta_2\text{ hat } x_2 + \beta_3\text{ hat } x_3 + \beta_4\text{ hat } x_4$; where $y_2\text{ hat}$ = estimated *Talent development*, x_1 = *Physical wellbeing*, x_2 = *Emotional wellbeing*, x_3 = *Psychological wellbeing*, x_4 = *Social wellbeing*, whilst β_0 , β_1 , β_2 , β_3 and β_4 are the estimates of the y-intercept and the slopes for *Physical wellbeing*, *Emotional wellbeing*, *Psychological wellbeing*, and *Social wellbeing*, respectively.

The micro-level is concerned with providing employees with a set of motivating resources such as social support from colleagues and superiors, performance feedback, and opportunities for learning and development. The JD-R Model (Bakker & Demerouti, 2007) focuses on emotional wellness, of which the main detractors are emotional labor and burnout (exhaustion of physical or emotional strength or motivation, emanating from stress or frustration) (Nzonzo & Du Plessis, 2020). Consequently, investment in decent work practices that promote employee wellbeing (i.e. physical, emotional, psychological, and social) and resilience is critical, not only to support individual health and wellbeing, but also to improve the profitability and sustainability of the organization (Cooper & Bevan, 2014), and could significantly enhance the retention of employees. VUCA conditions challenge both the traditional and local leadership practices, which rely on hierarchical control and predictability. Therefore, we hypothesized that:

H_{a3}: There is a statistically significant relationship between talent retention and the following employee wellbeing attributes: physical wellbeing, emotional wellbeing, psychological wellbeing, and social wellbeing.

Regression Model 4:

$y_3\text{hat} = \beta_0\text{hat} + \beta_1\text{ hat } x_1 + \beta_2\text{ hat } x_2 + \beta_3\text{ hat } x_3 + \beta_4\text{ hat } x_4$; where $y_3\text{ hat}$ = estimated *Talent retention*, x_1 = *Physical wellbeing*, x_2 = *Emotional wellbeing*, x_3 = *Psychological wellbeing*, x_4 = *Social*

wellbeing, whilst β_0 , β_1 , β_2 , β_3 and β_4 are the estimates of the y-intercept and the slopes for *Physical wellbeing*, *Emotional wellbeing*, *Psychological wellbeing*, and *Social wellbeing*, respectively.

METHODOLOGY

This study was grounded in the positivist paradigm, underpinned by a quantitative research approach, utilizing a cross-sectional survey design. Positivism was appropriate for the study, as the research aimed to describe the results in quantitative terms (cf. Ryu, 2020). The population for the study comprised HR professionals registered with the South African Board for People Practices (SABPP). The rationale for this choice was mainly the specialist nature of the data required for the research; the research required respondents who possessed knowledge of talent management and employee wellbeing processes in organizations in a VUCA environment. The population consisted of all 1 110 chartered HR professionals (CHRP) registered with the SABPP and listed in its Annual Integrated Report of 2015. Stratified sampling strategy was employed, based on the assumption that the resulting sample would show the same distribution (Bryman & Bell, 2011).

Expert sampling, a form of purposive sampling, was used in identifying the HR practitioners to be considered for the study. Since this study aimed at relating theory to practice and using the techniques of systematic enquiry to gather data to inform planned actions, purposive sampling and stratified sampling were deemed applicable. Based on sample-size guidelines by Barlett, Kotrlik, and Higgins (2001), the estimated sample size was 286, and, after considering the issue on non-response, it was revised to 250. Table 1 shows the multistage sampling method adopted for the study.

Table 1: Multistage Sampling Process

Stage	Sampling method	Multistage Sampling Process
1	Census	Identification of registered HR professionals (1 110)
2	Stratified sampling	Classification of the professionals according to sector (public or private sector)
3	Purposive sampling (expert sampling)	Considered professionals according to occupational/managerial level

Source: Researchers' own construction

Although this research was conducted before the outbreak of Covid-19, structured questionnaires were administered online, through SurveyMonkey, as respondents were located in various provinces of South Africa, and it was not feasible to physically distribute the questionnaires. The questionnaire comprised 49 items, formulated by the researchers, with responses indicated on a five-point Likert scale ranging from 1 = *Strongly disagree* to 5 = *Strongly agree*. The use of a Likert scale ensured face validity. In addition, scale items were checked for reliability to establish internal consistency, and all items had a Cronbach alpha above 0.6 (see Table 2), which is deemed acceptable in quantitative studies (Meeker & Escobar, 2014). For newly created surveys, reliability factors greater than or equal to 0.60 are considered acceptable (Adamson & Prion, 2013).

Table 2: Summary of the Cronbach alphas of *Talent management* and *Employee wellbeing*

Code	Variable	Cronbach Alpha	No. of Items
y	Talent Management	0.757	3
y1	Talent attraction	0.630	6
y2	Talent development	0.639	6
	Talent retention	0.725	

y3			6
x	Employee wellbeing	0.793	4
x1	Physical wellbeing	0.610	5
x2	Emotional wellbeing	0.722	5
x3	Psychological wellbeing	0.725	5
x4	Social wellbeing	0.676	5

RESULTS

This section reports the results of the study. The data were captured in the Statistical Package for the Social Sciences (SPSS) Version 25 for further analysis. First, the demographics of respondents, including their gender, age group, ethnic group, and education levels, are reported in tabular form. This is followed by the results of the inferential statistics.

Response Rate

The questionnaire was distributed to a sample of 286. A total of 210 responses were received, yielding a response rate of 73.42%. This is an exceptional rate, and bespeaks interest in the topic and the importance of this research. Baruch and Holtom (2008) state that a response rate greater than 50% is regarded as acceptable.

Demographic Characteristics

The demographic information captured included gender, age, province, ethnicity, education, industry, and work experience, as shown in Table 3, below.

Table 3: Demographic Characteristics

Demographic Characteristics	Category	Frequency	Percent
Gender	Female	129	61.4
	Male	81	38.6
Age	20–29	30	14.3
	30–39	60	28.6
	40–49	78	37.1
	50–59	40	19.0
	60–69	1	.5
	>= 70	1	.5
Representation by province	GP	112	53.3
	WC	22	10.5
	EC	19	9.0
	FS	12	5.7
	KZN	11	5.2
	L	13	6.2

	NW	10	4.8
	NC	6	2.9
	MP	5	2.4
Ethnicity	Asian	2	1.0
	Black African	153	72.9
	Indian	7	3.3
	White	42	20.0
	Colored	6	2.9
Education	Diploma	47	22.4
	Undergraduate degree	61	29.0
	Honors degree	41	19.5
	Master's degree	47	22.4
	Doctoral degree	14	6.7
Industry segmentation	Automotive	3	1.4
	Banking	8	3.8
	Construction	3	1.4
	Education	53	25.2
	Engineering	11	5.2
	Tourism and hospitality	10	4.8
	Government	26	12.4
	Health	20	9.5
	Telecommunications	23	11.0
	Manufacturing	17	8.1
	Mining	12	5.7
	NGOs	8	3.8
	Retail	16	7.6
Work experience	< 1 year	21	10.0
	1–3 years	60	28.6
	4–6 years	55	26.2
	7–9 years	23	11.0
	=/> 10 years	51	24.3

The respondents comprised 129 (61.4%) women and 81 (38.6%) men. The female respondents outnumbering the male respondents is a true reflection of gender representation in this field in South Africa.

The majority (78 or 37.1%) fell into the age group 40–49 years, followed by 30–39 years (with 60 respondents or 28.6%), 50–59 years, with 40 respondents (19%), and 20–29 years with 30 respondents (14.3%). A few respondents were aged 60–79 and above 70, representing 0.5% each.

The majority of the respondents, 112 (53.3%), were from Gauteng province (GP), followed by the Western Cape (WC), with 22 respondents (10.5%), 19 (9%) from the Eastern Cape (EC), 12 (5.7%) from the Free State (FS), 11 (5.2%) from KwaZulu-Natal (KZN), 13 (6.2%) from Limpopo (L), and 13 (6.2%) from North West (NW). A minority of respondents were located in the Northern Cape (NC) and Mpumalanga (MP), six (2.9%) and five (2.4%) respectively.

All five main racial groups in the South African workplace, namely Asian, black African, Indian, white, and Colored participated. The majority of the respondents, 153 (72.9%), were black African, followed by white (42 or 20%). The other racial groups were in the minority, i.e. Indian (seven, or 3.3%), Colored (six, or 2.9%), and Asian (two, or 1%).

With regard to level of education, the majority of respondents (61 or 29%) held a bachelor's degree, followed by a Master's degree or diploma, with 47 (22.4%) respondents each. A total of 41 (19.5%) respondents held and honors degree, and 14 (6.7%) held a doctorate.

With regard to industry, 53 (25.2%) were from the education sector, followed by government, with 26 (12.4%) respondents. The telecommunications sector ranked third, with 23 (11%) respondents. Sectors with the lowest representation were: health (20, or 9.5%), manufacturing (17, or 8.1%), retail (16, or 7.6%), mining (12, or 5.7%), engineering (11, or 5.2%), and tourism and hospitality (10, or 4.8%). The NGO- and the banking sectors had eight (3.8%) respondents each, and the automotive and construction sectors had three (1.4%) respondents each.

All respondents had experience in talent management and wellness, and were thus able to provide informed responses. A total of 60 (28.6%) respondents had 1–3 years' experience in HRM and/or employee wellness, followed by 55 (26.2%) with 4–6 years' experience and 51 (24.3%) with more than 10 years' experience. A minority had 7–9 years' experience (23, or 11%) or less than one year's experience (21, or 10%).

RESULTS

Model 1: Main hypothesis on talent management and employee wellbeing

The study found a positive significant positive association between *Talent management* and *Employee wellbeing* ($r = 0.675$; $p < 0.01$). Therefore, H_a is supported.

Table 4: Model 1 Regression Analysis

Model Summary				
Model	R	R-square	Adjusted R-square	Std. Error of the Estimate
1	.675	.456	.453	.285
a. Predictor: (constant) <i>Employee wellbeing</i>				

The R-square of this model was 0.456, which meant that 45.6% of the variation in *Talent management* was explained by *Employee wellbeing*.

Table 5: Model 1 Coefficients

Coefficients					
Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B

		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.478	.214		6.907	.000	1.056	1.900
	<i>Employee wellbeing</i>	.637	.051	.675	12.512	.000	.537	.738
a. Dependent variable: <i>Talent management</i>								

As shown in Table 5, the standardized coefficient beta was 0.675. This indicated that *Employee wellbeing* made the largest contribution to variance in the dependent variable (*Talent management*). The beta coefficient was positive, indicating a positive influence.

Interpretation:

A 1-unit increase in *Employee wellbeing* (*EW*) will cause an increase of 0.637 in *Talent management*.

The model is represented by the following equation:

$$\text{Talent management} = 1.478 + 0.637 (EW)$$

Model 2: Talent attraction

The correlation supported a significant positive relationship between *Talent attraction* and the following *Employee wellbeing* attributes: *Physical wellbeing*, *Emotional wellbeing*, *Psychological wellbeing*, and *Social wellbeing*. Therefore, H₂ is supported.

Table 6: Model 2 Regression Analysis

Model Summary				
Model	R	R-square	Adjusted R-square	Std. Error of the Estimate
1	.639	.408	.395	.391
a. Predictors: (constant) <i>Social wellbeing</i> , <i>Physical wellbeing</i> , <i>Emotional wellbeing</i> , <i>Psychological wellbeing</i>				

Source: Research Survey (2020)

The R-square of the model was 0.408, which meant the model showed that 40.8% of the variation in *Talent attraction* was influenced by the following *Employee wellbeing* attributes: *Physical wellbeing*, *Emotional wellbeing*, *Psychological wellbeing*, and *Social wellbeing*.

Table 7: Model 2 Coefficients

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
2	(Constant)	.941	.304		3.096	.002	.341	1.541
	Physical wellbeing	.052	.072	.052	.727	.468	-.089	.193
	Emotional wellbeing	.213	.086	.199	2.492	.014	.044	.382

	<i>Psychological wellbeing</i>	.152	.078	.161	1.943	.054	-.002	.307
	<i>Social wellbeing</i>	.337	.062	.377	5.431	.000	.214	.459
a. Dependent variable: <i>Talent attraction</i>								

As shown in Table 6, all the beta coefficients indicated that all the independent variables positively influenced the dependent variable.

Interpretations:

- An increase in *Physical wellbeing (PW)* of 1 unit, while all other independent variables remain constant, will cause an increase of 0.052 in *Talent attraction*.
- An increase in *Emotional wellbeing (EW)* of 1 unit, while all other independent variables remain constant, will cause an increase of 0.213 in *Talent attraction*.
- An increase in *Psychological wellbeing (PWB)* of 1 unit, while all other independent variables remain constant, will cause an increase of 0.152 in *Talent attraction*.
- An increase in *Social wellbeing (SW)* of 1 unit, while all other independent variables remain constant, will cause an increase of 0.337 in *Talent attraction*.

The model is represented by the following equation:

$$\text{Talent attraction} = 0.941 + 0.052 (PW) + 0.213 (EW) + 0.152 (PWB) + 0.337 (SW)$$

Model 3: Talent Development

Table 8 Model 3 Regression Analysis

Model Summary				
Model	R	R-square	Adjusted R-square	Std. Error of the Estimate
2	.540	.291	.276	.361
a. Predictors: (constant) <i>Social wellbeing</i> , <i>Physical wellbeing</i> , <i>Emotional wellbeing</i> , <i>Psychological wellbeing</i>				

The R-square of this model was 0.291, which meant that 29.1% of the variation in *Talent development* was influenced by the following *Employee wellbeing* attributes: *Physical wellbeing*, *Emotional wellbeing*, *Psychological wellbeing*, and *Social wellbeing*.

Table 9: Model 3 Coefficients

Coefficients							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	1.827	.280		6.520	.000	1.274	2.380

<i>Physical wellbeing</i>	.109	.066	.130	1.655	.100	-.021	.239
<i>Emotional wellbeing</i>	.151	.079	.167	1.910	.058	-.005	.306
<i>Psychological wellbeing</i>	.189	.072	.236	2.609	.010	.046	.331
<i>Social wellbeing</i>	.105	.057	.139	1.835	.068	-.008	.217
a. Dependent variable: <i>Talent development</i>							

Referring to Table 9, above, the beta coefficients implied that all the independent variables influenced the dependent variable positively.

Interpretations:

- An increase in *Physical wellbeing* (PW) of 1 unit, while all other independent variables remain constant, will cause an increase of 0.109 in *Talent development*.
- An increase in *Emotional wellbeing* (EW) of 1 unit, while all other independent variables remain constant, will cause an increase of 0.151 in *Talent development*.
- An increase in *Psychological wellbeing* (PWB) of 1 unit, while all other independent variables remain constant, will cause an increase of 0.189 in *Talent development*.
- An increase in *Social wellbeing* (SW) by 1 unit, while all other independent variables remain constant, will cause an increase of 0.105 in *Talent development*.

The model is represented by the following equation:

$$\text{Talent development} = 1.827 + 0.109 (PW) + 0.151 (EW) + 0.189 (PWB) + 0.105 (SW)$$

Model 4: *Talent retention*

Table 10. Model 4 Regression Analysis

Model 4 Summary				
Model	R	R-square	Adjusted R-square	Std. Error of the Estimate
3	.513	.263	.247	.413
a. Predictors: (constant) <i>Social wellbeing</i> , <i>Physical wellbeing</i> , <i>Emotional wellbeing</i> , <i>Psychological wellbeing</i>				

The R-square of this model was 0.263, which meant the model explained that 26.3% of the variation in *Talent retention* was influenced by the following *Employee wellbeing* attributes: *Physical wellbeing*, *Emotional wellbeing*, *Psychological wellbeing*, and *Social wellbeing*.

Table 11: Model 4 Coefficients

Coefficients							
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B
		B	Std. Error	Beta			Lower Bound Upper Bound
4	(Constant)	1.807	.321		5.628	.000	1.173 2.440

	<i>Physical wellbeing</i>	.187	.075	.198	2.471	.014	.038	.336
	<i>Emotional wellbeing</i>	.075	.090	.074	.834	.405	-.103	.254
	<i>Psychological wellbeing</i>	.226	.083	.252	2.730	.007	.063	.390
	<i>Social wellbeing</i>	.094	.065	.111	1.434	.153	-.035	.223

a. Dependent variable: *Talent retention*

As depicted in Table 11, above, all the beta coefficients were positive, indicating that all the independent variables influenced the dependent variable positively.

Interpretations:

- An increase in *Physical wellbeing (PW)* of 1 unit, while all other independent variables remain constant, will cause an increase of 0.187 in *Talent retention*.
- An increase in *Emotional wellbeing (EW)* of 1 unit, while all other independent variables remain constant, will cause an increase of 0.075 in *Talent retention*.
- An increase in *Psychological wellbeing (PWB)* of 1 unit, while all other independent variables remain constant, will cause an increase of 0.226 unit in *Talent retention*.
- An increase in *Social wellbeing (SW)* of 1 unit, while all other independent variables remain constant, will cause an increase of 0.094 unit in *Talent Retention*.

The model is represented by the following equation:

$$\text{Talent retention} = 1.807 + 0.187 (PW) + 0.075 (EW) + 0.226 (PWB) + 0.094 (SW)$$

DISCUSSION OF RESULTS

The main objective of this study was to determine the strategic role of HRM in a VUCA world from a talent wellness perspective. The results of the study validate the importance of strategic HRM to sustain employee talent-wellness in the VUCA environment, as highlighted by Ochoa et al. (2019). HRM practices should be aimed at increasing employees' psychological resources in the form of self-efficacy, hope, resilience, and psychological safety, which increase their wellness, as indicated in the research by Agarwal (2021). As presented in the results section, the R-square of this model was 0.456, which meant that 45.6% of the variation in *Talent management* was explained by *Employee wellbeing*. This further indicated that *Employee wellbeing* made a stronger and unique contribution in explaining the dependent variable *Talent management*. This correlation supports a significant positive relationship (large effect) between talent management and employee wellbeing; therefore, H_a is supported.

With reference to Table 4, the standardized coefficient beta was 0.675. This indicates that employee wellbeing is positively associated with talent management. These findings are supported by extant literature. De Simone (2014) identified two interrelated sets of consequences of wellbeing in the workplace. One has the most direct implications for individuals — physical, psychological, and behavioral consequences. The other set of consequences is financial, and includes issues such as loss of productivity.

Based on this research, we can infer that talent management requires an integrated and holistic process that focuses on, first, attracting high-potential employees; second, the deployment of skilled employees; third, development that is aimed at enhancing employees' knowledge, skills, and abilities; and, finally, retention practices that focus on increasing commitment and reducing labor turnover. The above validate the research findings of Baruch, Singh, Halliday, and Hammond (2021), Bayat and

Cissna (2022), and Rajesh, Ekambaram, Rakesh, and Kumar (2019) that the rate of change in a VUCA environment is much faster (and less predictable) than in past decades, and, as such, efforts towards talent management for the thriving of organizations in a VUCA world should be directed towards talent management (attracting, hiring, retaining, and developing talent) and wellness interventions. As evidenced by this research, *Talent attraction* was found to have a significant positive relationship with the following *Employee wellbeing* attributes: *Physical wellbeing* (medium effect) ($r = 0.379$; $p < 0.01$), *Emotional wellbeing* (medium effect) ($r = 0.468$; $p < 0.01$), *Psychological wellbeing* (large effect) ($r = 0.525$; $p < 0.01$), and *Social wellbeing* (large effect) ($r = 0.560$; $p < 0.01$).

Furthermore, all the beta coefficients indicated that the employee wellbeing attributes influence talent attraction positively. Thus, effective talent wellness strategies ultimately lead to effective talent management, which enhances organizational success at the macro (strategic) level, meso (group) level, and micro (individual) level.

The study also validated the application of the JD-R Model (Bakker & Demerouti, 2007) in talent wellness management in a VUCA world, confirming the research findings of Bakker and Demerouti (2007). Furthermore, job demands and resources, as described by Carlson et al. (2017) also play a role in talent wellness management in a VUCA environment. Job demands — the physical, social, and organizational aspects of the job — require sustained physical or mental effort by employees in order to achieve the strategic objectives of the organization. To create an environment in which employees thrive requires an integrated evaluation of employee wellbeing (Avey, Luthans, Smith, & Palmer, 2010).

The present study confirms that there is a significant positive relationship between *Talent development* and the following *Employee wellbeing* attributes: *Physical wellbeing* (medium effect) ($r = 0.392$; $p < 0.01$), *Emotional wellbeing* (medium effect) ($r = 0.441$; $p < 0.01$), *Psychological wellbeing* (medium effect) ($r = 0.482$; $p < 0.01$), and *Social wellbeing* (medium effect) ($r = 0.381$; $p < 0.01$). These results are aligned to extant literature; for example, the work of Meyer (2014) and Thunnissen, Boselie, and Fruytier (2013), who posit that employees should be encouraged to develop their professional competency to improve wellness, which was supported by Kim and Jung (2022) who found employee competence affects employees' wellbeing by limiting stress and possible burnout.

The results show a significant positive relationship between *Talent retention* and the following *Employee wellbeing* attributes: *Physical wellbeing* (medium effect) ($r = 0.403$; $p < 0.01$), *Emotional wellbeing* (medium effect) ($r = 0.388$; $p < 0.01$), *Psychological wellbeing* (medium effect) ($r = 0.458$; $p < 0.01$), and *Social wellbeing* (medium effect) ($r = 0.352$; $p < 0.01$). These results validate the theoretical stance that investments in good work practices to foster employee wellbeing and resilience are critical to, not only support individual health and wellbeing, but to improve the organization's bottom line and increase the retention of employees (Cooper & Bevan, 2014).

However, employee wellbeing is a subjective experience; employees may construe the effects of talent retention efforts on work-related outcomes differently. As such, employers should ensure that a variety of talent wellness interventions are made available to employees, and not assume that one strategy will work for all.

THEORETICAL AND MANAGERIAL IMPLICATIONS

Theoretical implications

From a theoretical perspective, this study expands the integrated academic understanding of talent management and wellness. Most research in this field lacks an integrated perspective on talent and wellness, with inconsistent assumptions based on the specific research ideologies related to researchers' fields of specialization. Whether one takes a wellness-centric or a talent management-centric approach (Field & Louw, 2012; Guest, 2017; Hattie, Myers, & Sweeney, 2004; Thunnissen et al., 2013), there is an urgent need to facilitate the implementation and improvement of talent- and

wellness management. Therefore, this study makes a significant contribution to the way in which the integration of talent management and wellness as a phenomenon should be understood theoretically, as well as how it should be developed further in organizational research and practice.

This study highlights the importance of an understanding of the theory and practice of the strategic HR management process from a VUCA perspective: Strategic HRM plays an essential role in the formulation, implementation, and evaluation of a variety of strategies that underpin organizational performance. Thus, HR practitioners need to have a clear understanding of the business strategy and how to ensure alignment of HRM strategies with business strategy (Boudreau & Ramstad, 2005; Dinwoodie Quinn, & McGuire, 2014; Dowell & Silzer, 2010), to effectively managing talent-wellness. This is crucially important in ensuring holistic and effective talent management in a VUCA context such as South Africa.

The role of HRM in talent management has changed since the COVID-19 pandemic, and much more must be done to focus on employee talent-wellness. In the words of Chamorro-Premuzic and Yearsley (2017): ‘The war for talent is over and everybody lost.’

Managerial Implications

This research highlights important practical insights into redefining HR management's strategic role in a VUCA world from a talent wellness perspective. HR managers who do not effectively optimize the integration of employee wellbeing in the talent management process will face the challenges of managing the negative effects of a VUCA world. If employees are provided with a conducive work environment that promotes positive flourishing, coupled with coaching and support, it is likely that such employees will strive to perform their duties effectively when considered at the organizational (strategic) level. It is suggested that coaching may be a useful process ensuring talented individuals being groomed for higher positions understand the nature and impact of VUCA conditions (Baruch et al., 2021; Bayat & Cissna, 2022).

At the individual level, an employee may be facing challenges in terms of balancing work and family needs (work–life integration), or may be affected by a prevailing mind-set, values, and beliefs are not congruent with the organizational value system or culture. This will have a negative impact on the way employees execute their duties, with a negative spill-over into team synergy, and, ultimately, teams’ functioning and performance (Kartha, Fowler, & Fraser, 2017).

When implementing wellness programs, it is essential that organizations continuously evaluate the processes and procedures (Erasmus, Schenk, & Tshilongamulenzhe, 2017), and make the necessary adjustments to the program. Central to this argument is the fact that poor adoption and application of talent management practices negatively impact individual outcomes such as job satisfaction, as well as organizational outcomes such as service quality and performance.

CONCLUSION

The results of this study reveal that the integration of employee wellbeing in the talent management process is essential for the effective optimization of employee performance and enhancing organizational productivity, growth, and competitive advantage in a VUCA environment. To survive in this environment, organizations have to ensure that their employees are physically, emotionally, psychologically, and socially well. The findings of this study provide HR professionals and other relevant stakeholders with insights into how to effectively integrate and manage talent and wellness initiatives. As organizations continue to face regulatory and operational challenges emanating from the internal and external environment, the findings of this study are essential for enhancing the holistic management of talent in order to promote organizational success.

Limitations and Areas for Further Research

The was limited to the context of South African organizations. As talent- and wellness-management issues are challenges that companies worldwide grapple with, researchers could replicate the study in other contexts. Comparisons may also yield additional information.

Researchers could also complement the current study's quantitative approach with qualitative data, in order gain greater depth of understanding regarding the constructs under study.

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WATER CONSERVATION BY MANAGERS AT THE WORKPLACE: EXAMINATION OF ATTITUDES AND BEHAVIOUR USING THE THEORY OF PLANNED BEHAVIOUR

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ABSTRACT

Understanding the behavioural drivers of water conservation in public spaces is essential for enhancing the effectiveness of water resources management and water use especially in water scarce environments. This study used the Theory of Planned Behaviour to determine the contributing factors of water conservation attitude and behaviour among managers at work. Data were collected from 72 managers at North-West University – Mahikeng, South Africa through self-administered survey questionnaire. The study targeted managers because these are perceived as role models, thus could set environmental sustainability norms and perceptions within the workplaces. Results showed that practical behaviours of reporting water leakages and closing taps were prevalent among the managers. Positive correlations between length of service ($r = .791$); and gender ($r = .509$) were reported while training about water issues ($r = -.263$) and education about water conservation ($r = -.0392$) reported negative correlations. For this study, gender and length of service emerged as significant predictors of a water conservation attitude and behaviour. Promotion of water conservation attitude and behaviour through education and training would have a greater tendency among managers to conserve water at work.

Keywords: attitude, awareness, behaviour, theory of planned behaviour, water conservation.

INTRODUCTION

This research determines the prevalence of a water conservation attitude and behaviour among managers in the workplace. Water is a crucial resource that drives all aspects of life (World Water Forum, 2018). The major global water users being agriculture, industrial and domestic sectors. Shortages and compromised water availability are causes of concern to food security (agricultural sector), performance of businesses, and economic growth among others. Water is one of the natural resources which sustains socio-economic development as well as maintain environmental integrity (Zhang, Sun, Yang, Li, Zhang & Li 2021). The conservation of water is thus essential for socio-economic development.

According to the Department of Water (2013), South Africa is classified as a semi-arid country which experiences variations in terms of precipitation associated with droughts, dry spells and occasional flooding which contribute to the acute water shortages. The water shortages are exacerbated by an increase in population growth, resulting in water demand that exceeds supply (He, Liu, Wu et al., 2021) and inefficient water use or management practices (Maphela & Cloete, 2020). Worsening the

situation is the demand from various activities in quest for economic development in South Africa that have led to the contamination of water sources, thus threatening the security of water resources. Being considered as a water scarce country (Fantoso & Yessoufou, 2022; Tamea, Laio, & Ridolfi, 2016), South Africa has declared, through the Department of Water Affairs and Forestry that ‘water resources must be shared equitably and managed judiciously by all water users in an utmost discretion manner’ (DWAF, 2008). The recognised central guiding principles in the protection, management, use, conservation, development, and control of water resources are sustainability, efficiency, and equity (Kotir, Brown, Marshall, & Johnstone, 2017; Rasmussen, Bierbaum, Oldekop, & Agrawal, 2017; Bajzelj, Fenner, Curmi, & Richards, 2016).

In Higher Education Institutions (HEIs), Managers are concerned with the articulation of the institution’s mission, strategic planning, evaluation, and commercial marketing, to ensure that their organisations become more entrepreneurial, adaptive, and commercially responsive (Meek, Goedegebuure, Santiago, & Carvalho, 2010). The academic managers focus on teaching and research. On the other hand, the non-academic managers function in support departments such as human resources, finance, and central administration. Additionally, the support staff are concerned with infrastructure maintenance and renovations as well as recruitment and selection, monitoring and controlling employees and interpreting policies to employees (Bainbridge, 2015). Managers are accountable for all resources within an institution, whether operational or technical. In the context of water conservation, prevalent attitudes and intentions that define the organisation’s position and practices do not only afford guidelines as to how managers should respond to water scarcity, but they also provide a structure for action to reduce inefficient usage of water in the workplace.

The Water Conservation and Water Demand Guidelines of South Africa (DWAF, 2011) stipulates the need to reduce water use through measures such as efficient water usage and improved technology, in accordance with applicable rules and regulations. This process should include on site water conservation coupled with behavioural change which is critical as it helps to reduce the amount of water used as well as its sustainability. In addition, ‘conservation’ could be identified by using psychological constructs that underpins one’s personal distinguishable attitudes, beliefs, and values (Schein, 2015). Therefore, a water conservation behaviour will influence one’s “everyday” attitudes, intuitions and actions towards water saving and water efficient usage even in a workplace environment.

The aim of this paper is to determine the prevalence of water conservation and factors contributing to water conservation attitude and behaviour of managers at the workplace. Specifically, the study sought to investigate the relationship between water conservation attitudes, behaviour, and intentions of managers towards water conservation practices at North-West University, Mahikeng Campus in South Africa. It is aimed at determining why managers may or may not choose to engage in water conservation practices and not necessarily how managers conserve water in the workplace.

REVIEW OF LITERATURE

Theory of Planned Behaviour (TPB)

The Theory of Planned Behaviour (TPB) developed by Ajzen, (1991) has generated strong debate in the context of predicting the intentions of individuals to engage in water conservation behaviour. A central factor in the TPB is the individual’s intention to perform a given behaviour. The behavioural intention of an individual is grounded on the three predictors of behaviour namely: attitude toward the given behaviour, subjective norm, and perceived behavioural control (Blok, Wesselink, Studynka, & Kemp, 2015). Attitudes comprise of feelings, beliefs, and behaviours which are always directed towards a target (person, object, or event) and represent the degree to which that target is perceived favourable or unfavourable (Woods and West 2015). According to Fishbein & Ajzen (1975), attitude is formed by the beliefs about the likely outcomes of the behaviour (the salient beliefs) and the evaluations of these outcomes. The subjective norm (the normative beliefs) is the perceived social pressure to perform or

not to perform the behaviour. It is constructed by beliefs about the perceived expectations of others to carry out the behaviour and the motivation to comply with these expectations. Perceived behavioural control reflects the extent to which the individual feels he or she can carry out the behaviour, which is based on beliefs about factors that may facilitate or impede performance of the behaviour (control beliefs) and the perceived power of these factors (Ajzen, 1991). According to Barber & Legge (2017), perception is about receiving, selecting, acquiring, transforming, and organizing the information supplied through one's senses. The three TPB constructs; the attitude toward the behaviour, the subjective norms, and the perception of behavioural control, lead to the formation of a behavioural intention, which in turn leads to the performance of the behaviour (Ajzen, 1991). Building based on this theory, water conservation depicts changes in the behaviour of managers in response to the situation of water availability, demand, and supply.

In accordance with the TPB, managers can integrate water conservation attitudes and behaviours which could set environmental sustainability norms and perceptions within the workplaces. Such setting of norms and perceptions could generate environmental conduct and awareness, which could eventually build environmental consciousness towards sustainable utilisation of water resources. Yuriev, Boiral, Francoeur, & Paill, (2018) noted that workers in any organisation can voluntarily perform numerous environmental behaviours such as recycling, carpooling, or willingness to conserve water as an initiative to natural resources management. Based on the TPB, it is expected that perceived positive change of attitude has a positive relation with the intention to act pro-environmentally (Blok, Wesselink, Studynka, & Kemp, 2015), in this case to conserve water.

Factors determining attitude towards water conservation

Numerous studies have investigated determinants of water conservation and a significant body of works exists. Previous conversations pertaining to water conservation would have been understood as consequences of water availability, water shortages and/or water consumption due to natural forces as well as reticulation or lack of service delivery (McKenzie-Mohr, Nemiroff, Beers, & Desmarais, 1995). However, current views of natural resources conservation incorporate interaction between availability and pro-environmental behaviour (Foster & Pereira, 2015). Using relationships between environmental and water conservation attitudes and a domestic water end use, Willis, Stewart, Panuwatwanich, Williams, & Hollingsworth, (2011) noted that residents in the Gold Coast city, Australia with very positive environmental and water conservation attitudes, consumed significantly less water in total than those with moderately positive attitudinal concern. Those water users with positive attitudes towards environmental sustainability would tend to be more cautious when using water than those who do not highly value or consider the environment.

Adams (2014) investigated the links between pro-environmental behaviour and water conservation attitude. Results revealed that individuals who have a greater measure of willingness to sacrifice for the environment also have the tendency to engage in water conservation behaviour. While education and income (socio-demographic variables) did not show significant influence on the dependent variable, pro-environmental behaviour turned out to be a significant predictor of water conservation behaviour. Socio-demographic characteristics (age, education, gender, and income) showed that water conservation did not have an asserted relationship with a person's income, age, or level of education (Zietlowa & Michalscheck, 2016). Clark & Brown, 2006; Klein, Kenney, Lowery, & Goemans, 2006; Campbell, Johnson, & Larson, 2004 noted that demographic characteristics had an impact on the ability and capability of individuals to acquire and apply household water saving and water recycling measures.

Normative inclinations as well as perception of risk are found to be important for intention as well as actual water conservation behaviour (Yazdanpanah, Feyzabada, Forouzania, Mohammadzadeha, & Burton, 2014). Boland & Whittington, (2000) noted that for water conservation to be implemented, understanding of the multi-dimensional facet of the water problem and the acceptance of the need for water conservation is necessary. Attempts to promote voluntary action will

require an understanding of existing behaviour, and an understanding of how behavioural change can be influenced (Yazdanpanah, Feyzabada, Forouzanian, Mohammadzadeha, & Burton, 2014). Gilbertson, Hurlimann, & Dolnicar, (2011), investigated whether individual attitudes to water conservation, and reported participation in water conservation behaviour, differ between two Australian locations that vary significantly in their physical water situation. Results of the study revealed that there are significant differences in attitude and participation between the two areas. More people from the water-scarce location are supportive of most water conservation behaviour, and they are significantly more likely to state that they participate in water conservation behaviour (Gilbertson, Hurlimann, & Dolnicar, 2011). Besides water scarcity and pro-environmental behaviour as drivers of water conservation, some of the studies have reported significant relationships between the level and form of water prices and the adoption of water conservation behaviour by households (Aprile & Fiorillo, 2017; Dupont & Renzetti, 2013).

The above-mentioned studies, among many others, represent important contributions to the literature. Although there are abundant studies on attitudes toward water conservation at household level, it is not well established that the same factors explain water conservation attitudes and behaviour at the workplace (Blok, Wesslink, Studynka, & Kemp, 2015; Wesslink, Blok, & Ringersma, 2017). We believe that further theoretical development and empirical testing of factors that promote Manager's engagement in water conservation behaviours in the workplace is needed. Specifically, there is little theoretical understanding regarding how an organisations' environmental management practices promote Managers' involvement in water conservation behaviours. Included in such practices is how frequently Managers speak about water conservation, the degree to which they promote workplace environmental practices (e.g., closing leaking taps, reporting faults), and whether they are trained about water issues in the workplace. This research seeks to fill that gap.

Additionally, previous workplace studies focussing on employee's personal environmental attitudes, habits, personal norms, and intention are the most widely conducted (Norton, Parker, Zacher, & Ashkanasy, 2015). The scanty literature available reveal that Managers are in an influential position to make decisions that can impact on their employees. Robertson & Barling (2012) found that Managers' environmental descriptive norms, leadership and pro-environmental behaviour played an important role in the greening of organizations. Their study showed that the managers influence their employees in the workplace by sharing values, inspirational motivation, intellectual stimulation, and establish a relationship with their employees. Thus, our study contributes to and extends on the growing literature on Manager's involvement in promoting pro-environmental behaviour in organizations and its activities as well as the employees of the organizations.

A conservation attitude and behaviour occur when an individual in this instance, the Manager, holds a greater environmental concern and the need to preserve natural resources for future generations. Broadly understood as a behavioural construct, conservation is driven by either organisational or individual attitudes, perceptions, or intentions. This study answers two research questions namely: (i) what are the prevailing factors that influence the managers' behaviour to support water conservation? (ii) how do socio-demographic characteristics of managers relate to attitudes and behaviour towards water conservation within the workplace? The focus of the study was to explore the responses of managers to their own attitude, perceived behaviour as well as their subjective norms towards water conservation. The factors that might drive these relationships are discussed where they appeared to be significant.

RESEARCH METHODOLOGY

The main purpose of this study was to determine the prevalence of and factors contributing to a water conservation attitude and behaviour among managers at the North-West University – Mahikeng Campus. The study explored if manager's perceptions and intuitions about water conservation are based on socio-demographic factors and general attitudes towards this scarce resource. In this study, a

quantitative cross-sectional design was adopted through a survey questionnaire with selected senior management in their capacity as high-level decision makers. The attitudes and behaviours of managers were tested to determine the prevalence of and contributing factors of water conservation behaviour in the workplace. A correlational research design using Spearman's correlation analysis was used to describe the relationships between water conservation attitudes and behaviour among managers at NWU-Mahikeng and the socio-demographic variables such as awareness, gender, and length of service. The following hypothesis was tested in this study:

H₁: There exists water conservation attitudes and behaviour among the managers of the NWU-Mahikeng.

Data collection

For this study, Directors, Deputy Directors, Supervisors and Managers in key academic and support sections at NWU-Mahikeng were purposively chosen as respondents. The key support sections included: People and Culture (employee relations section), Finance and Facilities, and Research Support. Academic top-level managers included Deans, Deputy Deans, Directors, Deputy Directors and Subject Chairs from the six faculties of the NWU-Mahikeng and the Directors and Deputy Directors of research entities at the Mahikeng Campus. Survey questionnaire was distributed using Survey Monkey, an online data collection tool. Altogether 83 emails were sent to respondents. The survey took approximately ten to fifteen minutes to complete. The respondents also received a reminder two weeks after the initial survey distribution. Of the 83 managers who were targeted, 72 responded representing a total response rate of 87%. The total number of respondents that participated in the survey were 8 managers from the support cluster and 64 managers from the academic cluster. The proportion of managers from the two clusters is a natural reflection of the composition of the management structure at NWU-Mahikeng whereby there are more academic managers than support staff managers.

The study questionnaire

The survey instrument comprised only close-ended questions because such questions enhance comparability of answers, making it easier to show relationships between variables (Bryman & Bell, 2017). Efforts were made to guarantee that the response categories provided are comprehensive and mutually exclusive. Table 1 shows items of the attitude scale used to evaluate the three TPB constructs.

Table 1: Items of the attitude scale to evaluate the three TPB constructs

Attitude (salient beliefs)	The best solution to constant water problems on campus is: - to use more ground water - to apply water conservation mechanisms - to introduce water tariffs - to enforce water usage restriction - to install water conservation tools on campus to promote water savings
Subjective norms (normative beliefs)	• I report leaking water pipes or toilet sink to relevant authority • I make sure that the taps do not drip • I have a responsibility to conserve water at the workplace • I use minimal water for washing hands • I will address someone if I see them wasting water • I participate in activities that conserve water • I think I contribute to conserving water on campus

Perceived behavioural control (control beliefs)	• Training programs to help employees take responsibility of water resources are available • Speaking to staff and colleagues about water issues is encouraged • Water conservation education is offered to staff under me

The behaviour of interest (dependent variable) in this study is self-reported past water conservation behaviour, which was measured using the four questions that were included in the Likert scale focussing on the four domains (i) water usage attitudes (ii) water consumption attitudes (iii) water conservation behaviour and (iv) water conservation involvement. The Likert scale format had responses of 1 to 4, namely: 1 = Strongly disagree, 2 = Disagree, 3 = Agree and 4 = Strongly agree. The dichotomous scale had yes or no questions which focused on the practical subjective behavioural attributes of the respondents. Two questions required multiple responses about the respondents' perceived intention; to conserve water or not and respondents marked their preferred choice with 'X'.

DATA ANALYSIS

Reliability of measuring instrument

Reliability in research is a measure of quality in quantitative studies to assess the accuracy of the instrument. In other words, the extent to which a research instrument consistently has the same results if it is used in the same situation on repeated occasions (Heale & Twycross, 2015). In this study, reliability and internal consistency have been tested by using Cronbach's Alpha, some scholars have documented that an Alpha coefficient of possibly at least 0.7 is equally reliable (Vaus de, 2002b; Yong & Pearce, 2013). In this study, the Cronbach Alpha coefficient for the subscales were reported as 0.76 for water conservation attitudes.

In this study, description of the data involved univariate analysis. Frequency tables were drawn and further cross tabulated to describe and estimate the relationships between water conservation and behavioural attributes (awareness, perceptions/intuitions, and attitudes). To explore relationships between variables, Spearman's rank-order correlations were utilised to test the statistical significance of any observed relationships. Only cases that fulfilled the additional assumption concerning the 'minimum expected cell frequency', which should be 5 or greater (Pallant, 2005; Saunders, Lewis, & Thornhill, 2007), were included in the analysis.

RESULTS AND DISCUSSION OF FINDINGS

Characteristics of the respondents

Most of the respondents (61.1 %) were male, while 38.9 % were females; the majority were Subject Chairs or Heads of Departments (43.1 %), whereas only 9.7 % were Deans and Deputy Deans. In terms of the post level category, more than 88.9 % of the respondents were from the academic sector, with only 11.1 % respondents occupying a position in the support sector of the university. Regarding the number of service years on the Mahikeng Campus, the majority (50.0 %) of the respondents served in management for a period of 5 years and longer, holding different portfolios. Only 11.1 % had been involved in management for about one year.

Determinants of water conservation in the workplace

Salient beliefs towards water conservation

Based on the experiences of respondents, the study sought to identify the possible solutions to the prevalence of water shortage. Half of the respondents (50 %) perceived that water conservation mechanisms offer the best solution to water shortages. About 38.9 % of the respondents held the opinion that using more groundwater would help to alleviate the problem. Finally, 11.1 % indicated that imposing water restrictions as a driver of behavioural change would be the best solution to the persistence of water shortages on Campus. The findings of this study suggest that in response to water shortages, practical solutions to bridge the intention and action gap must be implemented to address the water issues. This process should include on site water conservation which is critical as it helps to reduce the amount of water used and contributes to the sustainable use of water. Therefore, based on the study results, it means that water conservation mechanisms could be employed at all levels in the organisation (top to bottom) to ensure the conventional use of water during drought and other times when water is in short supply.

Managers' perceived subjective norms towards water conservation in the workplace

The descriptive statistics shown in Table 2 depict respondents perceived subjective norms towards water conservation in the workplace.

The results in Table 2 reveal that 100 % of the respondents agreed that they '*make sure that the taps do not drip*' (M = 3.72, SD = 0.45), and they also believed that they *have a responsibility to conserve water at the workplace* (M = 3.67; SD = 0.48). The combined responses further reveal that 94.5 % of the respondents agreed that they would '*use minimal water for washing hands*' (M = 3.44; SD = 0.77). In addition, a more positive subjective norm was associated '*addressing someone if I see them wasting water*' (M = 3.33; SD = 0.75; 94.4 %); meaning that managers encourage each other to conserve water in the workplace. 88.8% of the respondents agreed that they '*report leaking water pipes or toilet sink to relevant authority*' (M = 3.39; SD = 0.83).

Table 2: Respondents' perceived subjective norms towards water conservation (N=72)

Scale and items	Mean	SD	Agree	Disagree
I make sure that the taps do not drip	3.72	0.45	100	0
I have a responsibility to conserve water at the workplace	3.67	0.48	100	0
I use minimal water for washing hands	3.44	0.77	94.5	5.5
I will address someone if I see them wasting water	3.33	0.75	94.4	5.6
I report leaking water pipes or toilet sink to relevant authority	3.39	0.83	88.8	11.2
Overall mean	3.51			

The overall mean score shows that the attitude of respondents towards water conservation is positive. This means that positive outcomes are associated with carrying out the behaviour. Fewer managers encounter less factors which impede water conservation than factors which enable water conservation in the workplace. Thus, based on the overall mean, there is a prevalence of water conservation attitude and behaviour among managers at NWU-Mahikeng.

Managers' perceived behavioural control and water conservation in the workplace

Generally, Fishbein & Aizen (2010) noted that the more favourable the attitude and subjective norm, and the greater the perceived behavioural control, which could result into a stronger individual's intention to perform the behaviour. Once managers have stronger intention, they are more likely to engage in water conservation behaviour. In this case, the perceived behavioural control is driven by existing situational and internal factors to inhibit or facilitate the performance of the behaviour. The internal factors relate to programs that provide knowledge about water conservation through awareness platforms such as water issues conversations and training.

Survey results indicated that 33.3 % of the respondents never speak about water conservation. Additionally, combined responses for 'occasionally' and 'sometimes' (61.1 %) revealed that most of the managers held the opinion that there are infrequent conversations about water issues. Only 5.6 % of the managers indicated that they speak to their staff/colleagues about water issues (supply, quality). In terms providing awareness on Campus, only 5.6 % and 16.7 % of the Managers reported that there are training and educational programs in water resources conservation respectively.

The results depicted a statistically significant correlation between speaking about water conservation and reporting '*leaking water pipes or toilet sink to relevant authority*' ($r = 0.302^*$, $P = 0.010$), indicating a weak positive association. Also, speaking about water conservation ($r = 0.201$, $P = 0.91$) and water conservation education ($r = 0.055$, $P = 0.207$) are positively correlated with water conservation behaviour such as '*making sure that the taps do not drip*'. However, for a majority of the attitude constructs, statistically significant negative correlations were reported between training on water issues ($r = -.263^*$, $P = .026$), water conservation education ($r = -0.392^{**}$, $P = 0.001$) and the perceived attitudes; speaking about water conservation and a responsibility to conserve water ($r = -0.060$, $P = 0.619$), *address someone if I see them wasting water* ($r = -.051$, $P = 0.669$) and *use minimal water for washing hands* ($r = -.161$, $P = 0.177$). Similarly, negative correlations are reported for training in water conservation and '*reporting leaking water pipes or toilet sink to relevant authority*' ($r = -.210$, $P = 0.076$), '*making sure that the taps do not drip*' ($r = -.150$, $P = 0.644$), a responsibility to conserve water at the workplace ($r = -.171$, $P = 0.067$) and '*using minimal water for washing hands*' ($r = -.213$, $P = 0.073$). Water conservation education followed a similar negative correlation trend: '*report leaking water pipes or toilet sink to relevant authority*' ($r = -.129$, $P = 0.280$) and *will address someone if I see them wasting water* ($r = -.210$, $P = 0.076$).

The perceived behavioural control revealed that speaking about water conservation, training about water issues and water conservation education was weakly positive suggesting that managers encounter factors which enable water conservation as well as those that hinder it. Since we looked at the intention to carry out a behaviour, the effect of perceived behavioural control through speaking, training and education is an appropriate proxy for intentions and behaviour towards water conservation. However, the negative correlations depict that Managers appeared to have inadequate understanding of water, low awareness of saving water, and limited knowledge of water conservation which could inhibit behavioural change. According to Çoban, Akpınar, Küçükçankurtaran, Yıldız, & Ergin, 2011, conversations about water issues enhance one's understanding of water, promote attitudes towards water usage, and increase awareness of water conservation. In addition, water conservation education promotes awareness and has effects on general environmental concerns as well as water conservation behaviour (Aprile & Fiorillo, 2017). Based on the findings of this study, the lack of training and education programs about water conservation exhibits negative water saving behaviour.

Relationships between gender, length of service and water conservation behaviour

Gender and water conservation

The Spearman's rho correlation analysis in Table 3 reveals that the correlations between gender and the attitude of '*reporting leaking water pipes or toilet sink to relevant authority*' are perfect, which shows a strong significant relationship. The perceived subjective norm towards water conservation behaviour could be related to the expected positive results of water conservation i.e., saving water bills, alleviating water shortage, and protecting the environment (Tong, Fan, & Niu, 2017). A concern for

natural resources and perceived subjective intention could influence individuals toward water conservation attitudes (Yuriev, Boiral, Francoeur, & Paill, 2018).

Table 3: Spearman's rank-order correlation analysis between gender and attitude

Variable	Gender		Correlation	Sig. (2-tailed)
I report leaking water pipes or toilet sink to relevant authority	Female	28	1.000	-
	Male	44	1.000	-
I make sure that the taps do not drip	Female	28	-0.255	.191
	Male	44	0.198	0.197
I have a responsibility to conserve water at the workplace	Female	28	0.509**	0.006
	Male	44	0.319*	0.035
I will address someone if I see them wasting water	Female	28	0.000	1.000
	Male	44	0.592**	0.000
I use minimal water for washing hands	Female	28	0.197	0.314
	Male	44	0.444**	0.003

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

Although the number of males and females was not proportional, it is interesting to note the behavioural differences presented by the different genders. A moderate positive statistically significant relationship between gender (both females and males) and the attitude of '*taking responsibility to conserve water at the workplace*' ($r = 0.509^{**}$, $P = 0.006$; $r = 0.319^{*}$, $P = 0.035$ respectively). Hablemitoglu & Ozmete (2010), found that water conservation consciousness is more prevalent among women than males because of past experiences, general women hygiene, and memories of hard times of water shortage and inconvenience of collecting water. Spearman's rank-order correlation results indicate that male respondents are significantly different from females regarding the attitude of *using minimal water for washing hands* ($r = 0.444^{**}$; $P = 0.003$). The female respondents portray a negligible insignificant correlation ($r = 0.197$) towards the attitude of using minimal water for washing hands. In other words, males are more likely to use less water than females. These results are similar to the research findings by Tong, Fan, & Niu, 2017, which noted that females consumed twice as much water compared to their male counterparts. Based on the results, gender was a significant predictor of water conservation behaviour.

Length of service and water conservation

The positive correlation between length of service above 5 years and managers' attitude of '*making sure that the taps do not drip*' shows a statistically significant effect ($r = 0.791^{**}$; $P = 0.000$) which could be interpreted as a strong relationship (Table 4).

Table 4: Spearman's rank-order correlation analysis between length of service and attitude

Variable	Length of Service (yrs)	Correlation	Sig. (2-tailed)

I report leaking water pipes or toilet sink to relevant authority	0-1	-	-
	2-5	1.000	-
	>5	1.000	-
I make sure that the taps do not drip	0-1	1.000	-
	2-5	-.529**	0.004
	>5	.791**	0.000
I have a responsibility to conserve water at the workplace	0-1	-	-
	2-5	.000	1.000
	>5	1.00**	-
I will address someone if I see them wasting water	0-1	-1.00**	-
	2-5	.733**	0.000
	>5	.550**	0.001
I use minimal water for washing hands	0-1	-	-
	2-5	.452*	0.016
	>5	.550**	0.001

The relationship between the attitude of *using minimal water for washing hands* and managers' who have been in service for 2-5 years and >5 years shows a statistically significant positive effect ($r = 0.452^*$, $P = 0.16$; $r = 0.550^{**}$, $P = 0.001$) indicating a moderate relationship. These findings suggest that length of service is a significant factor influencing Managers' positive environmental attitudes and concerns towards water conservation. According to Raza, Farruh, Iqbal, Farhan & Wu (2021), individuals develop a sense of belonging and an emotional attachment which could motivate positive behavioural intentions in their work-related engagement concerning voluntary pro-environmental behaviour (e.g., water conservation, energy saving, recycling etc) in a person's everyday life. This may explain the significant effect of subjective norm on the behavioural intention of water conservation in this present study.

CONCLUSION

The results of this study showed that there is a prevalence of water conservation behaviours and attitudes at the NWU-Mahikeng Campus. Managers at the institution are aware of the water scarcity problems in Mahikeng and on the Campus. The study indicated that the contributing factors towards a water conservation attitude are to a large extent dependent on gender and length of service while awareness (training and education) exhibited as barriers towards water conservation. Water conservation behaviours and behavioural intentions among managers at NWU-Mahikeng can be explained more clearly by using the TPB indicators. Behaviour is strongly impacted by behavioural intention which is significantly affected by subjective norm, perceived behavioural control and attitude. However, empirical evidence from the findings of this study shows that the lack of awareness in terms of educational programs and training are barriers to a water conservation attitude. The findings of this study revealed that critical platforms (such as training and education about water conservation) are not in place to trigger commitment to behavioural change. According to Dieu-Hang, Grafton, Martínez-Espineira, & Garcia-Valinas, (2017), information and educational campaigns are expected to change attitudes towards conservation. However, Trail & McCullough (2021) noted that only sustainable engagement campaigns to understand the target audience's personal needs and values are likely to promote water conservation behaviour.

Implications, limitations, and recommendations

The results of this study hold several implications for public and private institutions that are interested in promoting water conservation at the workplace. Given the threat of water scarcity associated with climate change and unsustainable water resources, institutions must promote water conservation behaviour among employees. This study contributes to and extends our understanding of the water conservation behaviour in the workplace and identified the justifications of conservation. From a managerial viewpoint, the findings provide support for pro-environmental decisions that address the importance of an individual's personal attitude, subjective norm and perceived behavioural control on interpreting and applying the organization's environmental sustainability objectives.

Additionally, the research illustrates how an existing behavioural theory, i.e., TPB, can successfully be modified and adopted to explain behaviour in the field of water resources management. This study has demonstrated the existence of relationships between gender, length of service, awareness and behaviour pertaining to water conservation. This study contributes to the TPB literature by extending it to include organisational citizenship behaviours like pro-environmentalism and psycho-socialisation such as subjective norms, attitudes, and intentions. The individual drivers related to personal responsibility for environmental sustainability have revealed the necessity of providing specific water conservation messages targeting attitudinal approaches that could enable managers, and employees in general, to practice water saving in the workplace. On that basis, when implementing water conservation activities, managers should consider incorporating awareness strategies that may trigger positive attitudes, perceptions, and intentions to conserve water at the workplace. As such, the design of generic as well as tailor-made education and training programmes on water conservation could provide the necessary knowledge related to addressing behavioural change.

Although efforts have been made through this study to determine the prevalence and contributing factors towards a water conservation attitude and behaviour among managers at an institution of higher learning, the study has unearthed several issues that require further research. The first potential limitation of this study is that it adopted a cross-sectional research design, which means that it took a snapshot of the situation regarding behavioural change in the workplace. A longitudinal study can be done to examine behavioural change if water-efficient appliances, water conservation training and educational programmes were to be implemented in the workplace. Nonetheless, the study identified that gender, length of service and awareness are the contributing factors towards water conservation attitudes among the managers. Secondly, the constructs used to create behavioural attitude, perceptions and intentions toward water conservation are not exhaustive nor are they exclusive. Additional constructs of behavioural attitude may result in different conclusions. However, this study has made an invaluable contribution by acknowledging that proper management of water starts with management at all levels as well as other stakeholders having a water conservation attitude and behaviour in support the UN 2030 agenda on Sustainable Development Goal number 6 of the United Nations are to be realised (United Nations World Water Assessment Programme, 2018).

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THE IMPACT OF TRANSFORMATIONAL AND SERVANT LEADERSHIP ON JOB SATISFACTION IN EGYPT

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ABSTRACT

This study is an empirical investigation of the distinctions between the Two Styles (transformational leadership & servant leadership) and the effect of each of them on employee's job satisfaction, applying to a random sample of employees in Egypt, as it is one of the strongest countries in its African continent economically as the third place in 2021 with a value of \$396.3 billion with Population of 104 million in 2021 as the third place in Africa.

Therefore, Egyptian organizations similar to most of the other countries attempt to improve their performance. From human resource management perspective, in order to increase performance, there should be improvement of employee job satisfaction. For measuring the employees' job satisfaction, the relevant literature emphasized intrinsic and extrinsic job satisfaction. Leadership style is one of the important factors that have the potential to improve the organizational performance. It is important to know which leadership style has most influence in making changes in an organization to enhance job satisfaction, productivities and sales. The independent variables are the transformational and servant leadership styles. The dependent variable is job satisfaction. The sample size was 200 and the response rate was 60%. The study found that transformational leadership style has a positive effect on job satisfaction, whereas servant leadership style has an insignificant effect on job satisfaction. Therefore, it can be argued that the transformational leadership style is more effective in the Egyptian markets. At the end of the study, the limitations and several recommendations will be addressed and presented in this study.

Keyword: Leadership Styles, Job Satisfaction, Egypt

INTRODUCTION

Every organization wants to have the best human resources to achieve its objectives but this can be only possible when it has a satisfied workforce, because a satisfied workforce exerts more efforts and works hard to achieve organizational objectives (Dorfmann & Zapf, 2001). The more the employees are satisfied with their jobs, the more efforts they will exert to achieve organizational objectives (Blakely et al., 2003), and satisfaction of employees with their jobs has a direct effect on the success of the organization (Shaukat et al., 2012). Moreover, an organization that fosters high employee job satisfaction is also more capable of retaining and attracting employees with the skills that it needs (Mosadegh Rad & Yarmohammadian, 2006). However, if employees are dissatisfied with their jobs it will show adverse results like withdrawal behavior, growing cost, lowering profits and finally customers' dissatisfaction (Allen & Wilburn, 2002). Therefore, organizations attempt to increase job

satisfaction in different organizational levels according to their expectations in order to increase organizational performance (Gelens Dries, Hofmans, and Pepermans, 2013; Hastie and Dawes, 2010). Effective leadership and employee job satisfaction are two factors that have been regarded as fundamental for organizational success. Researchers have found that leadership style has a significant influence on organizational performance and success (Jamaludin, Rahman, Makhbul, & Idris, 2011). In addition, Leadership style in an organization is one of the factors that play significant role in enhancing or retarding the interest and commitment of the individuals in the organization (Obiwuru et al., 2011). Several studies have also examined the relationship between the two factors and concurred that leadership has significant impacts on job satisfaction and organizational commitment (Lok & Crawford, 1999, 2001; William & Hazer, 1986; Mosadegh Rad & Yarmohammadian, 2006).

Egypt's economy is the third largest economy in Africa after Nigeria and South Africa regarding nominal GDP, the sixth largest in the Middle East, and 35th in worldwide ranking as of 2021. Moreover, the International Monetary Fund's expectations indicate that the Egyptian economy will be the second largest in Africa during 2022, with a value of \$438.3 billion, compared to obtaining the third place in 2021 with a value of \$396.3 billion. In addition, Egypt accommodating many international companies in light of globalization and its distinguished location in Africa and the Middle East.

The labor force in Egypt is about 29 million distributed on different industries like textiles, food processing, tourism, chemicals, pharmaceuticals, hydrocarbons, construction, cement, metals, light manufactures. Though organizations concerned with job satisfaction and how to maintain it, with contemporary challenges such as digital transformation, Employees national diversification and sustainability. Hence, it becomes imperative for the Egyptian companies to keep its employees satisfied with their jobs so that they can maintain its position in this competitive industry.

Research on leadership domain has been conducted all over the world and leadership styles that have been found most common are autocratic, bureaucratic, laissez-faire, charismatic, democratic, participative, situational, transactional, and transformational leadership (Mosadeghrad, 2003) but out of all these styles these are the transformational and transactional leadership styles that are mainly related with the job satisfaction of employees (Powell et al., 2008; Ahmad et al., 2013). In comparison to other leadership styles, transformational leadership is more effective in increasing employee commitment, performance and job satisfaction (Banks, McCauley, Gardner & Guler, 2016). On the other hand, increased attention has been directed at, and value placed on, an approach termed 'servant leadership' which is Originally described by Greenleaf (1977), characterizations of servant leadership include an understanding and practice of leadership that places the good of those led over the self-interest of the leader, emphasizing leader behaviors that focus on follower development, and de-emphasizing glorification of the leader (Barbuto and Wheeler, 2006; Farling et al., 1999; Laub, 2004). Consequently, the servant approach to leadership also seems to be distinct from other approaches to describing patterns of leader behaviors, such as transformational leadership, transactional leadership and dyadic linkages (Barbuto and Wheeler, 2006; Liden et al., 2005).

This study aims to investigate the theoretical framework, characteristics, and focus of both transformational leadership and servant leadership to determine what similarities and differences exist between the two leadership styles and their relation with employee's satisfaction in the Egyptian organization.

LITERATURE REVIEW

In order to reach the impact of leadership styles on job satisfaction, we have to define leadership and its theories and styles. Many articles and books have defined leadership. In a study indicated by Dubrin (2004) reveals that about 40,000 research articles, magazine articles, and books have been written about leadership. An act that causes others to act or respond in a shared direction.

Leadership definitions

The process by which an individual exerts influence over other people and inspires, motivates and directs their activities to achieve group or organizational goals.

- The art of influencing people by persuasion or example to follow a line of action.

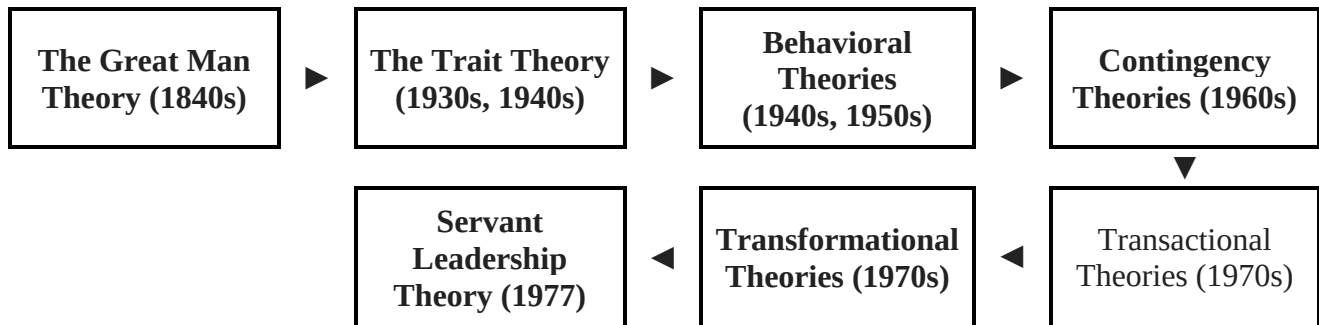
- Jong and Hartog (2007) described leadership as a process to influence people in order to get desired results.
- leadership can be seen as a process where the leaders affect and are affected by their followers positively and negatively (Rowe, 2007)
- It is better to lead from behind and to put others in front, especially when you celebrate victory when nice things occur. You take the front line when there is danger. Then people will appreciate your leadership. —Nelson Mandela.

To wrap up, we can say that the leadership is a process in which someone influence others in order to achieve a shared goal. In addition, leadership is not existed only among people at high levels. Leadership is needed at all levels in an organization and can be practiced to some extent even by a person not assigned to a formal leadership position (Dubrin, 2004).

Leadership Theories

Leadership theories in the literature began by the theory of “Great Man” and come to the most recent styles of transactional, transformational and servant leadership and between those we have been focusing on leader’s traits, behaviors, and the situational/contingency factors.

Figure 1. Leadership common theories



The Great Man Theory

Our journey starts by the theory of “Great Man” which has been originally emerged in the nineteenth century by Scottish historian Thomas Carlyle, (1841) who declared, “The history of the world is but the biography of great men”. It assumes that leaders are always born and cannot be made. In addition, their qualities are born with them and it cannot be learned. Hence, they were born leaders and the word “Man” was used because initially men were only thought to be leaders (Bolden, 2004). On the other hand, the Great Man Theory, like many theories, is not without criticism. Smith (1964) criticized the theory in several ways. First, he asserted that great leaders do not have universal traits in common and the application of those traits also happen in myriad ways. In addition, he asserted that different traits are demanded and valued by different societies. Moreover, Smith argued further that in the same society, different organizations demand different traits and that within an organization different department would demand different traits.

Trait Theory

The trait theory became popular at the end of the 20th century and it was considered the first modern theory of leadership in which researchers approached leadership by emphasizing various leaders’ attributes. These attributes, or traits, could include personality, motives, values, and skills (Yukl, 2006). According to Bass (2008), leaders and non-leaders differ in their attributes and tested personality traits. Moreover, leaders tend to be higher in things such as extroversion, self-confidence, and height, while the differences tend to be small. For example, if the leader is extroverted, that

individual is outgoing, straight-forward, and usually has a huge ego. If he or she is introverted, they are usually timid, have terrible social skills and usually lack the ability to lead followers.

Studies conducted on the Traits Theory spanned the entire 20th century; however, Stogdill (1974), who is one of the researchers associated most with this theory, conducted a meta-analysis of more than 120 trait studies that were performed between 1904 and 1974. His findings indicated that the average individual in a leadership role differs from an average group member with respect to the following eight traits: intelligence; alertness; insight; responsibility; initiative; persistence; self-confidence, and sociability. Stogdill conducted a second analysis on more than 160 new studies between 1948 and 1970, and the findings indicated that these same traits were associated positively with leadership (Northouse, 2015).

Critics of the trait approach like Hollander and Julian (1969) note that it failed to provide a definitive list of leadership traits as well as to take into account the effect of specific situations also criticized trait theory because of its failure to determine the most important traits that could be associated with effective leadership. In addition, Gordon (1981) summarized numerous studies that placed emphasis on leadership traits, citing their inability to totally explain leadership success.

Therefore, the numerous shortcomings of the trait approach led many researchers to try to find a better explanation of leadership ability (Griffin, 1990). Consequently, in the early 1950s, researchers had changed their focus from studying the personal characteristics of leaders to the study of leader's observable behaviors (Schermerhorn et al., 1982). However, traits still are considered to be significantly important in the study of leadership (Bass, 2008).

Behavioral Theory

During the 1950s, the behavioral approach began after the researchers found that trait theory was not an adequate approach to explain leadership effectiveness, they started to focus on behavioral traits of leaders. It emphasizes what leaders do and the way in which they act rather than who they are. Therefore, these theories can be regarded as the opposite to the Great Man Theory. They also contrast with the Trait Theory, which emphasizes leaders' personality characteristics (Northouse, 2015). Researchers who have studied behavior theories determined that leadership is composed of two general kinds of behaviors: task behaviors, which facilitate goal accomplishment, and relationship behaviors, which help subordinates feel comfortable with themselves (Northouse, 2015). In the late 1940s, Ohio State University researchers conducted one of the most powerful studies of this approach. They found two general types of leader behaviors: initiating structure behaviors (task behaviors), the behavior that is concerned with defining and organizing the work, work relationships and goals and consideration (relationship behaviors), that is concerned with mutual trust, respect, and rapport between the leader and his subordinates. In addition, it helps followers feel comfortable with themselves, with each other, and with the situation in which they find themselves (Northouse, 2015). Researchers at the University of Michigan took this a step further in their study of leadership behaviors. Their results were similar to those of the Ohio State study, but referred to leader behaviors as employee oriented and production oriented (Northouse, 2015). Production-oriented leadership style emphasized close supervision, legitimate and coercive power, routine, and performance, while employee-centered leadership style were described as more concerned about their subordinates as people. These leaders recognized the needs of followers, such as welfare, advancement, and growth. However, critics of the behavioral approach pointed out that behavioral theory researchers have been unable to establish a universal set of leadership behaviors that are linked to effective leadership. In addition, they have not been able to associate the behaviors of leaders with outcomes such as job satisfaction and morale (Northouse, 2015).

Contingency Leadership Style Theories

In the 1960s, the first contingency leadership theory was developed by Fred Fiedler. The main idea of the theory is that group effectiveness is dependent upon the proper match between the leader's personality or style and the demands of the situation. In addition, Fiedler (1967) mentioned, "We can improve group or organizational performance either by changing the leader to fit the situation or by changing [the] situation to fit the leader" (p. 247). Moreover, he also explained that the success of relationship- and task-oriented leaders is dependent on the demands of a particular situation (Bass,

2008). In addition, the Path- Goal theory is a contingency model of leadership developed by Robert House and based on effective leaders' help those in their direction attain their goals; they create clear paths to help their subordinates achieve goals and that they work to remove obstacles that stand in the way. Moreover, Vroom-Yetton-Jago Decision-Making Model of Leadership, this contingency leadership model puts forth the idea that effective leaders' size up situations, assess them and then determine how much support the group will give toward the effort, adjusting their preferred leadership style to fit.

To sum up, these contingency theories are concerned with styles (a personality trait) and situations (fairly constant), and the cornerstone of the leader's style is both task- and relationship-oriented. Therefore, the primary goal of the former is task success, while the primary goal of the latter is relationship success. Although contingency theories have made a substantial contribution to our understanding of the leadership process, critics have argued that they cannot be used easily in ongoing organizations (Northouse, 2013).

Transformational leadership

According to Nielsen, Yarker, Brenner, Randall and Borg (2008:466), transformational leaders are described as leaders who broaden and elevate the interests of their followers, stimulate awareness and enable them to transcend their own interests for the betterment of the organization. In addition, transformational leadership is viewed as a people-oriented leadership style where emotional attachments occur between the leader and follower Mester, Visser, and Roodt (2003:74). Other researchers like Naidu and Van der Walt (2005:2) view transformational leaders as people who inspire their followers to work towards the good of the company both in the short-term and long-term.

Transformational leadership attribute

Idealized Influence

The leader makes an effort to promote his/her beliefs and values through influence (Flynn, 2009:3). Hence, idealized influence comes into play when the leader expresses a sense of conviction and confidence, when making high impact decisions in the face of threats (Nielsen, Yarker, Brenner, Randall and Borg, 2008:467). In addition, Ozaralli (2002:335) also describes idealized influence as a process where the leader instills faith, pride and respect among followers through inspiration.

Intellectual stimulation

Intellectual stimulation pivots on promoting innovative ideas and creativity among followers. According to (Mester et al., 2003:73) intellectual stimulation occurs when the leader encourages creativity among followers to look for new and more efficient ways of solving problems compared to methods employed in the past. Moreover, the leader encourages followers to challenge their conventional problem solving abilities and explore other avenues in order to stimulate deeper and innovative thinking (Barling, Comotis, Gatien, Kelloway and Kelly, 2003:163). This can be done through brainstorming and problem solving techniques which are utilized to guide the innovative thinking process.

Individualized Consideration

Mester et al., (2003:73) explain individualized consideration as a process whereby the leader identifies individual uniqueness, links the individuals' current needs to the organization's needs and provides coaching, mentoring and growth opportunities. Therefore, the understanding of followers' personality is the key guide for this dimension. In addition, the leader plays the role of the listener and give supporting and offers a caring climate for his employees. In addition, the leader's aim is to assist employee personal development, while assessing ways to help individuals in meeting their aspirations. Finally, leaders allow followers to grow through personal challenges within the process of delegated authority.

To wrap up, a transformational leader can be viewed as a people orientated person who aligns followers towards the vision and goals of an organization. In addition, he can also be characterized as an empathetic person who focuses on people development.

Servant leadership

The new style of leadership which is Servant leadership began with Robert Greenleaf's (1970) article, "The Servant as Leader," as only a theory, later a lot of contributions included imperial studies about this topic has been published.

According to Parris and Peachey (2013) who determined through their literature research, that servant leadership is a humanistic leadership style that encourages followers to adopt behaviors based on societal values and shared beliefs. In addition, (Liden et al., 2014) stated that Servant leadership considers organizational goals as a secondary priority that, even when leaders focus on the needs of employees first, would eventually be achieved. Moreover, Liden, Wayne, Liao, and Meuser (2014) found that servant leadership inspired followers to become more committed, develop trusting relationships, embrace learning, and seek work fulfillment.

Furthermore, Sun (2013) stated that servant leadership is different from other leadership styles and, in its distinctiveness, offers the potential to have a unique influence on organizations and their stakeholders. Hence, Servant leadership is a practice that places the good of others over self-interest by valuing others (Choudhary et al., 2013; Trastek et al., 2014). In addition, Parris and Peachey (2013) described how servant leaders established clear goals and direction, resulting in a more satisfied workforce. Hence, when employees perceive that their supervisors are committed to service, empowerment, and a shared vision, they are more likely to see the organization as one that embraces servant leadership (Beck, 2014). Another strong focus on supporting followers suggests that servant leadership might strengthen the link between goals and team processes by elevating each member's commitment to shared organizational goals. Hence, the importance of the commitment of followers is exemplified by its relation to improved organizational and job performance and a decrease in absenteeism, tardiness, and turnover (van Dierendonck, Stam, Boersma, De Windt, & Alkema, 2014). Committed employees who are encouraged to be creative, help develop learning organizations where individuals feel safe to take risks and make mistakes (van Dierendonck & Nuijten, 2011). In conclusion servant leadership has a great impact on employee satisfaction and commitment by setting clear goals, listening to their subordinates and put priorities for their followers needs and they can scarify to achieve their followers needs.

Job satisfaction

Human resources are considered the most valuable assets and a major factor to achieve organizational objectives. Organizations can achieve success when its employees are committed and hard worker that can only be possible when they are satisfied with their jobs. Job satisfaction is defined as "a pleasurable or positive emotional state resulting from one's job or job experiences" (Sempane et al, 2002). Later, (Ajila and Omolayo, 2012) stated that employee's job satisfaction is the attitudes of the employees towards their job as well as what they feel about the work. Compare to past, employees are more concerned with their jobs now and expect to get more satisfaction. They make job satisfaction as a base to stay in the current organization or leave it for another (Bosman & Nalla, 2009). Job satisfaction has major impact on employees' productivity (Lim, 2007).

Leadership and employees 'Job satisfaction

Job satisfaction of employees can be enhanced through many factors like working conditions, work itself, supervision, policy and administration, advancement, compensation, interpersonal relationships, recognition and empowerment (Castillo and Cano, 2004) but leadership has a major relationship to enhance employees' job satisfaction (Wexley and Yukl, 1984). In addition, some researchers discovered that different leadership styles will engender different working environment and directly affect the job satisfaction of the employees (Bogler, 2001, 2002; Heller, 1993; McKee, 1991; Timothy & Ronald, 2004).

Moreover, the quality of leader-employee relationship has a significant relatedness with employees' job satisfaction (DeCremer, 2003). On the other hand, negative leader-employee relationship has various adverse impacts on the employees as it reduces productivity, increases absenteeism and the turnover and intentions to quit.

According to (Emery & Barker, 2007) transformational leaders tend to encourage and motivate their followers to take on more responsibility and autonomy thereby enhancing employees' sense of

accomplishment and satisfaction with their job. On the other hand, a correlation exists between servant leadership and workplace attitudes and commitment (Chan & Mak, 2014), which influences job satisfaction. As a management strategy, research conducted by Bobbio and Manganelli (2015) found that servant leaders improved the job satisfaction and retention of nursing staff. This improvement relates to a positive increase in the intrinsic motivation of followers (Chen et al., 2013). In addition, Tischler, Giambatista, McKeage and McCormick (2016) conducted a field study of three firms and found that servant leadership predicts both core self-evaluation and job satisfaction, and that core self-evaluation also predicts job satisfaction.

To wrap up, according to the literature discussed above there are a big similarity between transformational leadership and servant leadership because they treat their followers well by listening to their opinions, encouraging them to participate, setting clear goals and offering a healthier climate for innovation and creating new ideas. On the other hand, the major difference between both styles is that servant leader give more concern for their follower needs up on themselves.

Consistent with the objectives of the study, two hypotheses were developed for testing this study:

H1: There is significant positive relationship between transformational leadership and job satisfaction among employees in Egypt.

H2: There is significant positive relationship between servant leadership and job satisfaction among employees in Egypt.

RESEARCH METHODOLOGY

Data was collected through survey questionnaires from targeted employees working in different companies in Egypt which are classified according to their structure (public, private, joint venture and nonprofit organization). The respondents included employees from different levels in the company such as Senior, Section Head, and project manager, Manager, Head of Department and Executive. A total of 200 questionnaires were distributed to selected companies using a convenient sampling method. However, only 120 employees responded to the survey, resulting in a 60 percent response rate. The measuring instrument for data collection from the employees is in the form of questionnaires which consists of close-ended questions and few open-ended questions and is divided into four sections. Section 1 consists of 5 items measuring the personal profile and demographic characteristics of respondents. Section 2, 3 and 4 consist of 20 items measuring superiors' leadership styles and job satisfaction among the employees using a 5- point Likert scale. Data was analyzed using SPSS. In this study, independent variables are divided into two types of leadership style namely, transformational and servant leadership style. The dependent variable was job satisfaction.

FINDINGS AND DISCUSSION

The demographic characteristics of respondents are reported in the following Tables:

Table 1. Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	95	79.2	79.2	79.2
	Female	25	20.8	20.8	100.0
	Total	120	100.0	100.0	

Table 2. Age group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-29	3	2.5	2.5	2.5
	30-39	46	38.3	38.3	40.8
	40-49	57	47.5	47.5	88.3

50 Above	14	11.7	11.7	100.0
Total	120	100.0	100.0	

Table 3. Company structure

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Private	68	56.7	56.7	56.7
Public	39	32.5	32.5	89.2
joint venture	10	8.3	8.3	97.5
nonprofit organization	3	2.5	2.5	100.0
Total	120	100.0	100.0	

Table 4. Job level

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Manager	45	37.5	37.5	37.5
Head of Department	40	33.3	33.3	70.8
Executive	25	20.8	20.8	91.7
Section Head	5	4.2	4.2	95.8
Senior	2	1.7	1.7	97.5
Project Manager	1	.8	.8	98.3
Assistant General Manager	1	.8	.8	99.2
Owner	1	.8	.8	100.0
Total	120	100.0	100.0	

Table 5. Years of experience with current company

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 15 Above	62	51.7	51.7	51.7
11-15	30	25.0	25.0	76.7
Less 5	15	12.5	12.5	89.2
5-10	13	10.8	10.8	100.0
Total	120	100.0	100.0	

Table 6. Descriptive Statistics

	Mean	Std. Deviation	N
Job satisfaction	3.9000	.89464	120
Transformational Leadership	3.4275	.96397	120
Servant Leadership	3.1560	.94543	120

Table 7. Correlations

		Job satisfaction	Transformational Leadership	Servant Leadership
Pearson	Job satisfaction	1.000	.489	.449
Correlation	Transformational Leadership	.489	1.000	.850
	Servant Leadership	.449	.850	1.000
Sig. (1-tailed)	Job satisfaction	.	.000	.000
	Transformational Leadership	.000	.	.000

N	Servant Leadership	.000	.000	.
	Job satisfaction	120	120	120
	Transformational Leadership	120	120	120
	Servant Leadership	120	120	120

Table 8. Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.493 ^a	.243	.230	.78490

a. Predictors: (Constant), Servant Leadership, Transformational Leadership

b. Dependent Variable: Job satisfaction

Table 9. ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.165	2	11.582	18.801	.000 ^b
	Residual	72.080	117	.616		
	Total	95.244	119			

a. Dependent Variable: Job satisfaction

b. Predictors: (Constant), Servant Leadership, Transformational Leadership

Table 10. Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		Correlations			
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part
1	(Constant)	2.310	.269		8.585	.000			
	Transformational Leadership	.359	.142	.387	2.533	.013	.489	.228	.204
	Servant Leadership	.113	.145	.120	.784	.435	.449	.072	.063

a. Dependent Variable: Job satisfaction

Descriptive statistics of the leadership and job satisfaction variables are reported in Table 6.; The means range from 3.16 to 3.90. Comparison of means suggests that respondents report more satisfaction towards transformational leadership style. Standard deviations are closed to one which is at an acceptable level.

Multiple regression analyses were carried out to test the hypothesized relationships between leadership styles and job satisfaction. The results are summarized. Transformational style ($\beta = .359$, $p < .013$). The findings provide full support for hypothesis H1 which posited that the servant leadership are positively related to job satisfaction. On the other hand, servant leadership style results ($\beta = .113$, $p > .05$) which indicate that servant leadership is in significant with job satisfaction.

CONCLUSION

Overall, the purpose of this study was to determine the aspects of servant and transformational leadership that affect employee's job satisfaction in some organizations in Egypt. The results showed that transformational leadership style has a positive relationship with job satisfaction whereas servant leadership style has an in significant relationship with job satisfaction in the Egyptian organization. For the linear regression test, the findings show that only transformational leadership has significant

relationship with job satisfaction. Overall, this paper has shown that transformational leadership style has a positive relationship with job satisfaction. This implies that transformational leadership is deemed suitable for managing Egyptian organizations. Organizations that have leadership capability to change their management approach using leadership skills will further improve their performance. Therefore, firms that wish to adopt the job satisfaction must resource their initiatives and increase the capabilities that should be given serious attention by organizations aiming to be world class.

Limitations and future research

The major limitations of this study revolve around sampling issues as this study does not focus on a specific target group and the questionnaires were only able to be distributed randomized to the employees of some organizations in Egypt. As a result, it may have affected the current results. Furthermore, most of the respondents are confused over the transformational and servant leadership and this might have affected some of the relations studied. For future research, the researchers should focus on other organizations either on private or government sectors in other states in Egypt. By doing so, the results obtained can be used to do the comparison of findings between this study and other states in Egypt. In addition, future research also should include both questionnaires and interview methodology together in the study as it will provide more comprehensive outcomes.

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THE IMPACT OF CULTURE AND TRANSFORMATIONAL LEADERSHIP ON JOB SATISFACTION IN AN EMERGING ECONOMY: EVIDENCE FROM GHANA'S HOSPITALITY AND TOURISM INDUSTRY

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ABSTRACT

The purpose of this study is to investigate the relationship between organizational culture, leadership strategy, and employee satisfaction. We explicitly examine business leaders in Ghana to explain some of the region's nuances considering its emerging economy and exploding business environment. This study seeks to shed light on a significant relationship between organizational culture and organizational performance within the tourism and hospitality industry in Ghana. Managing job satisfaction within an organization is essential to firm performance and a vital component regarding sustainability and competitive advantage. Maintaining high employee satisfaction is also critical to retaining skilled employees and keeping the turnover rate at a minimum. Therefore, one of the ways that may be effective in helping managers increase satisfaction among their followers is employing the right leadership style and culture. We surveyed 102 entrepreneurs and small business managers in Ghana's hospitality and tourism industry. After examining the data collected from the survey instruments, we have a better understanding of whether there is a notable relationship between leadership style and culture as it relates to job satisfaction in the business environments in the West African region. Results show that there is a strong correlation between transformational leadership and job satisfaction amongst small businesses in Ghana.

Keywords: transformational leadership; transactional leadership; organizational culture; job satisfaction; entrepreneurship; ubuntu

INTRODUCTION

Extant literature describes transformational leadership as leadership in which the leader has charismatic qualities that motivate followers to perform at a higher level. Followers are stimulated by the transformational leaders' personalities. This stimulation and motivation results in an increased level of commitment to the organization. There is empirical support that suggests transformational leadership has a positive effect on followers' attitudes and job satisfaction. An organization is a social system and human resources are one of its main sources of competitive advantage and sustainability. In order for a business to have efficient operations, it requires cooperation and commitment among managers and employees. This study explores job satisfaction and its impact on behavior and attitude. Therefore, job satisfaction can indirectly affect organizational performance as well as the achievement of strategic goals and objectives. This study aims to investigate the relationship between transformational leadership culture and job satisfaction in West African small businesses, specifically Ghana. Organizational culture is very much affected by the organization's leadership and vice versa. For instance, transformational leaders promote change and develop a new vision regarding culture, whereas transactional leaders do not seek to change the culture of the firm. There is a constant interaction between culture and leadership. Leaders create the space for cultural development. This is accomplished by aligning the vision of the company with the norms and behaviors that serve as the foundation of the organization's culture.

This paper

contributes to the literature by further conceptualizing transformational leadership. There is a lack of consensus regarding what the concept actually entails (Hoover et al, 1991). Due to leadership challenges and problems of job satisfaction in public and private institutions in Ghana, we propose that transformational leadership is the more effective leadership style. It is also the main contributor to the positive outcomes of business and organizations in the hospitality sector in Accra, Ghana (Rouche, Baker & Rose, 1989). This study investigates the relationship between the transformational leadership style of general managers/entrepreneurs and employee job satisfaction in the tourism and hospitality industry in Ghana. Organizational Description Questionnaire (ODQ) was used to assess leaders in relation to the satisfaction they develop from their jobs.

THEORETICAL FRAMEWORK

Transformational Leadership Theory

Literature states that transformational leadership appears to provide the most advantageous results when it comes to organizational performance and job satisfaction. Transformational leaders have three main objectives which have been proven to be both effective and efficient (Leithwood, 1992). The first objective is to promote collaboration regarding decision-making and planning. The second objective is that transformational leadership fosters professional development by giving subordinates the opportunity to be responsible for a problem and its solutions. Lastly, transformational leadership creates a work environment where employees feel like they have a voice to be an agent of change within the organization (Barnett, 2001). The organization effectiveness and organizational efficiency created by transformational leadership more often translates to increased levels of employee job satisfaction and decreased levels of turnover. Transformational leaders seek to create new mindsets and viewpoints to promote growth and increase profit within the organization (Mirkamali et al., 2014). Transformational leaders aim to bring individuals together. This type of leader transforms the interests of individuals into the interests of the collective. According to Bass and Avolio (1993), transformational leadership is a spiritual, moral, and conscious process that provides organizations with equitable leadership. A leader in the transformational context has an acute focus on the needs of each follower with the purpose of getting followers to perform at their full potential (Kelly, 2003). The ultimate goal of transformational leadership is to develop followers into leaders themselves in return creating a flatter organizational structure. The transformational leader is the direct opposite to the transactional leader, who doesn't focus on the individual differences subordinates. Transactional leaders do not seek to intellectually stimulate their followers. It is clearly a contractual relationship in the transactional leadership sense (Gelis, 2001).

Research asserts that transformational leadership is more proactive and ultimately more effective than other leadership styles (Webb, 2009). Studies comparing transformational with other forms of leadership such as transactional and avoidant leadership show that transformational leadership is more effective. Transformational leadership is more proactive when it comes to motivating subordinates to go above and beyond when performing job tasks (Nguni et al, 2006). This study examines transformational leadership theory through a global lens. This study aims to investigate whether the theory holds true in an emerging economy such as Ghana and the region of West Africa. Ghana has a more collective culture than western nations which means transformational leadership may be more effective in this region as well as other emerging economies (Zame & Hope, 2008). However, Ghana also has a larger power distance than western nations such as the United States and Canada. The power distance of this region may prove that the transactional leadership style is a better fit (Mine, 2009; Eskandari, 2014). We hope to shed light on this undiscovered territory and contribute to the leadership and entrepreneurship literature.

Culture and Transformational Leadership

The cultural concept or philosophy that this study looks at is called Ubuntu. Ubuntu captures the central idea of most traditional African cultures. Ubuntu embraces the spirit of caring for others and stresses the importance of community (Mangaliso, 2001). Ubuntu is about being spiritually connected

to one another. Kwanza even holds a derivative of Ubuntu which is Ujima focusing on uplifting one's community. Furthermore, it is described as having compassion, reciprocity, and self-respect (Bekker, 2008). The popular African proverb "I am because we are" is also associated with the cultural philosophy of Ubuntu. Ubuntu expresses the African view of the world and is hard to put into an understandable western context (Ncube, 2010).

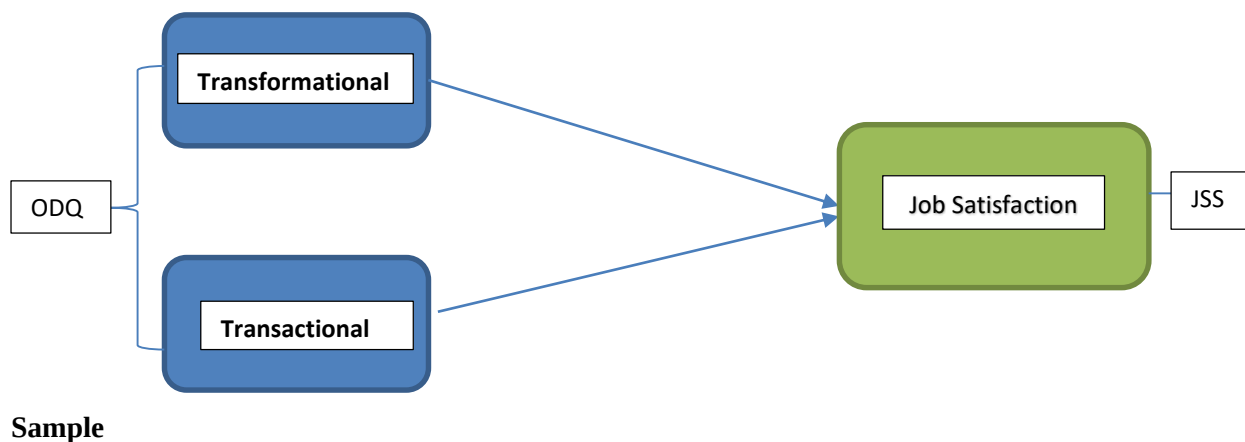
Leadership philosophies focus on leaders, behaviors, values, and traits. Just as management concepts leadership theories come in a multitude of forms. In this study, we specifically look at transformational leadership theory. Ubuntu certainly embodies the idea of transformational leadership. Ubuntu states that no individual is more important than another and the respect of one's basic humanity is supreme. Ubuntu is indigenous and Afrocentric very different from the Eurocentric western views (Van Hensbroek, 2001). Management scholars are beginning to acknowledge the significance of cultural perspectives of leadership. Ubuntu culture seems to fit seamlessly with the transformational theory when comparing the commonalities. This connection further explains why transformational leadership in West Africa may need to be implemented on a more frequent basis (Van Binsbergen, 2001). Paying attention to the culture of the business and aligning leadership with that culture is vital to that organization's success. This study adds to the growing need for this area to be explored as it relates to organizational performance and employee well-being.

Transformational Leadership and Job Satisfaction

There are many outcome variables correlated with transformational leadership and job satisfaction is one of the most cited. Studies indicate that employee commitment and organizational citizenship behavior are more prevalent in organizations that have transformational leaders (Koh et al, 1995; Lowe Kroeck & Sivasubramaniam, 1996). Managers and entrepreneurs that practice transformational leadership techniques inspire and motivate their employees to go above and beyond their own interests. They lead with the idea that everyone should behave with the greater good of the organization in mind. When followers focus on the organization's goals and go the extra mile to achieve them this creates a challenge. This challenge motivates followers to become more engaged in their work which increases organizational commitment and job satisfaction (Graham, 1988). Transformational leadership establishes trust between the subordinate and the leader. Trust between the leader and follower is positively associated with various outcomes including job satisfaction. Bryman (1992) discovered that transformational leadership is positively related to a number of important organizational outcomes such as perceived extra effort, organizational citizenship behaviors, and job satisfaction.

METHODS

FIGURE 1
RESEARCH MODEL



The target participants for this study were managers and entrepreneurs in Ghana. Respondents were recruited and screened by the 1st and 3rd authors of the paper. A final data set yield of 102 complete responses were collected from entrepreneurs in Accra Ghana. Respondents were working in the tourism and hospitality sector and were active leaders in their respective organizations. This is a unique sample from a unique population. The West African region, specifically Ghana is classified as an emerging market. In addition, the tourism and hospitality sector is growing rapidly and very little literature and empirical studies have been conducted for that sector as it relates to leadership and entrepreneurship.

Survey Instruments

Job Satisfaction

While job satisfaction has recurred significant attention in the management literature, this is one of the few studies to assess job satisfaction within an emerging economy (Adelmann, 1995; Wharton, 1993). In this study, job satisfaction was operationalized using the General Satisfaction Subscale of the Job Diagnostic Survey (Hackman and Oldham, 1975). The respondents completed 6 survey items to capture job satisfaction. The scale consists of 5-items with Likert responses ranging from “Disagree Strongly” (1) to “Agree Strongly” (7). A sample scale item is “Generally speaking, I am very satisfied with this job.”

Transformational Leadership

This study examines leadership in the context of different organizational cultures. The study begins with each respondent defining their own organizational culture by means of an Organizational Description Questionnaire (Bass & Avolio, 1992). The Organizational Description Questionnaire (ODQ) consists of 28 items. Included in the ODQ are 14 items supporting a culture of transactional leadership items such as “everybody bargains with everybody else for resources.” In addition, 14 items deal with transformational leadership attributes such as “people go out of their way for the good of the institution.”

Data Analysis

A multiple linear regression analysis was performed to assess the relationship between the categorical independent variables (IVs) i.e. the 5 types of organizational culture and the dependent variable (DV), job satisfaction. Preliminary analyses were performed to ensure there was no violation of the assumption of normality. A composite score for job satisfaction was calculated as an average of the responses from the widely validated General Satisfaction Subscale of the Job Diagnostic Survey (Hackman & Oldham, 1975).

TABLE 1: REGRESSION COEFFICIENTS WITH “PREDOMINANTLY 4” IS AS CONSTANT

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Predominantly 4 Is	6.400	.207		30.862	.000
High Contrast	5.56	.410	-.204	-2.051	.043
Garbage	2.20	1.136	-.337	-3.698	.000
Moderate 4 Is	5.59	.261	-.331	-3.115	.002
Coasting	5.53	.446	-.192	-1.962	.053
Loosely	4.45	.596	-.309	-3.274	.001

Dependent Variable: Job Satisfaction

To facilitate the analysis of the categorical variables, each IV was recoded as new a dummy variable where (the IV=1, all else = 0); except for the baseline IV, predominantly 4 Is which was coded

as = 0 across all the dummy variables. The results (see Table 1) indicated that the model explained 21.9% of the variance and was a significant predictor of job satisfaction, $F(5,96) = 5.399$, $p < .001$.

RESULTS

The unstandardized coefficients may be interpreted as indicators of level satisfaction with 7 being extremely satisfied and 1 being extremely dissatisfied. Holding the IV Predominantly 4 Is constant, all the independent variables were statistically distinguishable significant predictors of job satisfaction except for Coasting ($B = .295$, $p = .07$). A notable outcome is that, in this study, there was no statistical difference between coasting and predominantly 4 Is as predictors of job satisfaction.

Regression analyses were used to analyze the data taking into consideration the descriptive statistics of mean and standard deviations. The data analysis showed a positive relationship between transformational leadership and employee job satisfaction. Based on the results of the preceding main analysis, there appeared to be a generally statistically significant positive relationship between the more transformative types of organizational culture — with managers working in predominantly 4 Is organizations displaying the highest levels of job satisfaction. Likewise, managers who reported working in organizational culture types associated with transactional style reported levels of job satisfaction. To confirm this hypothesis, an additional multiple linear regression analysis was conducted to analyze the relationship between the IVs transformational culture and transactional culture levels and the DV job satisfaction. The results (see Table 2) indicated that transformational and transactional culture were significant predictors of job satisfaction, $F(2,99) = 10.97$, $p < .001$. At the $p = 0.05$ significance level there was a positive relationship between the reported level of transformational organizational style and the DV and a negative relationship between transactional style and the DV.

TABLE 2: TRANSACTIONAL AND TRANSFORMATIONAL ORGANIZATIONAL STYLES

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.631	.278		16.680	.000
	TRANSACTIONAL	-.042	.020	-.190	-2.082	.040
	TRANSFORM	.103	.026	.362	3.956	.000

Dependent Variable: JOB SATISFACTION

DISCUSSION

Leadership/Entrepreneurship has always been revered as one of the vital components for a sustainable competitive advantage (Day & Jean-Denis, 2016). Transformational leaders utilize their personal attributes to promote the wants and needs of others within the organization. Managers that have a transformational leadership style seem to be able to transfer individuals to a higher level of performance. Transformational leaders play a significant role in organizational performance. When managers and business owners focus on their employees' personalities and individual differences it motivates them to perform at a higher level. By providing this spiritual stimulation, employees become more involved and are more likely to have higher levels of job satisfaction. This would also translate to lower levels of turnover.

Ultimately, transformational leadership enhances the organization's chance to succeed and create high performance in the business or organization. The results of this study indicate that Ghanaian leaders in the tourism and hospitality sector exhibited transformational leadership qualities. Transformational leadership also had a positive impact on job satisfaction. Thus, leaders, managers, and business owners who are more transformational in their leadership techniques will see greater job satisfaction in their employees. In conclusion, transformational leadership can moderately predict job satisfaction in Ghanaian businesses and enhance their organizational performance.

FUTURE DIRECTION AND LIMITATIONS

One limitation in this study is the extent that the results are generalizable. Future research should look at other emerging economies especially in West Africa to see if the conclusions are parallel to the findings in this study. Countries like Brazil, China, Russia, South Africa, and India could also be considered. Another avenue for future studies is to look at different sectors of the economy. This study could be duplicated in different industries to see if the different dynamics would moderate the relationship between transformational leadership and job satisfaction. Furthermore, different outcome variables should also be explored. Outcomes like innovation capacity, emotional exhaustion, and organizational citizenship behavior should be investigated to see how transformational leadership contributes. Lastly, cultures such as Ubuntu should be examined more precisely to see if the different types of cultures have moderation or mediation effects on the relationship between transformational leadership and the various positive organizational outcomes mentioned.

MANAGERIAL IMPLICATIONS

The study findings validate that transformational leadership has a significant impact on the job satisfaction of entrepreneurs and their businesses. This research adds to the field of entrepreneurship and leadership studies. We provide empirical data directly relating to the emerging global economy. This study lays the groundwork for further understanding leadership and employee relations in the West African region. Managers should now look at innovative ways to improve this relationship between the leader/entrepreneur and his/her subordinates. With the marginalization of research on transformational leadership in developing nations, this study is timely and a necessary step forward. This holds true especially in Africa as the findings suggest that the transformational leadership model is valid in the Ghanaian tourism and hospitality framework. Moreover, the results of this study demonstrate that cultural differences across international lines do not affect the transformational leadership theory. This body of work is further validation that the transformational and transactional leadership model developed by Bass is in fact universal (1998).

In order to promote job satisfaction, managers and business owners should create a work environment where subordinates feel comfortable expressing their opinions and ideas. Leaders in developing nations should allow their employees to collaborate on important decisions when appropriate. By taking these steps companies will have lower levels of burnout and increased levels of personal accomplishment and job satisfaction (Wakonick, 2004). Companies should provide training, workshops, and professional development opportunities for the leaders to acquire the necessary skills to employ some of the known transformational leadership techniques. Having these programs and training set in place will motivate and increase achievement amongst employees (Cherniss, 1998). Equipped with different transformational leadership styles administrators will have a better understanding of what effective leadership looks like in their respective organizations.

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Ubuntu - “I am because we are:”

SERVANT LEADERSHIP IN SOUTH AFRICA

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ABSTRACT

While most servant leadership research originates in North America and China, the concept is gaining attention in practice and academia in South Africa, resonating with the African concept of *ubuntu* that captures humaneness and communality. This paper provides an overview of servant leadership scholarship in South Africa, and shares results of three servant leadership workshop exercises conducted with diverse South African professionals. The results confirmed most dimensions of servant leadership but also included *ubuntu*, a worldview rooted in African philosophy based on dignity and connectedness. The emergence of *ubuntu* impelled us to reflect abductively on the unique nature of *ubuntu*'s inclusion in servant leadership in South Africa. We unpack what is meant by *ubuntu*, examining how it has been brought into management practices in South African organizations, and then explore the relationship between *ubuntu* and servant leadership. We conclude with implications for research and management in South Africa and beyond.

Key words: Servant leadership, South Africa, *ubuntu*, emic/etic debate

INTRODUCTION

Do your little bit of good where you are; it's those little bits of good put together that overwhelm the world.

- Desmond Tutu

Although the concept of servant leadership was first popularized in leadership and management circles in the 1970s by Robert Greenleaf's seminal essay *The Servant as Leader*, the roots of servant leadership can be traced back to ancient times in the writings of both Eastern and Western philosophers (Valeri, 2007). Definitions of servant leadership include putting the needs of others ahead of the needs of the self, with this being the underlying motivation for a leadership role. Ehrhart (2004, p. 68) states that “the basic idea behind servant-leadership is that the servant-leader recognizes his or her moral responsibility not only to the success of the organisation but also to his or her subordinates, the organisation's customers, and other organisational stakeholders.” However, scholars have pointed out that the concept of servant leadership could benefit from further construct clarity as the many varied definitions and operationalizations offered over the years have hampered systematic theory

development (Brown & Bryant, 2015). In the academic literature (Eva et al., 2019), there remains a degree of questioning as to what exactly servant leadership entails.

Despite calls for clarity, the servant leadership literature has documented positive relationships between it and several organizational outcomes such as organizational identification, organizational commitment, job satisfaction, and turnover intentions as well as performance-oriented outcomes that include customer service, satisfaction ratings, store performance ratings, and firm performance indicators. Servant leadership has also been linked to beneficial behaviors amongst followers such as organizational citizenship behaviors (that is, extra-role discretionary effort benefiting both colleagues and the organization) as well as positive attitudinal outcomes such as engagement, psychological well-being, creativity (at the individual and team level), and thriving at work. Given this, the concept of servant leadership pervades modern management textbooks and leadership development programs.

Most important to this paper, servant leadership theory originated in the United States and most conceptualizations and measures come from Western, individualist contexts (Creff, 2004; Van Dierendonck et al., 2017). While some evidence for the cultural invariance of servant leadership measures has started to emerge (*cf* Van Dierendonck et al.'s 2017 investigation across eight European countries), Parris and Peachey (2013) noted that servant leadership is likely to have different meanings depending on national context. This is corroborated by Pekerti and Sendjaya (2010) who found that the attributes perceived to comprise servant leadership were not viewed as equally important between Australia and Indonesia despite servant leadership as a whole being perceived as culturally universal in the two countries.

In contrast to the wealth of leadership research in Western countries and its more recent emergence in Asian scholarship, servant leadership research in African management and leadership literature is arguably nascent (Abebe et al., 2020). In Africa, and South Africa in particular, the influence of European and American thinking in management and leadership scholarship has been substantial, to the extent that there are calls for the “Africanization” and “decolonization” of management theory (Cooper, 2013, 2014; Skinner, 2005), i.e., the rewriting of the literature from a post-colonial, Africa-centric perspective. On the other hand, some authors argue the value of avoiding development of theories unique to a particular country or region. Instead, they advocate for a focus on cross-cultural scale development of leadership constructs, with contextual and cultural factors relegated to moderators or mediators of relations with outcomes (Liden, 2012). This cross-cultural view is upheld by Abebe et al.'s (2020) call to build a leadership research agenda embedded in experiences across African countries, synthesizing constructs across Africa, without a focus on a specific country or region. In this paper, we ask the question of whether servant leadership is indeed culturally invariant as the extant literature for the most part assumes, or whether South Africa needs her own version of the construct. Specifically, our research question is: *Do South Africans view servant leadership the same or differently from conceptualizations developed in Western contexts?*

We first provide an overview of servant leadership scholarship in South Africa. Second, we share results of three servant leadership workshop exercises done with diverse South African professionals where the results included the concept of *ubuntu*, a worldview based on dignity and connectedness, rooted in African philosophy. We use these results to approach our research question abductively, that is, based on data that caused us to speculate (*cf* Folger & Stein, 2017) on the possible unique nature of *ubuntu*'s inclusion in servant leadership in South Africa. Third, we unpack what is meant by *ubuntu*, examining how it has been brought into management practices in South African organizations, and then explore the relationship between *ubuntu* and servant leadership. We conclude with implications for research and management practices in South Africa and beyond.

SERVANT LEADERSHIP SCHOLARSHIP IN SOUTH AFRICA

The study of servant leadership in South African organizations is emerging, with 15 empirical studies published to date (see Table 1 for construct validation studies and Table 2 for more general scholarship) and several more unpublished masters' dissertations and doctoral theses (see Table 3). South African research on servant leadership has stemmed from our interest in positive organizational scholarship (e.g., Coetzer et al., 2017; Dannhauser & Boshoff, 2006; Mahembe & Engelbrecht, 2014), as well as scholars' focus on unethical leadership at the root of corporate scandals and government

corruption, which has promoted interest in servant leadership and other positive leadership styles (Den Hartog & Belschak, 2012; Grobler & Flotman, 2020; Hoch et al., 2018). South Africa's recent corporate scandals at Steinhoff and VBS Mutual Bank, precipitated by company directors' irregular activities, may not have had the same global impact as the collapse of Enron in the United States, but unethical leadership and corruption has substantially hindered the country's economic growth and development (Maroun & Cerbone, 2020). As such, Grobler and Flotman (2020, p. 1) note that servant leadership in South Africa "has a contribution to make to societal demands for integrity, transparency and consequence management."

To date, most South African organizational scholarship has operationalized the construct of servant leadership through five established measures, namely: Barbuto and Wheeler's (2006) Servant Leadership Questionnaire (SLQ), Liden et al.'s (2015) 7-item composite measure of servant leadership (SL-7), Reed et al.'s (2011) Executive Servant Leadership Scale (ESLS), Sendjaya et al.'s (2008) Servant Leadership Behavior Scale (SLBS), and Van Dierendonck and Nuijten's (2011) Servant Leadership Survey (SLS). These measures share the common factors of altruism, humility, stewardship, putting others first, ethics, and integrity. However, a recent systematic review of the servant leadership literature recommended using the SL-7, SLBS, and SLS in both research and practice going forward due to rigorous scale development processes (Eva et al., 2019). Several of the published South African studies have utilized these three recommended measures, which may be a promising indicator of the quality of South African scholarship in the area as well as our contributions to incremental knowledge on the subject.

Table 1: Servant Leadership Construct Validation in the South African Context

Authors (Chronological order)	Sample	Key findings	Measure used
Dannhauser & Boschoff (2007)	417 salespeople	While high internal reliability coefficients were found for each of the measure's subscales, the original multidimensional structure of the SLQ could not be replicated	SLQ
Mahembe & Engelbrecht (2013)	288 schoolteachers	In contrast to the Dannhauser and Boschoff (2007) study, good reliability coefficients and reasonable construct validity for the original multidimensional structure of the SLQ were observed.	SLQ
Grobler & Flotman (2020)	1,764 employees	The first investigation of the SL-7 in the South African context found the one-factor solution had acceptable psychometric properties and adequate convergent validity.	SL-7

Table 2: Servant Leadership Scholarship in South African Context

Authors (Chronological order)	Sample	Independent variable	Mediator	Dependent variable	Measure used
Dannhauser & Boshoff (2006)	417 salespeople	Servant leadership	-	Trust in organization Trust in manager Trust in colleagues Team commitment	SLQ
Chatbury et al. (2011)	411 administrative staff	Servant leadership	-	Interpersonal trust	SLBS

Mahembe & Engelbrecht (2014)	288 schoolteachers	Servant leadership	Organizational citizenship behavior	Team effectiveness	SLQ
Du Plessis et al. (2015)	154 private sector staff	Emotional intelligence Trust	-	Servant leadership	SLQ
Krog & Govender (2015)	48 IT staff	Servant leadership	Employee perceived empowerment	Organizational commitment Trust Innovative behavior	SLQ
Coetzer et al. (2017)	186 construction staff	Servant leadership	Job resources	Work engagement Burnout (-)	SLS
Bedser & Pearse (2017)	286 call center staff	Servant leadership	-	Quality of work life	SLS
Holtzhausen & de Klerk (2018)	71 IT team members	Servant leadership	Trust in leader	Team performance	SLS
Farrington & Lillah (2019)	241 healthcare practitioners	Servant leadership	-	Job satisfaction	Composite
Muller et al. (2019)	428 private sector staff	Servant leadership	Employee engagement	Organizational profitability Customer satisfaction Customer loyalty Organizational learning Innovation	Composite
McCallaghan et al. (2020)	230 employees	Servant leadership	Diversity climate	Job satisfaction Organisational commitment Intention to quit (-)	ESLS
Van der Hoven et al. (2021)	203 schoolteachers	Servant leadership	Psychological empowerment	Organizational citizenship behavior	SLQ

Table 3: Unpublished Postgraduate Studies on Servant Leadership in the South African Context

Authors (Chronological order)	Sample	Independent variable	Mediator	Dependent variable	Measure used
Baker (2009)	290 retail staff	Servant leadership	Role stress	Coping	SLQ
Pedro (2012)	54 public sector staff	Servant leadership	-	Interpersonal trust Organizational trust	SLBS
Van Heerden (2015)	151 agricultural staff	Servant leadership	-	Ethical work climate	ESLS
Barnard (2017)	397 logistics staff 249 medical staff	Servant leadership	Workplace trust	Work engagement Workplace well-being	SLS
Muller (2017)	428 private sector staff	Servant leadership	Employee engagement	Organizational profitability Customer satisfaction Customer loyalty	Composite

				Organizational learning Innovation	
Pillay (2019)	115 employees	Servant leadership	-	Employee engagement	SLBS

The construct most frequently investigated alongside servant leadership in South African scholarship is trust (Du Plessis et al., 2015; Holtzhausen & de Klerk, 2018; Krog & Govender, 2015), which is a well-established correlate of servant leadership scholarship in the international literature (Kashyap & Rangnekar, 2016; Ling et al., 2017; Robinson et al., 2018; Shim et al., 2016; Zhou & Miao, 2014). The emerging South African literature's attention to trust (and specifically trust in the leader) as well as leader-member exchange (LMX) (Grobler & Flotman, 2020) is in line with important scholarship elsewhere, as these are two of the three key constructs mediating the relationship between servant leadership and a range of follower outcomes both at the individual and team levels (Lee et al., 2020).³

A handful of studies have investigated the construct domain of servant leadership in South Africa. Mahembe and Engelbrecht (2013) and Grobler and Flotman (2020) found evidence supporting the cross-cultural applicability of these measures in South Africa. This is consistent with findings of cross-cultural applicability in China (Hu & Liden, 2011; Tang et al., 2016), Singapore (Liden et al., 2015), and Hong Kong (Schaubroeck et al., 2011).

EVIDENCE OF MEASUREMENT VARIANCE IN SOUTH AFRICA?

Consistent with Nkomo's (2011) observation of the dominance of Western conceptualizations of leadership and management, some studies have tested whether measures of servant leadership either developed in the United States (i.e., SLQ, SL-7, and ESLS), Europe (i.e., SLS) or Australia (i.e., SLBS) capture the content domain of servant leadership in South Africa. As stated above, Parris and Peachey (2013) caution that servant leadership could have different meanings, depending on socialization and national context, suggesting that there is potential to miss important contextually-relevant aspects of a specific construct if imported measures are used. To this point, not all South African studies investigating the construct validity and structural equivalence of established servant leadership measures found adequate support. Specifically, Dannhauser and Boschhoff (2007) raised questions regarding the SLQ's multidimensionality in the South African context, as they were unable to replicate the measure's original factor structure with a sample of salespeople. They posited the reasons for variance to be socially desirable responding and/or participants responding to a general picture or valence toward their managers rather than a careful consideration of the individual items. Subsequently, Mahembe and Engelbrecht's (2013) investigation with a sample of teachers replicated the SLQ's original five-factor structure reported by Barbuto and Wheeler (2006), suggesting Dannhauser and Boschhoff's (2007) findings may have been due to idiosyncrasies in their sample.

A parallel dilemma has been established in the measurement of personality in South Africa. It has been framed as an emic/etic debate in the cross-cultural measurement of personality, which led to the launch of the South African Personality Inventory (SAPI) development project (SAPI Project, n.d.). In the emic development of the SAPI, Nel et al. (2012, p. 916) highlighted how "personality inventories are mostly developed from existing, usually Western, personality models," based on the premise that personality structure is universal. Despite the general acceptance of the five-factor model of personality (McCrae et al., 2005), SAPI researchers demonstrated a sixth factor, one they named the social-relational personality factor (Fetvadjeiev et al., 2015; Hill et al., 2021; Morton et al., 2019; Nel et al., 2012; Valchev et al., 2014). In similar personality scale development in China, developers of the Chinese Personality Assessment Inventory (CPAI) and its revised version (CPAI-2) demonstrated the need for an additional interpersonal relatedness personality factor, amongst others (Cheung et al., 2011).

³ The absence of Lee et al.'s (2020) third construct—procedural justice—may be due to our heightened focus on the injustices of our apartheid past. This means the majority of organizations are highly aware of the importance of due process and giving attention to fairness considerations, especially in selection and development contexts (SIOPSA, 2005).

The researchers caution that when adopting an etic approach, premised in the assumption that personality structure is universal, “...indigenous constructs that are salient in the local folk concepts of personality and in the local taxonomy of person descriptions” may be missed (Cheung et al., 2011, p. 595). Looking across the SAPI and Chinese personality development projects, a parallel may be that both contexts are highly collectivistic societies. Similarly, both projects found the need for an additional personality factor to adequately capture a relational concept not present in more individualistic societies where existing measures were developed.

Returning to leadership, what have investigations of the factor structure of other leadership constructs developed in the West but imported to South Africa found? Yukl’s (2012) broad leadership construct that included task-oriented behavior, relations-oriented behavior, change-oriented behavior, and externally oriented behavior, was largely confirmed in southern Africa with a structure similar to the Western behavioral taxonomy (Grobler & Singh, 2018). However, Grobler and Singh (2018) also found a distinct Afrocentric permutation, whereby several of the relational survey items uniquely clustered into a new factor with a participatory, democratic, and communal focus (Grobler & Singh, 2018). Taken together, these observations suggest a potential need to investigate other possible conceptualizations of servant leadership in South Africa.

SOUTH AFRICAN CONCEPTUALIZATIONS OF SERVANT LEADERSHIP

To better understand how management practitioners in South Africa view servant leadership, the first author of this paper co-facilitated a workshop entitled “Servant Leadership for Mzansi” at the October 2019 Regional Scrum Gathering in Cape Town (Dowdeswell & Doyle, 2019), for South African professionals interested in self-organizing teams and agile ways of working as per the Agile Manifesto (2001).⁴ In total, 70 delegates--diverse in terms of age, gender, cultural background, and work experience--attended the session, drawn from both public and private sector organizations. Such professionals typically work as coaches and leaders in organizations that are open to or have adopted an agile mindset. Servant leadership is frequently encouraged in such organizations as staff are empowered to act in “aligned autonomy,” whereby leaders determine the direction but get out of the way and allow staff to get on with what they need to do to achieve the desired direction (Thoren, 2017). Delegates’ conceptualizations of servant leaders in South Africa were collected through a series of three exercises during the workshop, namely an online poll, a group discussion, and a card sort exercise, with the latter two exercises completed collaboratively by delegates while sitting in 11 groups of six to eight people each.

The online poll was run at the beginning of the workshop using Mentimeter (www.mentimeter.com) before any interpersonal discussions had taken place. Participants were not provided with a definition of servant leadership. They were invited to briefly describe servant leadership in their own words. Ninety words were received from 48 participants, with ninety percent of the words received mapping onto all dimensions of the SL-7, SLBS, and SLS (see Table 4), providing support for the universality of servant leadership (Roberts, 2018), or at least its generalizability to the South African context. Most words related to the role of the servant leader to help others grow (23%), putting others first (17%), and being humble (13%). Least mentioned words included servant leadership as conceptual skills (3%), spirituality (3%), authenticity (2%), and accountability (1%).

Table 4: Online Poll Descriptors of Servant Leadership Mapped onto Established Servant Leadership Measure Dimensions

Examples	Percentage of mentions	Established dimensions

⁴ The Agile Manifesto emerged from a meeting of minds between 17 developers frustrated with the cumbersome nature of traditional software development processes prior to 2000 and seeking a better way of working. The document that emerged serves as a guiding framework of values and principles for software development teams to work more effectively and sustainably. Amongst other values, the Manifesto prioritizes individuals and interactions over processes and tools.

“Helping,” “Guider,” “Mentor”	23%	Helping Subordinates Grow & Succeed* / Transforming Influence†
“Serving,” “Selfless,” “Commitment,” “Sacrifice”	17%	Putting Subordinates First* / Stewardship‡ / Standing Back‡ / Voluntary Subordination†
“Humble,” “Vulnerable”	13%	Humility
“Love,” “Listener,” “Empathy”	11%	Emotional Healing* / Covenantal Relationship† / Interpersonal Acceptance‡
“Leading by example,” “Walks the path,” “An example,” “Passionate”	8%	-
“Respect,” “Trustworthy,” “Inclusive”	6%	Behaving Ethically* / Responsible Morality† / Courage‡
“Community,” “Partnership”	6%	Creating Value for the Community*
“Enabler,” “Motivating”	4%	Empowering* / Empowerment‡
“Supportive,” “Curious”	3%	Conceptual Skills*
“Awareness,” “Mindset”	3%	Transcendental Spirituality†
“Natural,” “Authentic”	2%	Authenticity‡ / Authentic Self†
“Accountability”	1%	Accountability‡
“Ubuntu”	1%	-
“Misunderstood”	1%	-

* Liden et al. (2015)

† Sendjaya et al. (2008)

‡ Van Dierendonck & Nuijten (2011)

Of the remaining words not identified by an existing servant leadership dimension, “leading by example” was given four times. Taken together with “walks the path” and “an example,” these may suggest that “leading by example” is an important aspect of servant leadership in South Africa. This relates to theorizing by Liden and colleagues (2014) that servant leaders inspire followers to become servant leaders themselves through a role-modelling social learning process.

A second theme not incorporated in existing measures of servant leadership was *ubuntu*, a communal worldview rooted in African philosophy on which we will focus later in this paper. The final unique theme, “misunderstood,” was shared by participants who had encountered common misperceptions about servant leadership, e.g., that it is concerned with followers only and does not contribute to organizations’ survival or the bottom line (Sendjaya, 2010). We took this to mean that the respondents knew servant leaders were good for organizations, but they believed people did not understand that servant leaders add value to organizations. Empirical studies have demonstrated that servant leadership is related to several different categories of outcomes for individuals, groups, and organisations that are beneficial not only to followers but to organizations and the leaders themselves (Banks et al., 2018; Hoch et al., 2018; Lee et al., 2020; Marinova & Park, 2014; Zhang et al., 2019).

The second exercise was a group discussion where participants were asked to discuss their views of the key characteristics of a servant leader in their small groups. They were presented with an academic definition of servant leadership by Eva et al. (2019), but were also asked to draw on their own experiences. The intention was for each group to emerge with a shared understanding of servant leadership in the South African context, which was then fed back to the larger audience. Across groups, this generated a total of 70 characteristics, grouped into 14 clusters, 10 of which could be mapped back to established servant leadership dimensions (see Table 5). Three of the top four characteristics mentioned in the group discussions were consistent with the top four identified in the online poll, namely showing sensitivity and concern for others (31%), helping others grow (10%), and being humble (10%).

Table 5: Group Discussion Mentions Mapped onto Established Servant Leadership Measure Dimensions

Examples	Percentage of mentions	Established dimensions

“Empathetic,” “Appreciates diversity,” “Understanding”	31%	Emotional Healing* / Covenantal Relationship† / Interpersonal Acceptance‡
“Inspire & equip,” “Trusts” “Removes barriers”	14%	Empowering* / Empowerment‡
“Mentor,” “Supportive”	10%	Helping Subordinates Grow & Succeed* / Transforming Influence†
“Humble,” “Approachable”	10%	Humility
“Selfless,” “People focused,” “Head / Hand / Heart”	7%	Putting Subordinates First* / Stewardship‡ / Standing Back‡ / Voluntary Subordination†
“Authentic”	6%	Authenticity‡ / Authentic Self†
“Deep respect”	4%	Behaving Ethically* / Responsible Morality† / Courage‡
“Knowledgeable”	4%	Conceptual Skills*
“Partnership”	3%	Creating Value for the Community*
“Role model,” “Exemplar”	3%	-
“Cares for people & the job”	1%	Accountability‡
“Ubuntu”	1%	-
“Wisely patient”	1%	-
“Resilient”	1%	-
-	0%	Transcendental Spirituality†

* Liden et al. (2015)

† Sendjaya et al. (2008)

‡ Van Dierendonck & Nuijten (2011)

Consistent with the online poll, participants again named *ubuntu* as well as leading by example (i.e., “role model,” “exemplar”) as characteristics of South African servant leadership not explicitly captured by the existing servant leadership measures. The final two characteristics named in the group discussion exercise were “wisely patient” and “resilient.” We queried “wisely patient” with participants, asking them to elaborate on its meaning. Participants explained that a servant leader needs to understand that change in others requires time and there is only so much change that a person may be ready for. Servant leaders must know when to push and when to wait, and to distinguish between pushing for what matters leaving that which does not, in any given situation. Moreover, participants noted that embedding the principles of servant leadership in an organization requires substantial cultural change. When querying resilience, participants shared that servant leaders need to persist in the face of difficulties and remain focused on a desired future state. While the discussion bore similarities to the vision descriptor used by Greenleaf (2002)--foresight combined with developing and communicating a shared vision--the concept seemed unique to the servant leadership literature in its focus on the leader knowing that a relentless change agent can be counterproductive, and patience and perseverance may serve better.

Finally, participants were asked to identify what an effective servant leader looks like in South Africa through a card sorting exercise. Each group was provided with cards presenting the names and definitions of each of the dimensions in the SL-7, SLBS-6, and SLS, and was asked to sort them into three categories: highly relevant or essential in the South African context, less relevant or not currently seen in the South African context, or universally applicable (see Table 6).

Table 6: Servant Leadership Dimension Considered Key in the South African Context*

SL-7		SLBS		SLS	
Creating value for the community	100%	Authentic self	73%	Humility	73%
Helping subordinates grow and succeed	82%	Transforming influence	73%	Stewardship	73%
Emotional healing	82%	Responsible morality	64%	Authenticity	64%

Behaving ethically	64%	Covenantal relationship	55%	Accountability	64%
Putting subordinates first	55%	Transcendental spirituality	45%	Interpersonal acceptance	64%
Empowering	55%	Voluntary subordination	9%	Standing back	64%
Conceptual skills	45%			Empowerment	55%
				Courage	55%

* Percentage of groups viewing the dimension as essential or highly relevant in the South African context

Interestingly, the only characteristic unanimously identified by all groups as highly relevant to the South African context was the SL-7 dimension of “creating value for the community.” We view this as the closest conceptual match to *ubuntu*. Other dimensions identified as relevant to the South African context that had high levels of agreement (i.e., chosen by more than 70% of the groups) included “emotional healing” and “helping subordinates grow” (SL-7), “authentic self” and “transforming influence” (SLBS), and “humility” and “stewardship” (SLS).

Returning to our research question, the card sorting exercise demonstrated that South African participants’ conceptualizations of servant leadership largely map onto internationally developed models as represented by the SL-7, SLBS, and SLS. A genuine concern for helping not only colleagues and staff but the broader community is a key characteristic in the South African context, resonating with the spirit of *ubuntu* emphasized in more collectivistic African cultures (Mbigi, 2006). Unique conceptualizations that may not be fully captured in existing measures but that are influenced by *ubuntu* include 1) the explicit determination that servant leaders lead by example, that is, they role model desired behaviors, and 2) servant leaders in South Africa are required to be “wisely patient” to be able to bring their communities along slowly in reaching their full potential. This emphasis on patience is paralleled by a South African saying, “Hope does not kill, I shall live in hope of getting what I seek another day” (Molefi, 2017).

Ubuntu

The main dimension of servant leadership from our South African workshop which was not captured in existing conceptualizations of servant leadership was *ubuntu*. *Ubuntu* is a word meaning “humanness” or “humanity” in the Nguni group of Bantu languages, spoken by the Xhosa, Zulu, Ndebele and Swati ethnic groups in South Africa. Sometimes translated as “I am because we are” or “I am what I am because of who we all are,” *ubuntu* highlights the importance of interconnectedness and community in African cultures. Archbishop Emeritus Desmond Tutu described *ubuntu* thus (2004, p. 25):

A person is a person through other persons. None of us comes into the world fully formed. We would not know how to think, or walk, or speak, or behave as human beings unless we learned it from other human beings. We need other human beings in order to be human.

The term is often used beyond the Nguni language groups to represent sub-Saharan moral ideals and is common to most African countries (Metz, 2011), with interchangeable examples in other African languages including *hunhu* (in the Shona language, one of Zimbabwe’s official languages) and *botho* (in the Sesotho language, spoken by the Basotho peoples living in South Africa and Lesotho). Parallels have also been drawn to *ubuntu* in countries north of the Sahara, such as the ancient Egyptian concept of *Ma’at* emphasizing solidarity, humanity, and altruism (Baumann, 2015). Key to the *ubuntu* world view is communalism, the interdependence of people, and consensus-building, where the needs of the community are greater than the needs of the individual. It featured as a guiding principle in the preamble of South Africa’s 1993 interim Constitution, intended to steer the country’s transition from a divided apartheid society to a united democracy,

The adoption of this Constitution lays the secure foundation for the people of South Africa to transcend the divisions and strife of the past, which generated gross violations of human rights, the transgression of humanitarian principles in violent conflicts and a legacy of hatred, fear, guilt and revenge.

These can now be addressed on the basis that there is a need for understanding but not for vengeance, a need for reparation but not for retaliation, a need for *ubuntu* but not for victimisation.

Constitution of the Republic of South Africa, Act 200 of 1993:
Epilogue after Section 251

The literal translation of *ubuntu*, "*I am because we are; I can only be a person through others*," embodies a distinctly African world view emphasizing the dignity of people, solidarity, and collective personhood (Mbigi, 2006). The spirit of *ubuntu* may be defined as "a pervasive spirit of caring and community, harmony and hospitality, respect and responsiveness – that individuals and groups display for one another" (Mangaliso, 2001, p. 24). Two role models who embodied both *ubuntu* and servant leadership include Nelson Mandela and Archbishop Emeritus Desmond Tutu.

Ubuntu Personified – Nelson Mandela and Desmond Tutu

Nelson Mandela, the first democratically elected president of South Africa, was imprisoned by the apartheid government for 27 years for his efforts to realize a democratic society where all races were united in their diversity. Mbigi (2006, p. 300) describes him as "an epitome of African leadership virtues, particularly in terms of healing, compromise and diversity tolerance, as well as his focus on creating racial harmony and consensus democracy." Rather than seeking retribution for injustices against black South Africans, Mandela exemplified *ubuntu*'s solidarity to use forgiveness as a bridge to a better future for all. And the way he went about building that bridge parallels servant leadership characteristics in acting with authenticity, empowering and developing people, and serving as a steward with compassion and humility (Falzon, 2012).

Archbishop Emeritus Desmond Tutu was also frequently viewed as personifying both servant leadership and the spirit of *ubuntu*. Tutu selflessly campaigned against the injustices of the apartheid regime, demonstrating his deep compassion for people and causes while serving as an agent for change and a moral voice for what was right (Rensburg, 2013). From 1995 to 1998 he chaired South Africa's Truth and Reconciliation Commission, seeking to heal the country's apartheid wounds through restorative justice. With parallels to servant leadership's emotional healing, he continued to serve as a reconciliatory voice despite the frequently appalling testimonies heard.

Ubuntu as Leadership Practice

In the years since democracy in South Africa, *ubuntu* began to enter the management practices in organizations. Reflecting on the opportunities *ubuntu* offered for creating competitive advantage (see Table 7), Prof Mangaliso (2001, p. 32) writes,

Incorporating *ubuntu* principles in management holds the promise of superior approaches to managing organizations. Organizations infused with humaneness, a pervasive spirit of caring and community, harmony and hospitality, respect and responsiveness will enjoy more sustainable competitive advantages.

Table 7: Guidelines for Adopting the Principles of Ubuntu in Leadership Practice

Treat others with dignity and respect
Be willing to negotiate in good faith
Provide opportunities for self-expression
Understand the beliefs and practices of indigenous people
Honor seniority, especially in leadership choices
Promote equity in the workplace
Be flexible and accommodating

(Mangaliso, 2001)

To date, much of the scholarship concerning *ubuntu* in management has been conceptual, though empirical studies are starting to emerge. For example, bridging conceptual and empirical work, Khomba (2011) utilized the philosophical principles of *ubuntu* to ground his adaptation of Kaplan and Norton's Balanced Scorecard model of strategy performance management for business management

purposes, proposing four perspectives (i.e., “relationships and culture,” “stakeholders,” “value creation,” and “corporate conscience/resource allocation”) as alternatives to the traditional “financial,” “customer” “internal process,” and “learning and growth” perspectives.

Using qualitative methods, Poovan et al. (2006) demonstrated the relationship between *ubuntu* and team effectiveness. Nelson (2003) examined the likely impact of *ubuntu* on the acceptability of servant leadership in South African organizations (as cited in Brubaker, 2013). More recently, utilizing quantitative methods, Brubaker (2013) found a positive relationship between *ubuntu*-related leadership practices and leadership effectiveness, while Muller et al. (2019) demonstrated that a measure of *ubuntu* leadership was positively related to employee engagement.

Some scholars have focused on *ubuntu* leadership, respective of servant leadership, engaging in scale development of the former. Both Brubaker (2013) and Muller et al. (2019) utilized self-constructed scales to measure *ubuntu* leadership. An earlier measure of *ubuntu* developed by Sigger et al. (2010) focused on the presence of *ubuntu* in organizations and not solely leadership behaviors. All three scales were developed to measure four dimensions: survival, the spirit of solidarity, compassion, and respect and dignity—as the core values of *ubuntu* identified by Mbigi (2006).

Table 8: Dimensions of Ubuntu

Survival	Individual members of a group are dependent on one another for their survival; therefore, a concern for the needs of others in the organization can increase the effectiveness of teams and ultimately the organization
Spirit of solidarity	Expressed through the Zulu words “ <i>simunye</i> ” (meaning “we are one” and “ <i>shosoloza</i> ” (meaning “working as one”), the spirit of solidarity refers to understanding one’s self through understanding one’s connections to others
Compassion	Going beyond the concept of caring, compassion in <i>ubuntu</i> terms means sharing in others’ joys and sorrows and going out of one’s way to help others
Respect and dignity	Related to psychological meaningfulness, treating those around oneself with respect, dignity, and appreciation for their contributions

(Brubaker, 2013; R. J. Muller et al., 2019; Sigger et al., 2010)

SERVANT LEADERSHIP AND UBUNTU: THE SAME OR DIFFERENT?

Because the importance of service and community underpin both servant leadership and *ubuntu* (Meylahn & Musiyambiri, 2017), one may ask whether they are parts of the same construct as our abductive data leads us to believe, or different leadership constructs, as the foregoing section on *ubuntu* leadership suggests. There are arguments for considering *ubuntu* as a dimension of servant leadership, since they both share common values and characteristics including a collectivist or other-centered orientation, as well as humility, altruism, trust, and empowerment (Creff, 2004). Furthermore, Mbigi (2006) argues *ubuntu*’s leadership paradigm is focused on the common good and placing the needs of the community first, as does servant leadership.

However, while there are several parallels between servant leadership and *ubuntu*, scholars argue they should not be viewed as one and the same such that there is a “Western” and an “African” conceptualization of servant leadership. Specifically, we should not use the Western, established scales in Western contexts and an *ubuntu* leadership measure alone in African contexts. Following a comparative conceptual analysis, Okecha and Branine (2017) contend that servant leadership is a universal concept that shares some characteristics with *ubuntu*, but they are different types of leadership that may exist in co-existence or in parallel in African organizations, depending on the socio-economic context in which the organization operates. Similarly, Brubaker (2013) pointed out that *ubuntu* concentrates on community, solidarity, and shared humanness within and across communities; servant leadership may serve as a manifestation of *ubuntu* at times, but is first and foremost concerned with individual leaders placing their subordinates first. Finally, Creff (2004) argues the principles of servant leadership may serve to help connect people with the spirit of *ubuntu*, enabling the development of an African leadership assisting all in harnessing the potential of themselves and the continent. This idea is foundational to the work of Professor James Ogude and colleagues on the *Ubuntu Research Project*,

suggesting that *ubuntu* may serve as a bridge between Western and African ideas of humanism and enabling communities to move forward more effectively especially through exceptionally difficult times, such as South Africa transitioning from her painful past.⁵

Empirical evidence for construct and discriminant validity of servant leadership and *ubuntu* or *ubuntu*-inspired leadership is mixed. Brubaker (2013) reported mixed evidence regarding the discriminant validity of *ubuntu*-related leadership as distinct from servant leadership. On the other hand, our results suggest that most observations made by our South African participants in their conceptualizations of servant leadership could be mapped onto existing dimensions of servant leadership measures developed elsewhere in the world, but *ubuntu* was included as a descriptor and characteristic of servant leadership in South Africa. Further, Grobler and Flotman (2020) included measures of Afrocentric/*ubuntu* leadership in their investigation of the SL-7's construct validity in the South African context (unfortunately, detail regarding the nature of the Afrocentric measure was not published). While they observed a strong correlation between servant leadership and Afrocentric leadership ($r = 0.61, p \leq 0.001$), the correlation did not seem to suggest the constructs represented the same psychological idea. In sum, we call for future research to test a new factor structure for servant leadership, inclusive of an *ubuntu* dimension for South Africa and potentially other collectivist societies.

IMPLICATIONS FOR MULTICULTURAL LEADERSHIP RESEARCH AND PRACTICE

We believe that engaging in servant leadership provides leaders with a mechanism to connect and build *ubuntu*-based organizations, influencing staff for the better and influencing other parts of the world in bringing more humaneness to management. Mbigi (2006, p. 302) concludes,

The genius of European (North) leadership tradition lies in planning and technical innovation. The genius of the American (West) leadership tradition lies in entrepreneurship and a bias for action. The genius of Asian (East) leadership tradition lies in process innovation to attain quality and perfection. The genius of African (South) leadership tradition lies in Ubuntu – the interdependence of humanity, by emphasizing human dignity and respect through consensus democracy and people mobilization, solidarity and care.

As Mbigi (2006) highlights, each leadership tradition from around the world has its own contribution to make towards a holistic understanding of effective leadership. This aligns with Nkomo's (2011) advice to scholars not to "rewrite" "African" leadership separately, but rather to "re-inscribe" an African influence into the dominant, Western way of thinking. Similar to how the spirit of *ubuntu* was used to bridge the way from South Africa's painful apartheid past to a better, more equal future, we believe the inclusion of *ubuntu* into the construct domain of servant leadership provides an opportunity to bridge demands for a home-grown "African leadership" theory into calls for universal leadership theories.

Implications for research

We call on researchers to determine the factor structure of servant leadership incorporating indigenous forms of leadership such as *ubuntu*. Further, we echo Abebe et al.'s (2020) call to rigorously measure *ubuntu* leadership. This can then promote not only an understanding of the nature of the relationship between servant leadership and African/*ubuntu* leadership, but also promote the understanding of the nomological network of *ubuntu* above and beyond Western-dominated leadership styles. We point scholars to Eva et al.'s (2019) review of the SL-7, SLBS, and SLS for guidance on the development of a standard measure of *ubuntu* leadership for utilization in future research.

Furthermore, Cheung et al. (2011) recommended the adoption of a combined emic-etic approach for the development of personality measures, and our findings underscore the importance of a combined approach to the development of leadership measures as well. While an etic approach informs scholarship about more universal models of leadership, the inclusion of emic facets of measures

⁵ https://www.up.ac.za/research-matters/news/post_2994656-ubuntu-meaning-and-value-in-human-and-social-development-in-africa

has the potential to advance our understanding of the levels of universality and cultural specificity of various leadership behaviors. The study of *ubuntu* is not unique to South Africa but occurs across the continent of Africa and may apply to other communal, collectivist cultural contexts as well.

Implications for practice

Readers should also be cautioned that servant leadership and *ubuntu*-inspired management practices are not universally present in African organizations. While some research has shown visionary and servant leadership styles are perceived as important elements of effective leadership in organizations in East Africa (Galperin et al., 2017), other scholars have demonstrated autocratic leadership is alive and well in entrepreneurs in Nigeria (Okecha & Okeniyi, 2020). The African continent is home to 54 different countries, each with its own history and context, and further research is required to fully identify communalities and unique distinctions. Until then, we offer that South Africa likely has her own view of servant leadership, one that understands leadership as central to connecting the I to the we.

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SENSEMAKING-INTERSECTIONALLY= LEADERSHIP X CONTEXT

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ABSTRACT

This research explores differences in how marginalised groups in leadership roles are able to engage in sensemaking within a particular social context. Primary data were collected with semi-structured intersectional interviews. Thematic and axial coding was carried out. Coded data was tagged and quantified to determine which forms of sensemaking occurred and how each sub-group of participants arrived at that form of sensemaking. Findings suggest that gender- and race identity shape how one is able to engage in sensemaking. Furthermore, the manner in which the sub-groups of participants constructed meaning also differed significantly. Given the call to advance leadership theory beyond the legacy of leader-centred approaches, this study offers several insights into possible avenues for expanding leadership theory and practice as a contextualised management science.

Keywords: leadership, intersectionality, sensemaking, gender, race

INTRODUCTION

The research problem

Nearly three decades after the fall of Apartheid, women and people of colour remain significantly underrepresented in organisational leadership roles within the South African private sector (B-BBEE Commission, 2020; Bosch, 2021; Deloitte, 2016; Grant Thornton, 2017). At the time of this research, nearly half of South Africa's economically active population are women, yet women fill only 24.9% of top management positions. Additionally, only 9% of South Africa's economically active population is White, yet 64.7% of top management positions in the private sector are filled by white incumbents (Commission for Employment Equity, 2021; Statistics South Africa, 2020). These employment trends suggest that, in the context of organisational leadership, white men enjoy a considerable level of both white- and male privilege, leaving other groups severely marginalised (Andersen & Moynihan, 2016; Banks, 2012; Lund, 2010; Roberts et al., 2020). More specifically, the underpinning assumption here is that South Africa's social context represents a network of intersecting, direct and indirect disadvantages that inform commonly assumed antecedents of effective leadership; such as access to education (Council on Higher Education, 2019; Statistics South Africa, 2021), opportunities for career advancement (Booyesen, 2007; Commission for Employment Equity, 2021; Rowe & Crafford, 2003), visible role models (Bush & Moloi, 2007; Shung-King et al., 2018), access to informal networks (Carrim & Nkomo, 2016; Oosthuizen & Naidoo, 2010), and stereotyping (Motileng et al., 2006; Reuben & Bobat, 2014). The guiding research question of this study is therefore:

Are there differences in how women and people of colour in organisational leadership roles, within the South African private sector, engage in sensemaking?

Given the persistent underrepresentation of women and people of colour in organisational leadership positions, this study uses the South African context to critique the manner in which leadership is socially constructed and subsequently theorised. The study contributes to the leadership literature through an analysis of the lived experiences of marginalised groups within the specific social context of South Africa. Specifically, the study interrogates how leadership theorising, which is generally presented as gender- and race-neutral (Moorosi et al., 2018; Nkomo, 2006; Ospina & Foldy, 2009), has consistently overlooked the lived experiences of women and people of colour, and how

insight into such experiences may contribute to more robust leadership theorising.

Theoretical foundation

This study positions leadership as a socially constructed concept; the construction of which is material to how it can – and cannot – be enacted (DeRue & Ashford, 2010; Fairhurst & Grant, 2010; Grint, 2005; Parker, 2005). Leadership theory, for all its advancements since the beginning of the 20th century (Yukl, 2012), still struggles to break free from the notion that ‘leadership is an element of the leader’ (Fitzsimmons & Callan, 2020). Mainstream leadership literature seems to consistently default back to leader-centric conceptualisations of leadership (Alvesson, 2020; Alvesson & Einola, 2019). This pattern in theorising leadership is of particular concern when attempting to consider the social context within which leadership occurs, as leader-centric approaches do not lend themselves to a critical examination of how leadership is fundamentally gendered and racialised (Moorosi et al., 2018).

Albeit less dense than the literature on leader-centric approaches to studying leadership, context-based leadership theory does represent a significant part of the total body of knowledge on leadership (Jones, 2006; Scheepers et al., 2018; Sinha, 1995; Tee et al., 2013). However, a review of context-based approaches to leadership reveals an insufficient consideration for highly gendered and racialised contexts (Ryan et al., 2011; Sy et al., 2010). This trend in conceptualising leadership is evident in the ever popular notion of the ‘effective leader’ and quests for finding the elusive ideal skill-set and behavioural patterns for ‘effective leadership’ (Johnson, 2011; Rosette et al., 2008). As a result, mainstream leadership theory remains highly gendered and racialised, despite being presented as both gender- and race-neutral. Studying leadership within social context is, however, fraught with complexity. Intersectionality offers a means of responsibly interrogating leadership emergence in social context by considering the interrelated and compounding impact of gender and race identities (Rosette et al., 2016).

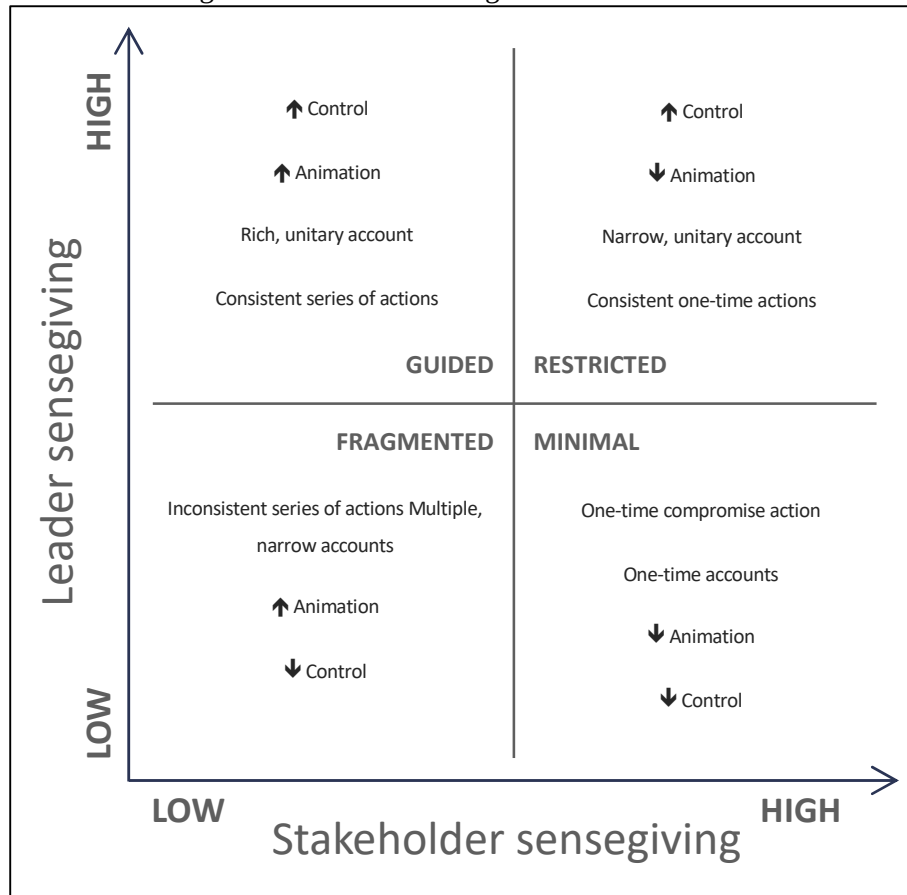
Intersectionality was developed as a framework to understand the lived experiences of black women in a way that feminist approaches could not (Crenshaw, 1989). Intersectionality holds that one’s race and gender are interlocking social identity categories that are experienced interdependently due to interlocking social structures of dominance and power (Gouws, 2017; McCall, 2005). The manner in which intersecting identities shape how individuals construct their sense of self can either motivate individuals to take on leadership roles, or to avoid them (Avolio, 2005; DeRue & Ashford, 2010; Gedro et al., 2020; Madsen & Andrade, 2018). Therefore, this study applies the concept of intercategorical complexity, which uses intersectional identities as an analytical starting point to gain insight into why certain groups remain marginalised (McCall, 2005). In this instance, the study acknowledges the inherently problematic nature of social categorisation (Abrahamsen, 2003) and uses an intersectional analysis to reveal the problematic nature of the social construction of organisational leadership in the South African context. Studying leadership from an intersectional perspective within a South African context seems almost obligatory if one considers that essentialised racial differences were central to the Apartheid ethos. Leadership research that considers race thus requires analyses that are robust in its interrogation of difference, privilege and power (Reygan & Steyn, 2017). Additionally, Apartheid-era labour policy was built on the ‘male breadwinner model’, which restricted women’s economic participation in a manner that is still visible today as a legacy of exclusion (Groenmeyer, 2011).

Meaning-centred approaches to studying leadership expose leadership as a continuous process of social construction. These meaning-centred approaches reflect a critical interpretive view of reality wherein the individual takes an active, constructive role in creating knowledge (Parker, 2005). These analytical approaches focus on leadership as a social process of meaning creation or sensemaking – in this instance, the terms *meaning* and *sense* will be used interchangeably. Sensemaking is considered an appropriate approach to studying the leadership experiences of marginalised groups, as sensemaking considers the creation of rational accounts of an ambiguous and uncertain social context, which then in turn enables action (Maitlis, 2005). Furthermore, meaning-centred approaches reveal leadership as an interactive process wherein meaning is created and also continuously changed. Thus, investigating leadership as socially constructed (Lewis, 2016), one cannot but consider the role of meaning in its construction.

For this study, I use the framework for studying organisational sensemaking proposed by Maitlis (2005), to analyse participant responses to topics such as power, control, relationships, and role models,

to gain insight into the lived experiences of marginalised identities within corporate leadership. Within this framework, sensemaking can occur as *guided*, *restricted*, *fragmented* or *minimal*. For each of the three intersectional groups, responses to the aforementioned topics were categorised into the four forms of sensemaking which may occur. According to Maitlis (2005) four distinct forms or categories of sensemaking occurs when one considers i) process, ii) outcome and iii) decision. Differences across these factors result in the emergence of the four distinct forms of meaning creation, as shown in Figure 1.

Figure 1: Forms of organisational sensemaking



Source: (Maitlis, 2005)

First, processes are characterised by their level of control - that is to say to what extent is there evidence of a process being structured or following some form of procedure. Secondly, processes differ in their animation. Animation refers to evidence of some form of emotional arousal or personal engagement into or towards the process. In terms of the outcome of a particular form of sensemaking, Maitlis (2005) states that the meaning created could be either a unitary account or multiple accounts, either rich in meaning or narrow in meaning. Finally, the subsequent decisions or actions that result from sensemaking will also differ across forms. Decisions or action, depending on what meaning was created, will either take place as a series of actions or as a one-time action, which is either consistent or inconsistent with other decisions-related decisions or actions.

METHODS

This study adopts a mixed-method research design, that explores the extent to which marginalised groups are able to engage in sensemaking in their respective leadership roles. One-on-one interviews were selected as the primary source of rich qualitative data, as this tool offers an opportunity for unique

insight into subjective opinions, perceptions and experiences that would be difficult to deduce by conventional quantitative means (Bryman, 2004). Thematic and axial coding was employed to identify dominant themes in the data (Creswell, 2014; Saldana, 2015; Yin, 2016), which in turn was quantified for analysis according to Maitlis' (2005) framework for organisational sensemaking.

Sampling

Given the persistent underrepresentation of women and people of colour in leadership roles in the South African private sector, women and people of colour currently in, or in the process of entering into, a leadership role were sampled for this study. Participants who self-identify as women and/or as a person of colour as per the South African statistical authority were sampled (Statistics South Africa, 2020), producing three intersectional groups, namely women of colour, men of colour and white women. In this instance, the study recognises that social categorisation is inherently problematic (Abrahamsen, 2003), however, to explore the seemingly persistent statistical underrepresentation of persons within some of these categories, these categories were used as purposive sampling parameters.

In addition to purposive sampling, snowball sampling also was used to identify suitable participants. The first round of participants was sourced from general calls for participation on social media and special interest group communications such as newsletters. During the first round of interviews, participants were asked to recommend suitable associates, within the limits of the purposive sample, which were contacted for participation in the study. Thematic saturation was achieved (Ando et al., 2014) after a total of 60 participants were sampled and interviewed.

Procedure and materials

A semi-structured interview schedule was developed around key themes within the existing leadership literature (Antonakis et al., 2004; Combs et al., 2019; Kezar & Lester, 2010; Smith et al., 2012). Specifically, participants were asked to share (a) their understanding of the role of leaders in organisations, (b) their experiences of career progression into leadership roles, (c) their experiences regarding access to resources for leadership development, and (d) their perceptions of South African equality legislation. Within these four broad categories, several probes were used to produce large amounts of rich qualitative data. Interviews were not timed, with the majority taking between 1 to 2 hours to complete. All interviews were recorded and transcribed using digital voice recording and NVivo research software.

Analysis

Thematic and axial coding was used to identify and organise dominant themes within the qualitative data (Saldana, 2015; Yin, 2016). After identifying key themes and organising the qualitative data accordingly, the content of each of the themes was interrogated according to Maitlis' (2005) framework of organisational sensemaking. Here, sections of the qualitative data were "tagged" as containing evidence of either *guided*, *restricted*, *fragmented* or *minimal* sensemaking. This process of tagging sections of the data allowed for calculations to determine the thematic composition of observed sensemaking forms for each of the three intersectional groups. This process of classification and tagging effectively quantified the qualitative data (Sandelowski et al., 2009) and added additional layers of insight to the data, making it more comparable at group-level. The process of coding offers the first layer of insight by providing a thematic structure for the qualitative data. Tagging the content of each theme according to Maitlis' (2005) framework offers the second layer of insight by indicating to what extent each theme contributes to either *guided*, *restricted*, *fragmented* or *minimal* sensemaking. Finally, aggregating the quantified data offers a third layer of insight by indicating what form of sensemaking occurs the most and the least for each of the three intersectional groups.

FINDINGS AND DISCUSSION

When responses were quantified, several significant differences were noticed in both cross-group and cross-form. Among the women, sensemaking seemed to be more *fragmented*, while sensemaking among the men seemed to be more *restricted*. These cross-group differences are summarised in Table 1.

Table 5: Code occurrence summary for sensemaking forms

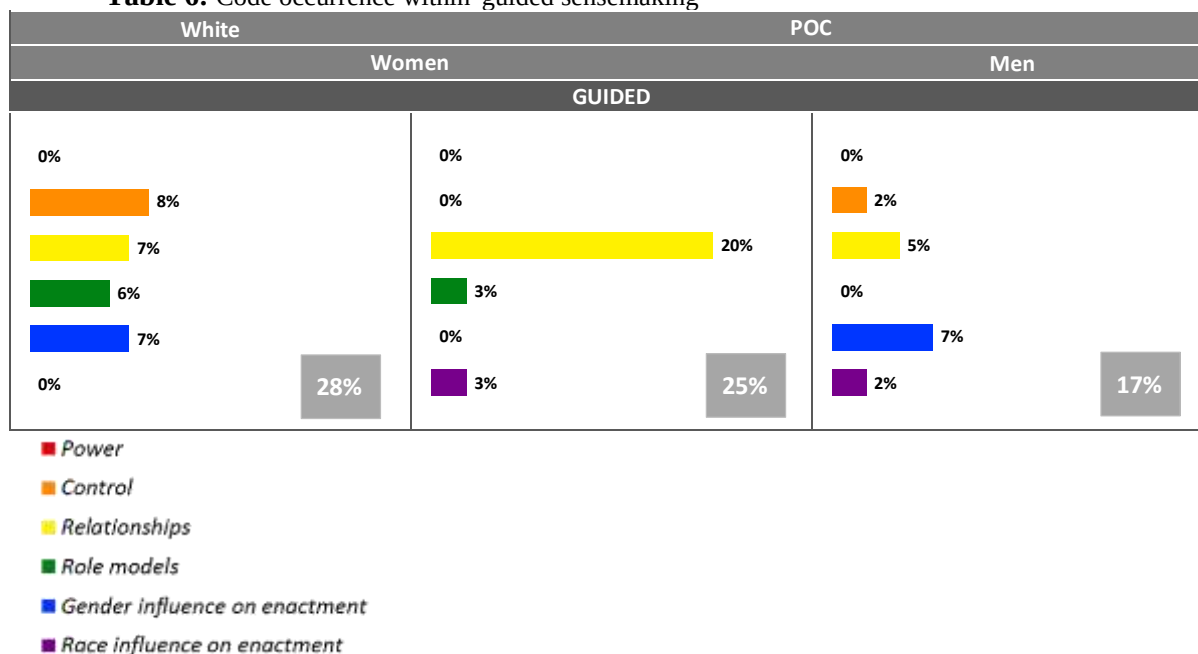
	White	Women	POC	Men
Guided sensemaking	28%	25%		17%
Restricted sensemaking	25%	23%		45%
Fragmented sensemaking	35%	48%		29%
Minimal sensemaking	11%	5%		10%
Total	≈100%	≈100%		≈100%

Further to these differences in where the most meaning was created for each participant group, significant differences in **how** meaning was created within each form of sensemaking also occurred cross-form. These differences are discussed per sensemaking form.

Guided sensemaking

According to Maitlis (2005), *guided sensemaking* occurs where social processes are controlled and animated, accounts are unitary and rich and decisions take on the form of a series of consistent actions. Ideally, all sensemaking processes should be *guided* as this is the optimal form of sensemaking within the framework proposed by Maitlis (2005). Based on responses regarding power, control, relationships, role models and leadership enactment, the white women created the most *guided sensemaking* with 28%, the women of colour's *guided sensemaking* were at 25%, and the men of colour only seemed to engage in sensemaking that was 17% *guided*.

Guided sensemaking for the white women seemed to be constructed from an eclectic mixture of views regarding control, relationships, role models and gender in leadership. This stands in quite strong contrast with the men of colour who predominantly created *guided sensemaking* from their views on gender and relationships and the women of colour who constructed *guided sensemaking* around virtually only relationships. These compositions of deduced guided sensemaking are tabulated for each of the three groups in Table 2.

Table 6: Code occurrence within 'guided sensemaking'


Within the guided sensemaking form, control was a dominant theme. Procedurally animation and control/structure seem to emerge from gaining compliance from followers. It would seem as if white women engage in sensemaking by having their followers comply and buy into suggested values and

goals, rather than collectively co-creating these values and goals. This is evident in how white women discuss control and relationships:

"I bring them in quite quickly. I'd probably do the work myself. I believe that a leader shouldn't be so distant from the job that they can't really appreciate what needs to be done. The higher up you go the more you realise you can't do other people's jobs because you don't have the degrees of speciality so you just step in to put out the fires. If someone then keeps going the wrong way, then you have to take decisive measures." 29BBR02 FW44

"If you have a good relationship with your followers then you will get a better performance out of them. If they are committed, then they deliver better work; their productivity is better [...] I think it boils down to having a common set of values in the division, having clarity on the strategic objectives and direction that you would like to go, that people understand that there's a common purpose and a common vision. And then making sure that there is regular communication and feedback and clear performance objectives and targets and expectations." 07TEL04 FW54

The reference to having "a good relationship" implies some form of rich account or interaction. Additionally, "a common purpose and a common vision" arguably reflects high levels of structure in interactions for the white women. However, respondents do not offer evidence of how these shared values and visions are collectively created or negotiated. One might therefore argue that the white women engage in *guided* sensemaking that is estranged from sensemaking that occurs among their followers. The idea of shared values also emerged in discussions about role models, but again it is evident in the way the respondent expresses herself that these values – whatever they might be – are given, rather than collectively produced:

"He's [MD] able to engage at all levels. He's got an extreme open-door policy. His values are very firmly intact, and everything in this business is based on the values that he drives. He's a quick decision-maker. We don't have company politics in this company." 34MAC04 FW40

This 'giving of structure' was not observed among the women of colour. In fact, the women of colour seemed to elicit animation and procedural control in far more of a collective manner than their white counterparts. This can be seen in a statement from a woman of colour, which stands in strong contrast with the *guided* sensemaking among white women, which seems to be heavily underpinned by compliance. From this response, it seems more like sensemaking occurs for the leaders, when they feel their followers also share in the meaning that is being created:

"People need to be influenced to act in a way that they are absolutely convinced of the action. It therefore means leadership is not just a one way thing. In order to arrive at a decision or course of action, it requires quite often the input of various people. People need to feel they have a stake in it.

How would you use a relationship to realise that?

It's important to have honest dialogue. The relationship has got to be based on honesty where people will not just simply tell you what they think you want to know but give their honest opinions. And that requires a relationship where there's a sense of safety about truth." 36MCK01 FB43

In contrast with the two women groups, whose responses regarding animation focused on individual interactions, the men of colour were observed to exhibit some form of social sensitivity. In more than one instance the men indicated an awareness that they work in environments with people from a wide variety of ethnic, cultural and religious backgrounds. Furthermore, they also displayed an awareness that these diverse backgrounds mediate social interaction and that it can have a significant impact on collective action and decision-making. This awareness is quite succinctly demonstrated by the following statement from a male respondent:

"When I first meet people, I would treat everyone with the basic respect. To gain respect, you have to earn it. So, you first have to give it to receive it, especially with people that have been working for the organisation for 20 years. You come in and you basically have to have control over the people. They look at someone new coming in and think that they been here for 20 years and you're someone new coming in and they know what they're doing and that there's nothing you can teach them. So, you have to come in with a certain

level of respect for them first for them to be able to respect you. And from there you can take your ideas forward; make them see we're evolving each and every day. So they've got to follow that." 46SHO04 MC36

Unlike the white women, the men of colour did not seem to elicit desirable emotional responses from followers and other stakeholders as a means to an end. Where the white women seemingly produce animation to attain organisational goals or targets, the men seem to do so as it is considered an essential requirement for an optimal work environment. The notion of respect in this regard is a dominant recurring theme in all discussions around relationships and personal social interaction. Even in instances where structure and compliance are discussed, the men exhibit a reluctance to engage in practices where structure and compliance are forced upon others. This reluctance is clearly illustrated by the following response:

"You need to control the team that reports to you. You do it in various ways. There are different kinds of leadership but in my view, the more successful leader is the consensus style because you're then taking your people with you...collaboration. But you also need to be assertive." 10PWC01 MI56

In so far as needing consistency in actions, this is no clearer than in discussions around leadership and gender, among the men of colour. The men demonstrated an acute awareness of their male privilege and also indicated a need to act in ways that do not abuse this privilege:

"So I made it clear yesterday to my senior team who are overwhelmingly men; I said if I ever come across an instance where a woman - who is then by definition in our hierarchy lower because we don't have many women in our leadership structure - 'If a woman ever comes to me with a sexual harassment case or feeling unsafe, trust me the burden is going to be against you [men]'. And woe betide there was an instance of inappropriate behaviour because of that power differential." 08LET01 MC43

"Do you think your gender or race could influence how you choose to lead? Ideally not but I feel that the circumstances in which we find ourselves in, in our country, I would have to say yes, absolutely. The fact that, as we've been talking, I kept consciously referring to a leader as he. This tells you that we're a very patriarchal society and place a lot of emphasis on male leadership. I think the gender issue is a huge ticket item in terms of the way we see and perceive leadership." 30MAC03 MI46

Similarly to the men of colour, the white women indicated an aversion to inconsistency in actions with regard to gender and leadership. This aversion is captured clearly in the following respondent's opinion on being able to handle stressful work situations:

"A woman who cannot handle stress will never reach the top. I'll tell you why. It is because I have seen very senior men who obviously also can't handle stress, but they still somehow manage to move up the hierarchy. So what I'm saying is that relationships and networks are very important to maintain." 23SHO02 FW49

Finally, unlike the other two groups, the women of colour seem to consistently look towards relationships to find consistency in actions and also demonstrate a tendency to make decisions carefully themselves so as to not make themselves guilty of inconsistent action. This is shown here in how the following respondent manages relationships with followers by carefully considering job content and matching tasks to specific individuals:

"If I know that you are not good with the soft side of things like counselling people, then it will be stupid of me to give you that kind of work to do. Knowing your people is critical for me. That is very important. Listening to their input and their views and as far as possible trying to incorporate that into where ever you are going [...] I think they think that I generally have their backs. They feel that I'm there for them and that they can come and talk to me if they have issues or if there concerns." 06TEL03 FC45

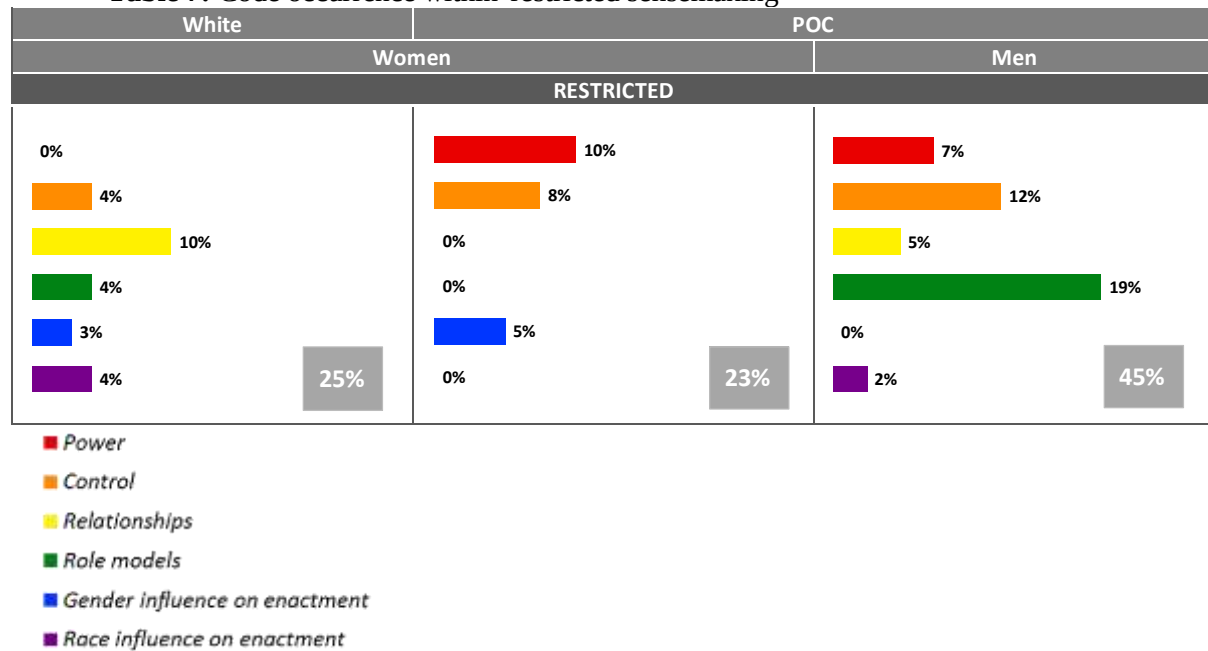
Restricted sensemaking

According to Maitlis (2005), *restricted* sensemaking occurs where social processes are controlled with low animation. Here accounts are unitary, but narrow in meaning and decisions take on the form of once-off actions that are consistent with other related decisions. Therefore, *restricted* sensemaking is not ideal, however, it is superior to that of *fragmented-* and *minimal* sensemaking. Based on responses regarding power, control, relationships, role models and leadership enactment, the men created the most

restricted sensemaking with 45%, the white women's *restricted* sensemaking was at 25% and the women of colour engaged in sensemaking that was 23% *restricted*.

Restricted sensemaking for the white women once again seemed to be constructed from an eclectic mixture of views regarding control, relationships, role models, gender and race in leadership, with a focus on relationships. This stands in quite strong contrast with the other two groups in two ways. Firstly, both women and men of colour engaged in *restricted* sensemaking from their conception of power, while the white women did not. In fact, power is the most salient factor in the women of colour's *restricted* sensemaking. Secondly, while the white women and the men of colour engage in *restricted* sensemaking using most of the concepts discussed, the women of colour only do so from a power, control and gender perspective. These differences are tabulated in Table 3.

Table 7: Code occurrence within 'restricted sensemaking'



Regarding meaning created that is characterised by high control, low animation, narrow accounts and consistent actions, the data suggest that the white women engaged in *restricted* sensemaking regarding relationships – more so than they are able to engage in *guided* sensemaking (7% *guided* vs 10% *restricted*). Relationships were also the most dominant theme in *restricted* sensemaking for the white women. Evidence of this is seen in the nature of the relationship one white woman has with her peers and superiors in the organisation:

“The organisation is socialised to be attuned to being layered [hierarchical] and I think it does come from the past and the traditional mining days where you really did know your position and you don't overstep your boundaries. At times I actually find this very frustrating. Because I'm driving transformation and levels don't bother me, initially I got very burnt. This person would be livid if I contacted that person. I had to get used to going via the boss and not contacting people directly [...] I have had to be mindful about it and take a few steps back to go forward again to get that person on board. So I have broken the informal rules and broken them again, but I play by the rules when I have to. There is a fine balance.” 01ANG01 FW48

This response demonstrates how the white women feel constricted by the structures within a hierarchical organisation and are not particularly engaged by individuals who enforce and reproduce this hierarchy. Further evidence of low animation, yet with high levels of control and consistent actions are seen in how gender is considered to impact leadership enactment among the white women:

“Do you think the fact that you're a woman plays a role in the fact that you tend to go towards a coaching style?”

Yes, I think it does. It could be because I'm a woman, but the strongest leadership style that I use is actually directive.

Do you find that, when you become a little more assertive than usual, that you get resistance?

Yes. Last year I had a lot of resistance. It was a new team and I think the team understands better now where we're going and I've spent a lot more time to create a vision for them to understand where we're going..." 39COC02 FW51

Of significant relevance in sensemaking that is *restricted* for the women of colour, seemed to be the notion of power and control. The ways in which women of colour conceptualise both power and control seem to attribute greatly to sensemaking that is low in animation, yet high in control. In fact, as far as the conceptualisation of power is concerned, for women of colour, high animation and high control (for *guided* sensemaking) seem to be seen as mutually exclusive. This can be seen in how these women of colour spoke about power:

"Power corrupts – power in the wrong hands. There's nothing wrong with power exercised responsibly. However, power in the wrong hands becomes a huge problem and I think part of what we are seeing in how government is lead and how state institutions are led and, in some instances, some of the businesses are led. It's unbridled power. We need to understand that power comes with responsibility and accountability... power means different things to people. For some, it's a means to control. For others, it is a means to gain access to what they otherwise could never have access to. People don't understand that you don't just respect someone because they're in a powerful position; they have to earn it by their deeds. In the exercise of power, there must be a very deep principled component as well as a deep ethical component and selflessness in the exercise of power..." 09MIN01 FB55

"Power tends to have a very negative connotation because of its power in relation to others. You have power to drive assets in this or that direction. So yes, it does require power. I think we tend to look at power solely in relation to people. I will look at it as power in relation to people and resources and the application thereof. You have positional power because your role gives you certain delegatory responsibilities and decision rights which others do not have." 36MCK01 FB43

Finally, when considering responses regarding control, the men of colour also seem to view animation and control as mutually exclusive. However, while the women of colour's responses seemed to indicate a preference to promote animation, the men seem to favour increased control. The following two responses from the men highlight this preference for control over animation by explaining how they go about ensuring compliance – sometimes at the cost of animation. These responses also highlight a need for consistency as far as organisational controls are concerned:

"So I am very comfortable, in this business, I have introduced scorecards. This business has been around for years and years, but nobody has been able to put a set of scorecards in place. First year I was here, I put in scorecards. So now scorecards lead to consequences, right? So some guys are going to shoot the lights out, and you reward them, and others aren't. And the hard one, I call them into my office individually - safe space - sit them down and say, you are not getting a bonus or an increase, you did not make your numbers, sorry, shall we talk about it, but you know this is not a line I am willing to cross." 08LET01 MC43

"There's nothing wrong with being a little assertive because group dynamics teaches you that there are people who will follow, people who are plodders, people who are innovative, people who will become part of the solution, and there are destructive ones who will find a problem but never come up with a solution. Then you get the guys that are detractors, and for each of those, you should have some level of intervention to be able to pull them all together." 30MAC03 MI46

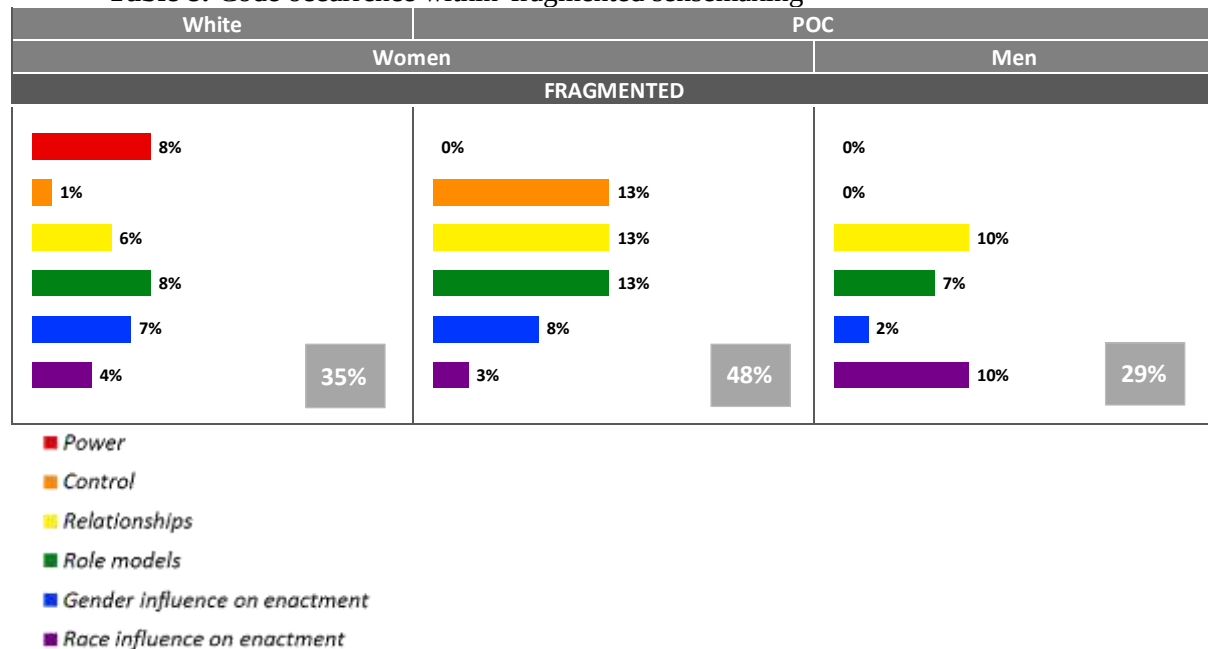
Fragmented sensemaking

According to Maitlis (2005), *fragmented* sensemaking occurs where social processes are highly animated but not highly controlled, accounts are multiple and narrow, and decisions take on the form of a series of inconsistent actions. Therefore, *fragmented* sensemaking is not ideal, as it lacks control,

richness and consistency. However, *fragmented* sensemaking is still more desirable than *minimal* sensemaking. Based on responses regarding power, control, relationships, role models and leadership enactment, the women of colour created the most *fragmented* sensemaking with 48%, the white women's *fragmented* sensemaking was at 35%, and the men only seemed to engage in sensemaking that was 29% *fragmented*.

Fragmented sensemaking for the white women again seemed to be constructed from an eclectic mixture of views regarding all the concepts discussed. The women of colour engage in *fragmented* sensemaking using all the concepts discussed, apart from power and do so more from a control-, relationship- and role model perspective. Where *fragmented* sensemaking occurs, the men of colour do not discuss power or control and focus most on relationships, role models and race. These differences are tabulated in Table 4.

Table 8: Code occurrence within 'fragmented sensemaking'



What emerged clearly from discussions around interactions with peers and superiors was that many of the white women felt trapped in a network of unbalanced power relations. This seemed to be especially true in situations where formal interactions took place:

"So you'll hear things like 'I'm talking to you as an SVP, and you are a VP', I mean what nonsense is that?! I would never frame a conversation like that. I would much rather have interactions on first-name basis." 01ANG01 FW48

"I mean, when I first came into this company, they would have meetings, and people would only address the chairperson. And I asked people 'what you mean I have to talk to the chairperson?!' And then they would say 'no you have to talk to the chair, you have to ask the chair if you can speak'. So I said 'why the hell should I talk to the chair?!' I will put up my hand when I need to speak. What if the chair does not want me to speak? It is my right to speak. I am a senior leader in this business! But you see, it also comes from the top because the previous CEO was okay with that, but the current CEO would not ever stand for that." 04TEL01 FW42

These experiences clearly result in feelings of resentment and frustration (high animation), along with insufficient procedural structure or control. Additionally, views on relationships among the white women also reveal how meaning created from relationships with followers is fragmented due to their narrow nature and the inconsistency in which relationships are maintained. As discussed earlier, among the white women, relationships seem to serve as a vehicle to reach targets set by the organisation and nothing more – followers and relationships with followers are only as useful as the results they can produce. As a result, social interactions are narrow and inconsistent, as shown by the following quotes:

"You don't always listen to everything they say because some of them gripe and they have no idea of the bigger picture, but you try and impart the information that they need to understand better what is actually going on and what's driving the business." 28BBR01 FW63

"If they won't take a bullet for me, I am useless. That is where most leaders do fail. If they will not take a bullet for you, they will not buy into you. If they don't buy into you and what you believe and they will not execute it. And execution is the whole part of strategy, is it not?" 04TEL01 FW42

When asked to discuss their view of the role of control in leadership, some of the women of colour had the following to say:

"One of the things I feel we need to have an appreciation of is how diverse our country is and how diverse our experiences are and how they may be able to influence certain behaviours. The diversity is so broad that there has to be an appreciation in the complexity that we have." 31SHE01 FB35

"I expect things to be done, but I am not going to control all the aspects. I try and create an environment where they are able to think naturally [...] Control, for me, is more about managing the output and what you are getting. There it is a collaboration. At this stage of my career, I am actually not liking administrative person management. I am more concerned with developing the person rather than 'when are you here?'" 03ESK01 FC44

These views on control highlight how women of colour in leadership roles seem to find control either problematic or unnecessary. The respondents from the women of colour group seem to prefer strategies of leadership that allow for accountability, but not at the cost of autonomy. This is precisely in line with Maitlis's (2005) proposition of fragmented sensemaking. Low control, coupled with high animation and a tendency to engage in inconsistent actions, can also be seen in how women of colour view relationships, which seems to be key in this group engaging in fragmented sensemaking:

"I am more concerned with developing the person rather than 'when are you here?'. As long as you tell me where you are. I know it's a difficult one, and I must say people do have difficulty adapting to that kind of environment, but I work like that because that is the relationship I have with my boss [...] There has to be a lot of trust both ways. From downwards and upwards because you know because we work in quite an authoritarian and hierarchical environment so people are suspicious of freedom, so you really have to inculcate the idea that that is not really the way I work. I let them do things themselves and let them fail as well. A big lesson for me is to let people make mistakes. And it is not always easy, but there is a lot of engagement and personal time in developing people." 03ESK01 FC44

"Leadership is different because that is when you take a vested interest in people. It's about relationships, and you invest in those relationships in order for them to feed into your ideas." 43MCK02 FB29

Demonstrating how the women of colour engage in fragmented sensemaking through inconsistency of actions, is a comparison between one respondent's view on leadership role models to her response to a question on whether she feels her race influences how she behaves as a leader. These responses show how this participant values certain qualities in a colleague, but decides to internalise contrary experiences rather than challenge them.

"He's [role model] developed his own model for employee engagement and it's all embedded in the things around care and entrenching the kinds of family values. He's the proof for me that you can be an astute business person, and you can still bring that softness to the business." 15CSC01 FC33

"There's a level of awareness when you are in the minority, and I think just because, earlier in my career, I was actually told – I obviously understood it at the time – 'for a 50-year-old old white woman to have to take direction from a young black woman is probably difficult in terms of her own structure of interpretation and her own background'. It wasn't that I had taken offence by it but what that has done for me is to sort of create an awareness that it's possible that someone could be thinking that even if they're not demonstrating that kind of behaviour or being blatant." 15CSC01 FC33

Similarly to the women of colour, the data suggest that the men of colour seem to value animation over control. This is quite evident from how the following two men discuss relationships:

“Relationships are very important. For you to be a leader, you must have people whom you are going to lead and, for you to have a conducive environment, you need to collaborate with people you’re working with. So, don’t see yourself as a boss but as someone who will guide. Relationships need to be nurtured, and you need to have a buy-in.” 44AIG01 MB26

“It comes down to people not actually knowing what their purpose is. What is it actually that people are working towards? Do they just work for the end of the month or a 13th cheque, or do they actually believe in the purpose of the business? People don’t know why they do what they do and how it affects business.” 60KIN01 MC25

These responses also highlight how many of the men feel that, even though they see superior relationships and social interactions as key in the leadership process, that they are not always able to establish this. As a result, interactions sometimes feel narrow. Finally, evidence of how men of colour in leadership roles experience difficulty in exercising consistent decision-making was found in responses regarding race identity and the way they practised leadership. The men of colour seemed to experience much difficulty in consistently reconciling the social expectations from them as men of colour and the corporate expectations of them as leaders:

“The one thing that I have noticed is that other coloured men would expect favours because you are also coloured. You understand? It’s kind of like you know where we come from, you know how we grew up, so help us out, but for me it does not work like that. I stuck it out, and for a few years, I went to university, and I put in the hours working late at night while you were on the corner drinking a beer. It doesn’t work like that, so I’ve drawn the line there. People know where they stand with me on a professional level, so my friends and my colleagues never meet. So my friends will stay my friends, and my colleagues will stay my colleagues.” 53CSC03 MC36

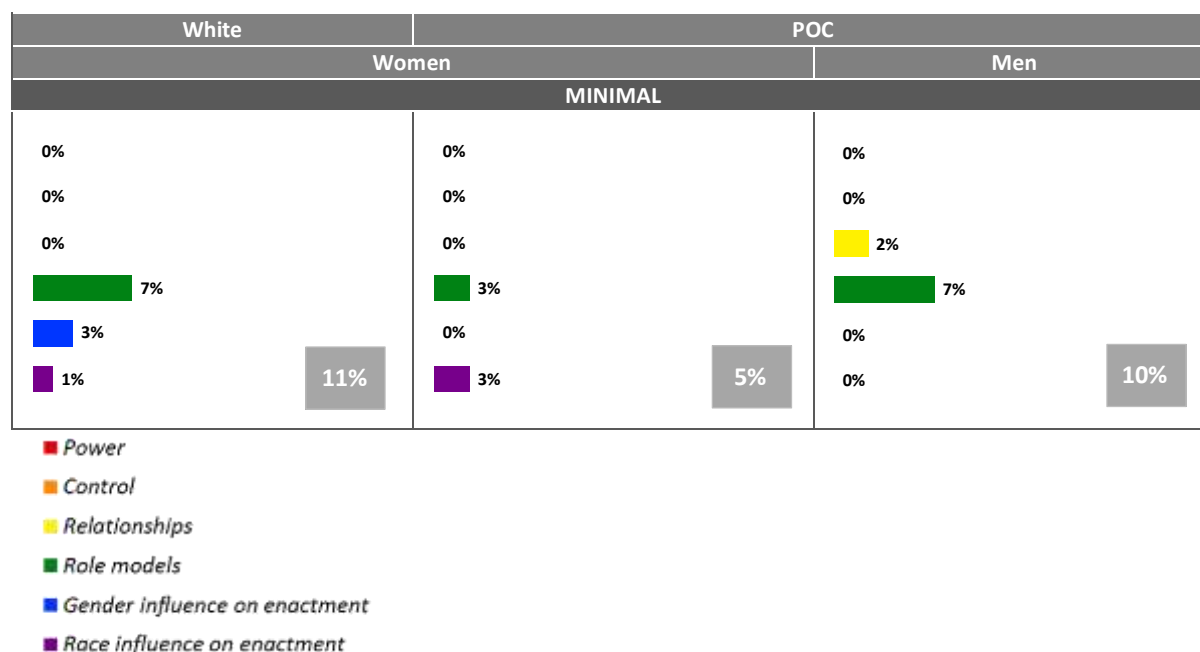
“When you assume the role of a leader, it requires you to sometimes be impartial, but now sometimes you come into a space where you are expected to be aligned with a minority group because you are part of that minority. I generally stay in a neutral place, even though it is difficult. I think what people of colour need to master more is to articulate why they assume that neutrality, because I think sometimes there is a disconnect between the expectation of the group how you behave. When that expectation is not met, they don’t understand how that expectation could not have been met. They don’t understand that the demands of the context require you to not align with a specific group.” 58STE01 MC22

Minimal sensemaking

According to Maitlis (2005), sensemaking will be *minimal* when social processes are not controlled nor animated, accounts are nominal, and decisions result in once-off compromise actions. Therefore, in cases of minimal sensemaking, leadership would not occur as no rational accounts of an ambiguous and uncertain world would have been constructed. Based on responses regarding power, control, relationships, role models and leadership enactment, the white women experienced 11% sensemaking which was *minimal*, the men of colour’s *minimal sensemaking* were at 10%, and the women of colour only seemed to engage in sensemaking that was 5% *minimal*.

Consistent across all three groups of respondents was *minimal sensemaking* regarding leadership role models. The white women also produced some *minimal sensemaking* regarding their gender and race and their leadership enactment. The women of colour also showed *minimal sensemaking* regarding race and leadership enactment, but not gender and enactment like their white counterparts. Lastly, the men were the only respondents to indicate that *minimal sensemaking* regarding their understanding of relationships and leadership. These differences are tabulated in Table 5.

Table 9: Code occurrence within 'minimal sensemaking'



Considering the historical context within which the majority of the respondents grew up, it is not surprising that role models emerged as problematic in constructing meaning. Restrictions to accessing role models for women and people of colour alone posed a significant barrier, not to mention that aspiring leaders who were women and people of colour did not have people like themselves visible in strategic leadership roles until the fall of Apartheid in 1994.

Furthermore, in discussing leadership role models, several interesting trends emerged. Firstly, the most apparent trend across groups is that of a person-orientation and that of a characteristic-orientation. There was a distinct difference in how respondents discussed leadership role models. Both the men- and women of colour seemed to have a person-orientation towards role models and suggested public figures, colleagues and family members to be appropriate role models for organisational leadership, however, the men seemed to base their choice of role model on achievements while the women of colour identified persons whose values or vision they could identify with. Conversely, the white women had a characteristic-orientation and discussed role models more broadly by referring to specific attributes that they found appropriate for organisational leaders, rather than “idolising” or singling out specific individuals:

“Obviously when you consider role models, you look at the most successful people...like your Raymond Ackermans⁶...your Allan Greys⁷...Motsepe⁸ and Khoza⁹...” 14UCT02 MB34

“I think there are a few women in SA that you would not normally consider. For instance Mamphela Ramphele¹⁰. I’ve become kind of disillusioned with her since her involvement in politics, but before that, I really admired her. I admire strong black women who are leading the way in business. You know, people like Phuti Mahanyele¹¹. And for example,

⁶ Raymond Ackerman is the founder of the retail group Pick ‘n Pay Group. The group is based in South Africa, but operates in South Africa, Zimbabwe and Australia (Forbes, 2014a).

⁷ Allan Gray found the the largest privately owned asset management firm in Southern Africa as a sole proprietorship in 1973 (Allan Gray, 2015).

⁸ Patrice Motsepe is a mining magnate and South Africa's first black billionaire (Fin24, 2015).

⁹ Dr. Reuel Khoza is a South African businessman and academic who is known for holding chairman positions with Old Mutual, Nedbank and Eskom (national utility provider) among others, in addition to being a visiting professor at Rhodes University and the University of Stellenbosch (Bloomberg, 2015b).

¹⁰ Dr. Mamphela Ramphele is one of Africa’s richest women, former Managing Director of the World Bank as well as founder and former chairperson of Agang SA, a South African political party (Forbes, 2014b).

¹¹ Phuti Mahanyele is a South African businesswoman and currently serves as the Chief Executive Officer of the Shanduka Group (Bloomberg, 2015a).

the COO of Facebook. She has a very forward way of thinking about how women engage the corporate world. So I admire women like that.” 13SAP01 FB29

“Some of them, in the way they achieved results...Some of them, in the way they nurtured and mentored me...All of those facets of leadership, I see different people doing things that I can learn from.” 05TEL02 FW42

What makes the responses from the white women even more interesting, was that not only did they focus on characteristics rather than the person when discussing role models, but some white women also expressed great dissatisfaction with persons who they perceived to have had the opportunity to serve as a role model, but failed. These types of responses were not observed among black participants:

“No. I find women quite bizarre in business, because a lot of the females that I've seen who are successful, they are so hard trying to be like men. Which I find bizarre, one of your traits is a nurturing side as a woman, and I think you should use that to your leadership ability. But they are trying to be like the men, that it is off-putting.” 04TEL01 FW42

“It's more a case of looking back over my career and looking at the different leaders that I've worked for and making comparison and taking a little bit from this one and a little bit from that one. I've certainly seen how NOT to do it.” 37TRU01 FW39

Further to what seems like reluctance to identify leadership role models, the white women also firmly hold on to societal gender roles. These firmly held beliefs transpire in how the white women talk about leadership styles and characteristics, their relationships with their followers, and their domestic responsibilities. One such response that clearly shows the problematic nature of these beliefs on gender roles in the creation of meaning is as follows:

“I've seen how conflicting it is to have stress at work and then try and come home and be a nurturing, patient mother. Where women are concerned, I have different views. I don't agree with the understanding that South Africa should have a 50% representation from women at a management level...For women who want to be the leaders - yes, there is no glass ceiling - go be the leader. But I don't think that naturally, we should have 50% of female leadership. My thinking is just a question of who's going to raise the children? Who's going to go home and do the homework? Yes, a man could do it. I used to believe a man can be parenting as well as a woman but I don't believe that anymore. I believe a man is, in general more inclined to see the big picture, to carry the more stressful things. While the woman in general is more geared to be nurturing, loving and patient.” 05TEL02 FW42

Finally, the women of colour expressed similar sentiments of having to compromise in order to meet expectations from both society and organisation, however for the women of colour, it seemed to be more about their racial identity rather than their gender identity:

“When I was working for the Durban office I was the equality representative and it was a reality that there was an imbalance in client allocation between Africans and non-Africans. It did not look like it was intentional, but when you looked at the client allocation it wasn't the same. Or, sometimes, when people are allocated clients, some of the [white] accountants are allocated to big clients while they have much less experience than me, for example, who was already in my third year of articles. This was quite damaging to the self-esteem, to be honest, and I know that this still happens in other units. You can hear it in the corridors being spoken about.” 38KPM01 FB30

These findings offer insight into both the role of social context in the organisational leadership experience and its centrality. Using the analytical lenses of intersectionality and sensemaking to examine the leadership experience, we expose how deficient acontextual leadership theorising truly is. Patterns in the data thus suggest that leadership and the context in which it occurs cannot be separated.

CONCLUSION

This study revealed several challenges to-, and opportunities for, the manner in which leadership is socially constructed within a South African context. First, regarding *guided* sensemaking, the white women engaged in this form of sensemaking through their conceptualisation of control, relationships, role models and gender. Here it seemed as if the white women created meaning by achieving

compliance from followers. This poses a significant challenge for the white women as one might argue that they engage in *guided* sensemaking that is estranged from sensemaking that occurs among their followers. Another challenge within *guided* sensemaking was observed among the men of colour in their reluctance to engage in practices where structure and compliance are forced upon others. This poses a significant challenge for the men of colour as hierarchical organisational structures are not always negotiable. Opportunities observed within guided sensemaking include women of colour's ability to elicit animation and procedural control in a far more collective manner than their white counterparts. In contrast with the white women and women of colour, whose responses regarding animation focused on individual interactions, the men of colour were observed to exhibit some form of social sensitivity. This allowance for diversity in organisational sensemaking holds opportunities for men of colour to be successful leaders in South African organisations where highly diverse work groups are the norm.

Within *restricted* sensemaking, several challenges were observed, with no tangible opportunities for any of the three intersectional groups. Firstly, the data indicated that the white women felt constricted by the structures within a hierarchical organisation and were not particularly engaged by individuals who enforce and reproduce these hierarchical structures. Furthermore, the women of colour's high animation and high control (as is the case for *guided* sensemaking) seem to be regarded as mutually exclusive. This poses a significant challenge for women of colour in leadership roles as Maitlis's (2005) framework indicates that high animation and high control can be established simultaneously and is in fact necessary for *guided* sensemaking. An analysis of *restricted* sensemaking also revealed that the men have a strong preference for procedural control over animation. Responses from the men also highlight a need for consistency as far as organisational controls are concerned, which is a challenge as procedural control and consistency are not always possible.

A consideration for *fragmented* sensemaking suggests that white women are at a disadvantage in how they conceptualise relationships with followers in comparison with the women of colour and the men of colour. This is because, for white women, followers and relationships with followers seem to be only as useful as the organisational outcomes they are able to facilitate. As a result, social interactions between the white women and their followers seem to be narrow and inconsistent in nature. Furthermore, the women of colour seem to find control (of their followers) either problematic or unnecessary. The women of colour seem to prefer strategies of leadership that allow for accountability, but not at the cost of autonomy. Similar to the observations among the women of colour, the data suggest that men seem to value procedural animation over procedural control. This could pose a challenge to men of colour in leadership roles, as optimal sensemaking occurs with both procedural animation and procedural control. Within *fragmented* sensemaking, it was observed that the men demonstrated an appreciation for superior relationships with followers in the leadership process, but they are not always able to establish these superior relationships with followers.

An analysis of *minimal* sensemaking yielded interesting findings. Both the men- and women of colour seemed to have a person-orientation towards role models and suggested public figures, colleagues and family members to be appropriate role models for organisational leadership, however, the men seemed to base their choice of role model on achievements while the women of colour identified persons whose values or vision they could identify with. Conversely, the white women had a characteristic-orientation and discussed role models more broadly by referring to specific attributes that they found appropriate for organisational leaders. Furthermore, the white women also expressed great dissatisfaction with persons who they perceived to have had the opportunity to serve as a role model, but failed to do so appropriately.

Marrying intersectionality and sensemaking has proven useful for examining the persistent marginalisation of women and people of colour in organisational leadership. The literature on the barriers women and people of colour face are well established, but less is known about how marginalised groups socially construct leadership. A key criticism of contemporary leadership theory is its tether to leader-centred conceptualisations. The findings from this study contribute to this critique and offer insights into how leadership theory may be advanced by considering the social context within which it occurs.

In addition to the clear theoretical contributions, this study also has implications for leadership practice in organisations. Specifically, it highlights the need to abandon traditional notions of effective

leadership, which are fundamentally gendered and racialised concepts. Instead, we must endeavour to develop ways of identifying, developing and evaluating organisational leadership that is in harmony with the social context. We must remain critical of leadership solutions that simply transplant practices from one context to the next, without regard for how social structures shape the leadership experience.

Limitations and directions for future research

This study has several limitations. Most notably, as an exploratory study within a specific social context, results cannot be generalised to other social contexts. This limitation does, however, set a clear direction for potential future studies in different social contexts. Another limitation of the study is its sample size. Given that the sample was subdivided into three groups in order to perform group-level analyses, a larger sample may have yielded insights or themes not covered by the existing study. This also presents possibilities for future research on larger samples of participants within the same social context. Finally, the incorporation of snowball sampling as a sampling technique could have introduced some biases into the data and subsequent analyses. Future studies of a similar nature might wish to attempt replication of these findings in order to identify such biases, or perhaps to repeat a similar study using different sampling techniques.

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PERFORMANCE DISCREPANCY, SOCIAL EMBEDDEDNESS, AND INFORMAL FIRMS' WILLINGNESS TO FORMALIZE

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ABSTRACT

Drawing on the behavioral theory of the firm and social embeddedness theory, I test a behavioral mechanism by which the search for improved performance rather than improved performance by itself triggers informal firms' willingness to formalize. I test the proposed mechanism using a random sample of 1,898 informal firms across 10 Latin American and African countries. I find that informal firms with sales performance below their aspiration level are more willing to formalize than informal firms with sales performance equal to or above aspiration level. I further test the moderating effect of two dimensions of social embeddedness, family and local embeddedness, on the proposed mechanism. I find that social embeddedness affects the relationship between performance discrepancy and willingness to formalize but primarily among firms with performance above aspiration level.

Keywords: Behavioral theory of the firm, Informal firms, Formalization, Social embeddedness; Family embeddedness, Local embeddedness.

INTRODUCTION

Firms are socially embedded (Granovetter, 1985; Jack & Anderson, 2002), and so is the strategy process by which firms make key decisions that affect their performance (Foss, 2021). The embeddedness in their social environment enables firms to access resources and relationships that increase their capacity for action beyond the boundaries of their own resources and capabilities (Uzzi, 1997). At the same time, social embeddedness imposes cognitive and cultural limitations on what practices, actions, and strategies are deemed as acceptable (Tina Dacin, Ventresca, & Beal, 1999; Zukin & DiMaggio, 1990). Hence, decision-makers of socially embedded firms may limit information search to the context within which their firm is socially embedded (Uzzi, 1997) or limit the information used in the decision-making to those that primarily align with prevailing cognitive schema (Cerrato, Alessandri, & Depperu, 2016). Decision-making in socially embedded firms may therefore be characterized by bounded rationality rather than economic rationality (Dequech, 2003; Granovetter, 1985). Arguably, The effects of social embeddedness on firm decision-making become even more pronounced when firms rely on alignment with socially constructed norms and values for their survival and competitive advantage (de Andrade, Bruhn, & McKenzie, 2016; Webb, Tihanyi, Ireland, & Sirmon, 2009; Williams & Martinez-Perez, 2014).

Despite the widespread social embeddedness of informal firms - firms that operate outside the legal framework of a state but in alignment with socially accepted norms and values (Webb, Tihanyi, Ireland, & Sirmon, 2009) -, the recent uptake in the management literature in answering the

question of when and why informal firms formalize has lacked an empirical estimation of the effect of social embeddedness (e.g. Assenova & Sorenson, 2017; Dau & Cuervo-Cazurra, 2014; Ram, Edwards, Meardi, Jones, & Doldor, 2019; Sutter, Webb, Kistruck, Ketchen, & Ireland, 2017). Formalization refers to registering with national agencies responsible for business registration and complying with formal regulations associated with operations, taxes, and labor (Godfrey, 2011; Siqueira, Webb, & Bruton, 2016; Williams, Martinez-Perez, & Kedir, 2017).

Firstly, studies have generally assumed that informal firms adopt a rational decision process that ignores the social implications of formalization to focus on its financial costs vis-a-vis benefits (Sutter et al., 2017). They argue that firms make a rational choice to remain informal by comparing the high financial cost vis-à-vis the minimal benefits of operating formally (De Castro et al., 2014; De Soto, 1989). The findings from this stream of literature indicate that informal firms become more likely to formalize when substantial positive performance leaves a firm with excess resources to cover formalization costs or makes the firm so big that it becomes uneconomical to operate informally (Gelb, Mengistae, Ramachandran, & Kedia Shah, 2009; Nguyen, Verreynne, & Steen, 2014; Williams et al., 2017). These studies, however, ignore the possibility that underperforming informal firms can be driven by a search for performance improvements to be more open to the prospect of formalization. The prevailing understanding is that formalization is superior to informality in productivity and firm performance (La Porta & Schleifer, 2014; Mbaye & Benjamin, 2015). Indeed, the empirical evidence follows that formal firms outperform their informal counterparts under the same macroeconomic conditions (Assenova & Sorenson, 2017; Benjamin & Mbaye, 2012; La Porta & Shleifer, 2008; Rand & Torm, 2012). Thus, it is plausible to expect that underperforming informal firms may consider formalization as an option for performance improvement.

Further, the limited studies that have accounted for the effect of social embeddedness (e.g. Thapa Karki, Xheneti, & Madden, 2020; Uzo & Mair, 2014) have been qualitative and tended to focus on broad categorizations of social embeddedness. This focus makes it difficult to disentangle the independent effects of different dimensions of social embeddedness (see Uzo and Mair (2014) for exception). Thus, despite the critical contributions of existing studies, the extent to which social embeddedness - a key characteristic of informal firms - affects informal firms' formalization decisions remains unclear. Further, given that decision-making in socially embedded firms may not align with the dictates of economic rationality, the focus on the cost-benefit calculus of formalization may represent an incomplete understanding of informal firms' decision to formalize. The effect of this is that the policy initiatives that have targeted the reduction in the costs of registering and operating in the formal economy have yielded little or no results in terms of formalizing informal firms (Bruhn, 2011; de Mel, McKenzie, & Woodruff, 2013; Galiani, Meléndez, & Ahumada, 2017).

Informal firms, however, contribute disproportionately to precarious working conditions, environmental pollution, and shortfalls in the tax revenue of countries (Blackman et al., 2006; International Labour Office (ILO), 2018; Levy, 2008). This is in addition to evidence to the fact that informality is inferior to formality in terms of firms level productivity and performance (Assenova & Sorenson, 2017; Benjamin & Mbaye, 2012; La Porta & Schleifer, 2014). Hence, the formalization decision of informal firms is essential in terms of its effects on national and firm-level performance.

To address the current challenges in the literature, I sidestep the focus on a cost-benefit calculus of formalization to test a behavioral mechanism by which informal firms become willing to formalize or not. I argue that formalization is an uncertain institutional change for informal firms. It regularly implies that informal firms have to make substantial financial investments, alter long-held business relationships, and change their traditional modes of operation (Godfrey, 2011; Sutter, Webb, Kistruck, Ketchen, & Ireland, 2017). For example, suppliers may work with an informal firm with the common implicit rule that the firm is informal and thus does not require invoices. Not providing an

invoice post a sale is vital for such suppliers because it lowers their taxes; they can keep the percentage of sales taxes and are free of any liability. Once the informal firm decides to formalize, their suppliers lose interest in working with them; they increase their prices, delay their shipments, and might even stop providing supplies to the firm¹². Such fundamental changes to the operations of an informal firm have the potential to affect the firm's chances of survival. Hence, I hold that formalization is an uncertain or risky decision for informal firms. At the same time, formalization has several benefits for formalized firms. Formalized firms have the legitimacy to operate more openly, access to a broader range of contracts, access government-provided business development services, and receive increased investments (Assenova & Sorenson, 2017; Fajnzylber, Maloney, & Montes-Rojas, 2011; La Porta & Schleifer, 2014; Rand & Torm, 2012; Webb, Khoury, & Hitt, 2019). These advantages mean that formalizing would be an attractive option for firms with performance shortfalls in the informal economy. Hence, I argue that their search for performance improvement will drive informal firms with current performance below their aspiration level to become more attuned to the performance-enhancing advantages of formalization and thus more willing to formalize.

On the contrary, informal firms with performance above aspiration levels will likely use it as a good reason to avoid risky change (Baum, Rowley, Shipilov, & Chuang, 2005; Greve, 2003) and hence will be relatively less willing to formalize. Finally, I argue that a focal firm's level of social embeddedness will moderate the relationship between performance relative to aspiration level and an informal firm's willingness to formalize.

I test this theory using a survey of 1,898 informal firms operating in 10 Latin American and African countries. I find that informal firms with sales performance below their historical level (negative performance discrepancy) are more willing to formalize compared to informal firms with sales performance above their historical level (positive performance discrepancy). The willingness of informal firms with positive performance discrepancy to formalize was not significantly different from informal firms with sales performance equal to their historical sales performance (no performance discrepancy). I find that the baseline mechanism is affected differentially by the level of social embeddedness measured on two dimensions; family embeddedness and local embeddedness. High family embeddedness exacerbates the risk-aversion of informal firms with positive performance discrepancy relative to firms meeting their aspirations, hence making them even less willing to formalize. On the other hand, local embeddedness had only a marginally significant moderating effect on the relationship between sales performance discrepancy and an informal firm's willingness to formalize..

This study makes two main contributions to existing literature. Firstly, I extend the behavioral theory of the firm to informal firms, and in so doing, I contribute to building a behavioral theory of community-oriented firms (Smulowitz, Rousseau, & Bromiley, 2020). Informal firms are generally micro to small firms operating under conditions where weak macro-level formal institutions are substituted by strong, typically localized informal institutions (Webb, Khoury, & Hitt, 2019; Webb et al., 2009). Hence, informal firms are relatively more dependent on social conformity for success or even survival compared to other community-oriented firms (e.g., community banks in the United States). Extending BTOF to such firms contributes to our understanding of community-oriented firms for which social goals may be treated as primary aspirations or aspirations simultaneously pursued with performance aspirations.

Secondly, I contribute to building a behavioral perspective to why and when informal firms formalize. The current views of formalization emphasize it as a rational decision based primarily on the financial cost-benefit calculus of registering and operating in the formal economy (De Castro et

¹² This example was provided by an anonymous reviewer of a related paper at the AOM 2021 conference

al., 2014; Sutter et al., 2017). The result is that current studies have deemphasized the boundedly rational nature of firm decision-making under conditions of social embeddedness. Our current approach highlights the boundedly rational nature of the formalization decision by recognizing the risky nature of the decision in terms of both the potential for firm failure and the social implications of formalizing for an informal firm. In so doing, I highlight the effect of firms' performance below aspiration level and provide an alternative mechanism that further clarifies formalization decision-making among informal firms. Further, I provide initial estimates of the differential influence of two important dimensions of social embeddedness on informal firms' willingness to formalize.

THEORY AND HYPOTHESIS DEVELOPMENT

Formalization of informal firms

The management literature's approaches to understanding the formalization of informal firms can be categorized into two non-mutually exclusive categories: contingency and agency perspectives. The contingency perspective to informal firm formalization has focused on the macro and meso level environmental factors that influence informal firms' decision to formalize or not (Godfrey, 2011; Sutter et al., 2017). Research from the contingency perspective usually relies on institutional theory to argue that firms are constrained or facilitated towards formalization depending on the relative strength and effectiveness of formal and informal institutional arrangements that govern economic exchange (De Soto, 1989; Webb et al., 2019). Findings from this perspective indicate that the formalization of informal firms is influenced by the initial cost of registration (De Soto, 1989), burdensome taxes, and the cost of regulatory compliance (Dau & Cuervo-Cazurra, 2014; Webb, Bruton, Tihanyi, & Ireland, 2013). Formalization is also influenced by the quality of governance in a country (Thai & Turkina, 2014), societal-level distrust for formal institutions (Williams et al., 2017; Williams & Shahid, 2016) and the existence of substantial stakeholder support for informality (Ram, Edwards, Meardi, Jones, & Doldor, 2020; Thapa Karki, Xheneti, & Madden, 2021; Webb et al., 2009). For example, extant literature suggests that large groups of customers are willing to buy goods outside the formal economy as a means of cutting costs or satisfying social and redistributive reasons (London, Esper, Grogan-Kaylor, & Kistruck, 2014; Williams & Martinez-Perez, 2014). Such stakeholder support creates a viable market for informal firms who otherwise are faced with doing business in dysfunctional formal markets.

The agency perspective, on the other hand, considers informal firms decision to formalize a “strategic choice” (Sutter et al., 2017: 441) that is driven or constrained by individual and firm-level factors (Grimm, Knorringa, & Lay, 2012; Williams, Shahid, & Martínez, 2016). At a broader level, however, this perspective to informal firm formalization may also include studies investigating institutional entrepreneurs' agency in facilitating the transition of multiple informal firms into formality (e.g. Lee & Hung, 2014; Sutter et al., 2017). At the individual level, the agency perspective indicates that the formalization of informal firms is influenced by the gender of the owner/managers (Thapa Karki et al., 2021; Xheneti, Madden, & Thapa Karki, 2019), the age of owner/manager, the age of informal firm (Williams et al., 2016), the level of human capital and entrepreneurial orientation of owner/managers (Grimm et al., 2012). At the firm level, findings have pointed to firm innovation, identification of high-growth opportunities (Nguyen et al., 2014; Williams & Martinez, 2014), firm performance sufficient to cover the transaction costs of formalization and firm growth that increases firm visibility and makes it unreasonably costly to be discovered by regulators (Cruz, Justo, & De Castro, 2012; Gelb et al., 2009; Nelson & De Bruijn, 2005; Ulyssea, 2018). Studies from the agency perspective find a positive relationship between these factors and informal firms' willingness to formalize. Therefore from the agency perspective, informal firms' increased willingness to formalize is

generally linked to positive firm performance in innovation and growth.

Following the agency perspective, I argue that formalization is a strategic choice that an informal firm makes to change from an institutional framework governed by informal norms and values to one governed by formal rules and regulations. Formalization for therefore involves substantial changes to the way the business operates - changing the reliance on trust and word-of-mouth to detailed contractual agreements and changing quality checks by visual inspection and touching to compliance with legal standards (Godfrey, 2011; Nelson & De Bruijn, 2005; Sutter et al., 2017). Formalization also involves making substantial financial investments on the part of the informal firm and the altering of long-held business relationships. The dramatic changes that come with informal firm formalization, therefore, make it an uncertain or risky decision. The risky nature of the formalization decision is especially true for informal firms because they frequently rely on informal norms, values, and relationships for competitive advantage (de Andrade, Bruhn, & McKenzie, 2016; De Castro et al., 2014; Williams & Martinez-Perez, 2014). I draw on the tenets of the behavioral theory of the firm and social embeddedness to argue that informal firms' decision to engage in such a risky change will be influenced by informal firms' performance relative to their aspiration level. I further argue that the influence on performance relative to aspiration level on informal firm's willingness to formalize is moderated by the level to which the focal firm is embedded within its social environment.

The behavioral theory of the firm

The behavioral theory of the firm (BTOF) has guided much research on risky organizational change. The theory has been applied in areas such as firms' merger and acquisition (Iyer & Miller, 2008), changes in market position (Greve, 1998), R&D intensity and innovation (Chen & Miller, 2007; Greve, 2003) and firms balance between financial and non-financial goals (Gaba & Greve, 2019; Rousseau, Bromiley, & Berrone, 2020). The central argument of BTOF is that decision-makers in firms use an aspiration level to evaluate firm performance and that the performance relative to the aspiration level influences the level of risks that firms are willing to take (Cyert & March, 1963; Greve, 1998; March & Shapira, 1987). Firstly, the decision-maker focuses attention on an aspiration level for performance. "An aspiration level represents the smallest outcome that would be deemed satisfactory by the decision-maker, given the current choice situation" (Schneider, 1992: 1053). Aspiration levels are typically set using the performance of similar firms or the historical performance of the focal firm (Greve, 1998). Second, the decision-maker uses the identified aspiration level to code outcomes as failures when performance is below the aspiration level and as successes when performance exceeds it. Third, the desire to overcome a performance failure is stronger than the desire to extend success, so decision-makers below the aspiration level are willing to accept more risks than decision-makers above the aspiration level (Audia & Greve, 2006). Therefore, firms performing below the aspiration level are motivated to engage in problemistic search, wherein managers pursue a search for a solution to an underperformance problem (Duke, Havakhor, Mui, & Parker, 2021).

Problemistic search often challenges the status quo and stimulates exploration of new practices, strategies, and actions to erase or avoid further losses (Baum, Rowley, Shipilov, & Chuang, 2005; Lant & Shapira, 2008). Thus, firms performing below aspiration level become more open to organizational change. On the whole, problemistic search, therefore, involves exploring new actions or opportunities that will change the firm's existing operations to improve performance since existing operations do not appear sufficient to generate the desired performance level (Cerrato et al., 2016). On the other hand, slack search involves using excess firm resources to experiment with new actions or strategies since the firm can absorb losses from such activities - as opposed to problemistic search (Alessandri, Cerrato, & Depperu, 2014; Cyert & March, 1963).

The behavioral theory of informal firm formalization

Informal firms rely on localized values and norms that govern and support economic exchange rather than country-wide formal regulations and support mechanisms (Tonoyan, Strohmeier, Habib, & Perlitz, 2010; Webb et al., 2019; Williams et al., 2017). The reliance on these localized support systems means that informal firms are excluded from the broader market and support systems that formal institutions provide. Informal firms, for example, lack the legitimacy to operate openly, access a wider range of contracts, access available risk pooling mechanisms (e.g., insurance plans), and access government-provided business development services (Assenova & Sorenson, 2017; Fajnzylber, Maloney, & Montes-Rojas, 2011; Rand & Torm, 2012). Furthermore, many informal firms operate at small and possibly suboptimal sizes due to resource constraints or out of the need to remain small enough to escape detection by regulators (Hart, 1973; Ulyssea, 2018). Hence, empirical evidence supports that informal firms have less productivity and overall performance than their formal counterparts (Assenova & Sorenson, 2017; Benjamin & Mbaye, 2012; La Porta & Schleifer, 2014; Mbaye & Benjamin, 2015).

Scholars have, however, provided several reasons for why firms informal firms exist. These included the high initial and transaction costs of formalization (De Soto, 1989), the desire to increase profit by avoiding tax and regulation costs (Ulyssea, 2018), the need to experiment with business ideas (Khavul, Bruton, & Wood, 2009), or the need to overcome alternative sources of liability of newness that exist in developing economies (Williams et al., 2017). Consequently, informal firms are theorized to formalize if performance is high enough to cover the initial and transaction costs of formalization, if it becomes unreasonably costly to be detected by regulators or if entrepreneurs acquire proof-of-concept for new their products or services (De Castro et al., 2014; Gelb et al., 2009; Nelson & De Bruijn, 2005). The existing explanations for informal firm formalization, however, ignore the possibility that an informal firm will be driven by a search for performance improvements to be more open to the prospect of formalization. I find this inconsistent with the existing empirical evidence supporting formal firms' superior performance and productivity relative to informal firms. Following the tenets of the behavioral theory of the firm (BTOF), I argue that informal firms performing below aspiration level will engage in problemistic search wherein the managers of an underperforming informal firm will pursue a search for a solution to an underperformance problem (Cerrato et al., 2016; Duke et al., 2021). This search for a solution to the underperformance problem makes an informal firm more open to changes in strategies and practices and, hence, more open to the prospect of formalization.

Firstly, I argue that decision-makers of informal firms use performance levels frequently achieved by their firms in the informal economy as an aspiration level. More often than not, informal firms have no formal or written records of business transactions (Sutter et al., 2017; Webb, Ireland, & Ketchen, 2014). The absence of formal records means in the first place that decision-makers of informal firms will rely on what they perceive from experience as the average performance level of their firm to judge whether a performance is a success or failure. On the other hand, the absence of written records means it is impossible for informal firms, unlike listed firms, to objectively compare their performance against "industry standards". The difficulty of making comparisons with similar firms is further aggravated by the fact that informal firms owners may consciously hold back success signals to reduce the demands of favor from family and other stakeholders or avoid detection by regulators (De Castro et al., 2014; Ulyssea, 2018). Based on the preceding arguments, I build our theory by focusing on informal firms' performance relative to their historical performance level (the performance level that decision-makers consider as normal to the firm). Hence our arguments apply when informal firms use their historical performance level as an aspiration level.

Secondly, given that the desire to overcome a performance failure is stronger than the desire to extend success, I argue in line with BTOF that decision-makers of informal firms performing

below the historical performance level (aspiration level) will be willing to accept more risks than decision-makers of informal firms with performance above the historical performance level (Audia & Greve, 2006). Informal firms with performance below aspiration level will be motivated to engage in problemistic search by exploring new practices, strategies, and actions with the hope of avoiding further losses. Such underperforming informal firms will therefore be more open to challenging their modus operandi given that current operations do not yield a satisfactory level of performance. An underperforming firm may, for example, be more open to changing its product line to focus on more culturally relevant versions of the same product or to focus on the marginalized portions of the product's market to reduce direct competition from larger or more formal competitors (Gebre-Egziabher, 2007). Alternatively, an underperforming informal firm may be open to new business practices or strategies that will grant it access to a wider market reach for its existing product. One such option is formalization. Formalizing will give an informal firm the legitimacy to operate more openly, access a wider range of contracts, access available risk pooling mechanisms (e.g., insurance plans), and access government-provided business development services (Assenova & Sorenson, 2017; Fajnzylber et al., 2011; Rand & Torm, 2012). However, formalizing is an uncertain decision as the drastic changes to a firm's operation that come with formalization (Sutter et al., 2017) can lead to firm failure. BTOF argues that the process of problemistic search will make underperforming informal firms risk-seeking and thus more open to the institutional change that comes with formalization. However, overperforming informal firms may consider their performance above aspiration a reason not to risk the survival of their firm. Hence I posit that;

Hypothesis 1a (H1a): informal firms with performance below aspiration level will be risk-seeking and thus more willing to formalize

Hypothesis 1b (H1b): informal firms with performance above aspiration level will be risk-averse and thus less willing to formalize

Social embeddedness and the behavioral theory of informal firm formalization

Social embeddedness refers to the ongoing contextualization of economic exchange (activity) in cognitive, cultural, structural, and political environments (Tina Dacin, Ventresca, & Beal, 1999; Zukin & DiMaggio, 1990). Firms that are embedded in their social environment can draw on resources and relationships that increase their capacity for action beyond the boundaries of their own resources and capabilities (Uzzi, 1997). However, this embeddedness in the social environment imposes cognitive and cultural limitations on what practices, actions, and strategies are deemed acceptable. Hence, even though social embeddedness expands firms' capacity for action, it also imposes limits on what organizations can do and the ranges of opportunity that firms can explore (Dequech, 2003; Tina Dacin et al., 1999). Nevertheless, economic exchange remains socially embedded (Jack & Anderson, 2002), and even more so in the informal economy, where firms rely on alignment with socially constructed norms and values that govern and support economic exchange. Indeed, informal firms only come into existence when a substantially large group of stakeholders consider them legitimate outside the dictates of formal laws and regulations (Webb et al., 2009). The influence of social embeddedness thus becomes critical in understanding decision-making within informal firms. We expect the facilitating and constraining mechanisms of social embeddedness to influence the level to which performance discrepancy affects informal firms' willingness to formalize.

Indeed, recent work in the behavioral theory of the firm (BTOF) tradition has recognized the influence of social embeddedness on the risk and search mechanisms proposed by BTOF (Gómez-Mejía, Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2007; O'Brien & David, 2014;

Smulowitz et al., 2020). Smulowitz et al. (2020) find that local embeddedness attenuates the influence of performance below aspirations on risk-taking but amplifies the influence of performance above aspirations on community-oriented goals. On the other hand, O'Brien and David (2014) find that even though embedded firms engage in problemistic search when firm performance is below aspiration, they also increase search behavior when performance exceeds expectations. They find that when performance rises above aspirations, communitarian-oriented firms raise R&D search to “pay forward” their network of stakeholders by engaging in additional R&D search that should yield growth opportunities that will benefit these stakeholders in the future. Hence, similar to the findings of Smulowitz et al. (2020), the findings of O'Brien and David (2014) indicate that embedded firms pay more attention to their social obligations when firm performance increases above aspiration level. By extension, if the social obligations of the embedded firm do not align with performance-enhancing activities, I expect embedded firms to engage in such social obligations at the expense of performance-enhancing activities. In line with this logic, I expect social embeddedness to affect the risk-taking and search propensities of firms performing below or above aspiration level in relation to formalization. I hypothesize these effects in two frequent manifestations of social embeddedness in the informal economy; family and local embeddedness.

Family embeddedness

Families and businesses are inextricably intertwined (Aldrich & Cliff, 2003), and this is very much so in the informal economy where entrepreneurs frequently rely on family resources and relations to start and grow their firms (Khavul et al., 2009; Webb, Pryor, & Kellermanns, 2015). Family members can serve as critical sources of advice, knowledge, capital resources, and emotional support. Hence, in contexts characterized by weak formal institutions, such as is present in many developing economies, firms can become highly dependent on families for resources and support (Ge, Carney, & Kellermanns, 2019). Informal firms, for example, depend on family income as a source of initial and growth financing of business (Ngek, 2018). Additionally, the family frequently serves as a source of unpaid or underpaid labor (Aldrich & Cliff, 2003; Leonard, 2000).

The deep involvement of the family and the low resource availability of many contexts with weak formal institutions mean the economic and social well-being of many families are tied to the fortunes of family-embedded firms (Webb, Pryor, & Kellermanns, 2015). Indeed, in many informal family economic units, family and business financial accounts may be operated as one (Chen, 2005; Hussmanns, 2004). Additionally, for informal firms that have moved beyond the provision of survival needs of a family may still have value for the socioemotional wealth of the family. Hence such firms will have other primary reference aspirations such as socioemotional wealth rather than financial performance (Gómez-Mejía et al., 2007). Thus, we argue that the primary effect of family embeddedness on informal firms is that the risk-taking propensities of such firms are significantly attenuated. Decision-makers of informal firms that have close linkages with the economic and social well-being of family members will be less willing to risk firm failure in an attempt to improve firm performance. Additionally, family-embedded informal firms that use socioemotional wealth as their primary reference point will be willing to accept significant risk to their performance while protecting the survival of such firms (Gómez-Mejía et al., 2007). I, therefore, expect family-embedded informal firms will be less willing to undertake the risky institutional change that comes with formalization. Hence, I posit that;

Hypothesis 2a (*H2a*): the risk-seeking propensities of informal firms performing below aspiration level will be negatively moderated by the level of family embeddedness, thus reducing the baseline willingness to formalize

Hypothesis 2b (*H2b*): the risk-aversion propensities of informal firms performing above aspiration level will be positively moderated by the level of family embeddedness, thus increasing the baseline unwillingness to formalize

Local embeddedness

Local embeddedness is defined as the involvement of economic actors in a geographically delimited network and/or institutional setting (Baù, Chirico, Pittino, Backman, & Klaesson, 2019). The dependence of informal firms on localized norms and values that govern and support economic exchange (Webb et al., 2019, 2009) makes the concept of local embeddedness relevant to informal firm decision-making. Local embeddedness grants informal firms contacts with customers and suppliers in the specified geographic area and facilitates access to tangible assets such as a labor force and intangible assets, such as localized knowledge (Baù et al., 2019; Kalantaridis, 2009; Webb et al., 2019). Local embeddedness means that informal firms can leverage localized knowledge and relationships to fit their products to the local institutional and market demands, thus, acquiring contextualized competitive advantage (Jack & Anderson, 2002; de Andrade et al., 2016; De Castro et al., 2014; Williams & Martinez-Perez, 2014).

On the other hand, high dependence on localized norms and values and high fit between firm resources and the local institutional and market environment will mean that such informal firms will exhibit higher inertia in responding to the institutional change that comes with formalization. Firms that fit their entire operations around the local institutional and market environment will incur relatively higher adjustment costs in the change process required for formalization. The higher adjustment cost is because the product and process standards and requirements of the broader formal market may be significantly different from the standards and requirements of localized informal institutional norms and values. Additionally, informal firms that depend on the local fit for competitive advantage may experience an erosion of such a competitive advantage with formalization. Indeed, formalization in some localized contexts can be viewed as bucking informal norms and values that others followed, thus leading to the firm's delegitimization within its locality (De Castro et al., 2014; Thapa Karki et al., 2021). An inability to successfully secure the support of stakeholders in the formal economy in such an instance could lead to the firm's failure. Thus, high local embeddedness significantly increases the risk of firm failure that comes with firm formalization. Behavioral theory of the firm asserts that decision-makers whose firms face a possible threat to survival become risk-averse (March & Shapira, 1987, 1992) to avoid putting their firms in danger.

Further, locally embedded informal firms that engage in problemistic search in the face of performance below aspiration level are also likely to search “deeply” for solutions within the existing relationship within the locality (Uzzi, 1997: 50). Such a “deep” search in the local environment truncates the likelihood that such firms will consider or attach a premium to the wider market reach and scope advantages of formalization. Locally embedded informal firms may, for example, focus on securing cheaper or free sources of raw materials (Webb et al., 2013) within the locality to cut down costs or use the existing firm resources to produce alternative products of value to customers in the locality. In essence, high embeddedness in the local environment will reduce the risk-taking propensities of informal firms and/or truncate the scope of their problemistic search, making them less willing to formalize. Hence, I posit that;

Hypothesis 3a (*H3a*): the risk-seeking propensities of informal firms performing below aspiration level will be negatively moderated by the level of local embeddedness, thus reducing the baseline willingness to formalize

Hypothesis 3b (*H3b*): the risk aversion of informal firms performing above aspiration level will be positively moderated by the level of local embeddedness, thus increasing the baseline unwillingness to formalize

DATA

The data source is the World Bank's Informal Enterprise Survey (IES), a random sample of informal or unregistered firms collected by the World Bank in 10 countries in Latin America and Africa between 2010 and 2013. The data are a pure cross-section of 1,898 firms for which information is available on all the variables used in the analyses. Following the IES data collection protocol, this study defines informal firms as those that are not registered with the relevant business registration authorities within their country of operation. This definition is consistent with many other studies in the related literature (Loayza and Roginlini 2011, Gindling and Terrell 2005, Rand and Torm 2012, Mead and Morrisson 1996).

In addition, to scope of coverage, a considerable advantage of the IES is that they employ the same methodology and identical survey instruments across countries, especially for the years included in this study.

MEASURES

Dependent variable. The dependent variable *formalize*, measures the respondent's willingness for their firm to be registered with the relevant business registration office in the country where the informal firm is located. It was coded 1 if the response is “yes” to the question “Would you like for your business to be registered with the (the name of the registration office where businesses are required to register in each country inserted)?” and 0 otherwise. This is consistent with our earlier definition for firm informality and with other studies (McKenzie & Sakho, 2010; Nguyen et al., 2014; Rand & Torm, 2012).

Independent variables. The focal independent variable *performance discrepancy* is a categorical measure that was coded 1 if the total sales for the previous month is “below what is normally sold by the business”, 2 if total sales for the previous month equal to “what is normally sold by the business” and 3 total sales for the previous month represented above what is normally sold by the business. The measure, therefore, captures the respondent's perception of the firm's performance in the immediate past month relative to the historical performance level of the focal firm. Thus, “what is normally sold by the business” represents the aspiration level in this study. This measure is appropriate for our study for several reasons. Firstly, the widespread absence of formal accounting practices among informal firms means (Thai, Oudin, Pasquier-Doumer, & Ngoc, 2017) that financial estimates provided by firms in the informal sector are largely based on recall and hence may suffer from recall bias. Secondly, given the level of discretion that the respondent has in providing such an estimate in the absence of formal records, there is a higher possibility of desirability bias where respondents may either overestimate or underestimate the value of sales provided.

To test the moderating role of family embeddedness, I follow Ge et al. (2019) to measure the variable, *family embeddedness*, as the ratio of the total numbers of employees of the firm that are members of the largest owner's family, including the largest owner. To test for the moderating effect for local embeddedness, I measure the variable *local embeddedness* as the total number of years that the largest owner has lived in the city or community where the firm was located, following Bau et al.

(2019) and Dahl and Sorensen (2012).

Control variables. I control several individual and firm-level factors that are likely to affect willingness to formalize and are regularly controlled for informal firm formalization studies using surveys (Mahoney & Skousen, 2015; McKenzie & Sakho, 2010; Nguyen et al., 2014; Rand & Torm, 2012). I also include country dummies to account for macro-level variations in the business and regulatory environments across countries and city size dummies to account for city/regional variations in the regulatory environment. Countries included in the survey are presented in Table A1 of Appendix A.

I then controlled for other factors likely to influence informal firms' willingness to formalize. *Reason unregistered*, controls for dummies of the main reason reported by the respondent as being why the firm is not registered with the national office for business registration. Descriptive statistics for this measure are presented in Table A4 of Appendix A.

Cost of informality is coded at 1 if the firm has to make any informal payment to remain unregistered, 2 if the firm does not make such payments, and 3 if the respondent refuses to answer the question. *Previously formal*, firms that started up formal or were formal at a period in the past are likely to have become informal because of falling firm performance, bad experiences with formality, or because they are deliberately avoiding regulation and or taxation for increased profits (Ulyssea, 2018). Such conditions are likely to affect firms' willingness to formalize.

Finally, it is possible that some informal firms are started by entrepreneurs who intend to formalize their firms in the future. Such firms are likely to be started by growth-oriented entrepreneurs who start up informally to overcome alternative sources of liability of newness imposed by the lack of formal institutional support (Williams et al., 2017). Informality may also be used as means to test the viability of entrepreneurial opportunities as entrepreneurs maneuver toward higher value-creating ventures (Khavul et al., 2009; Nelson & De Bruijn, 2005). It is plausible to assume that such growth-oriented entrepreneurs are more likely to have greater potential for performance above aspiration level as well as willingness to formalize their firms owing to the existence of such intentions at start-up. I, however, do not observe such predisposition to formalization from start-up in the data. To address this, I control for three additional variables that conform to the characteristics of such firms. Firstly, I control for the employment status of the largest owner at the start-up of the focal firm. This is to control for whether the firm was started out of necessity or not. Firms, started out of necessity are usually started as a survival strategy, i.e., serving the need for personal survival or provision for the family (De Soto, 1989; Godfrey, 2011; Kistruck, Webb, Sutter, & Bailey, 2015). Given that such informal firms are started because business owners lack other sources of income or employment (Garcia-Lorenzo, Donnelly, Sell-Trujillo, & Imas, 2018; Hart, 1973; Thieme, 2018) I control for *employment at start-up*; unemployment prior to starting a business is usually used as an indicator of necessity entrepreneurship (Dencker, Gruber, & Shah, 2009; Nikiforou, Dencker, & Gruber, 2019). Secondly, firms that are started as a result of opportunity identification and are started with the intention to become formal later are likely to look more closely like formal firms relative to other informal firms (Grimm et al., 2012; Nguyen et al., 2014). Hence, I expect that such firms would have a larger size at start-up relative to informal firms relative to other informal firms. Thus I control for *size at start-up*; log of the number of full-time employees the firm had at start up. Thirdly, I expect firms that started with the intention to formalize in the future and still have those intentions to have a higher perception of the benefits than formalization at the time of the decision-making. I, therefore, control for *formalization benefit*, the averaged perception of the benefit of formalization on four dimensions; better access to finance, better access to raw materials, less bribes to pay, and better opportunities with formal firms.

RESULTS

Descriptive statistics

Tables 1 and 2 present the descriptive statistics and the correlation matrix for the variables, respectively, while Table 3 presents the distribution of willingness to formalize relative to performance equal to, below, and above historical performance levels. In general, the informal firms involved in the study across the 10 countries are micro to small-scale firms with an average of 2.33 employees and a maximum of 35 employees. Table 1.2 indicates that having a female as the largest owner, combining business financial accounts with the financial accounts of the home, family embeddedness and local embeddedness are negatively and significantly correlated with willingness to formalize. Correlation coefficients are generally low, and mean-variance inflation factors are well below the critical value of 10 in all estimated models (Belsley, Kuh & Welsh, 1980). On the other hand, having a largest owner with education above secondary school level, managerial experience, high perceived value of formalization, increasing firm size, and being previously formal are significantly and positively correlated with being willing to formalize. From Table 1.3, the majority of the firms have performance equal to aspiration level (63.35%), while 23.14 % and 13.60 % have performance below and above aspiration level, respectively. Table 1.3 also indicates that 54.36% of firms performing below aspiration level are willing to formalize compared to 48.26% of firms performing above aspiration level and 47.13% for firms performing equal to aspiration level. Table 3 reports pairwise correlations between the main variables used in our model.

Table 1: Descriptive Statistics

Variable	Observations	Mean	Std. Dev.	Min	Max
Willingness to formalize	1898	0.49	0.50	0.00	1.00
Age	1898	38.77	11.16	17.00	85.00
Gender	1898	0.42	0.49	0.00	1.00
Managerial education	1898	0.66	0.47	0.00	1.00
Managerial experience	1898	2.06	0.76	0.00	4.26
Serial entrepreneur	1898	0.70	0.76	0.00	10.00
Owner-manager	1898	0.97	0.17	0.00	1.00
Formalization benefit	1898	1.63	1.25	0.00	4.00
Industry	1898	12.57	8.42	1.00	30.00
Firm size	1898	0.56	0.67	0.00	3.56
Age of firm	1898	1.83	0.84	0.00	4.88
Sales ¹³	1898	887.49	10636.62	0.10	326441.78
Informal payment	1898	1.91	0.38	1.00	3.00
Previously formal	1898	0.03	0.16	0.00	1.00
Combined account	1898	0.56	0.50	0.00	1.00
Reason unregistered	1898	1.93	1.05	1.00	5.00
Funding source	1898	1.51	1.30	1.00	7.00
Business location	1898	1.73	0.74	1.00	3.00
Start-up employment	1898	2.90	1.64	1.00	6.00
Size at start-up	1898	0.44	0.61	0.00	3.56
City size	1898	1.99	0.98	1.00	5.00

¹³ Given the wide distribution of the sales we run robustness checks a subsample of firms with sales between \$10 and \$9000. The results remained robust at same level of significance for performance below and above aspiration. The \$9000 limit is based on data collection in Ghana for a different but related study.

Year	1898	2011.67	1.44	2010.00	2013.00
Performance discrepancy	1898	1.50	0.72	1.00	3.00
Family embeddedness	1898	0.79	0.29	0.05	1.00
Local embeddedness	1898	27.73	15.69	1.00	80.00

Table 2: Tabulation of performance discrepancy by willingness to formalize

Performance discrepancy	Willingness to formalize		
	0	1	Total
Equal to aspiration	636	567	1203
Below aspiration	199	237	436
Above aspiration	134	125	259
Total	969	929	1898

Multivariate analyses

Results of the logit regression models (with standard errors country level) testing the various hypotheses are presented in Table 4. Model 1 in Table 4 includes all the control measures, and model 2 adds our focal performance discrepancy variable dummies (with performance equal to aspiration as the reference category). Model 3 adds the moderation variables family embeddedness and local embeddedness. Model 4 and 5 add the interactions between performance discrepancy and family embeddedness and between performance discrepancy and local embeddedness, respectively. Model 6 presents the full model, including all the interactions.

Results

Hypothesis 1a proposed that firms with performance below aspiration level will be risk-seeking and more willing to formalize. Results from Model 3 of Table 1.4 show support for this hypothesis. The estimated coefficient of 0.21 ($p = 0.003$) indicates that the logarithm of the odds ratio of being willing to formalize for firms with performance below aspiration is 21% higher compared to firms with performance equal to aspiration level. In terms of marginal effects, firms with performance below aspiration have an average predicted probability of 0.52 ($p = 0.000$) compared to 0.49 ($p = 0.000$) for firms with performance equal to aspiration. Hypothesis 1b proposed that firms with performance above aspiration level will be less risk-averse and less willing to formalize. Results from Model 3 of Table 4 show an estimated coefficient of - 0.21 ($p = 0.357$).

Table 1.2: Correlation among variables in the study

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(1) Willingness to formalize	1.00															
(2) Age	-0.01	1.00														
(3) Gender	-0.11**	0.02	1.00													
(4) Managerial education	0.09**	-0.04	-0.08**	1.00												
(5) Managerial experience	0.07**	0.44**	-0.16**	0.00	1.00											
(6) Serial entrepreneur	0.00	-0.08**	-0.05**	-0.03	-0.15**	1.00										
(7) Owner-manger	-0.03	-0.01	0.01	0.02	0.05**	-0.03	1.00									
(8) Formalization benefit	0.39**	-0.05**	-0.05**	0.02	0.06**	0.05**	-0.03	1.00								
(9) Firm size	0.16**	0.07**	-0.19**	0.11**	0.14**	0.09**	-0.08**	0.03	1.00							
(10) Age of firm	-0.01	0.41**	-0.13**	-0.04	0.77**	-0.14**	0.01	-0.01	0.09**	1.00						
(11) Sales	0.04	0.03	-0.01	0.04	0.02	0.02	0.01	0.00	0.14**	0.02	1.00					
(12) Previously formal	0.07**	0.06**	-0.01	0.06**	0.04	0.07**	-0.03	0.07**	0.05**	0.06**	0.00	1.00				
(13) Combined account	-0.09**	-0.06**	0.08**	-0.18**	-0.04	0.02	0.03	-0.03	-0.21**	0.00	-0.05**	-0.06**	1.00			
(14) Size at start-up	0.13**	0.06**	-0.17**	0.12**	0.12**	0.08**	-0.08**	0.02	0.68**	0.07**	0.15**	0.08**	-0.16**	1.00		
(15) Family embeddedness	-0.15**	0.00	0.22*	-0.11**	-0.12**	-0.07**	0.04	0.00	-0.81**	-0.06**	-0.08**	-0.03	0.17**	-0.52**	1.00	
(16) Local embeddedness	-0.05**	0.53**	0.00	0.06**	0.33**	-0.14**	0.00	-0.13**	0.07**	0.30**	0.04	0.02	-0.13**	0.10**	-0.05**	1.00

** $p < 0.05$

This result indicates that the logarithm of the odds ratio of being willing to formalize for firms with performance above aspiration level is lower than but not significantly different compared to firms with firms experiencing performance equal to aspiration level. I test the difference between the logarithm of the odds ratio of being willing to formalize for firms with performance below aspiration and firms with performance above aspiration level. I find that the two coefficients are significantly different from each other ($p = 0.035$), indicating that compared to firms with performance above aspiration level, firms with performance below aspiration level are significantly more likely to formalize. In terms of marginal effects, firms with performance above the aspiration level have an average predicted probability of 0.45($p=0.000$).

Table 4 Logit regressions

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)
Gender	-0.12 (0.08)	-0.11 (0.08)	-0.11 (0.09)	-0.11 (0.09)	-0.11 (0.08)	-0.11 (0.09)
Managerial education	0.33 (0.31)	0.32 (0.31)	0.32 (0.31)	0.31 (0.32)	0.32 (0.31)	0.31 (0.31)
Managerial experience	0.34* (0.19)	0.33* (0.18)	0.33* (0.18)	0.34* (0.18)	0.34* (0.18)	0.34* (0.18)
Serial entrepreneur	-0.08 (0.10)	-0.07 (0.10)	-0.07 (0.10)	-0.07 (0.11)	-0.07 (0.10)	-0.07 (0.10)
Owner-manager	-0.19 (0.19)	-0.16 (0.19)	-0.17 (0.18)	-0.18 (0.17)	-0.19 (0.19)	-0.19 (0.18)
Formalization benefit	0.70*** (0.10)	0.71*** (0.09)	0.71*** (0.09)	0.71*** (0.09)	0.70*** (0.09)	0.71*** (0.09)
Firm size	0.47*** (0.10)	0.47*** (0.10)	0.33* (0.18)	0.31* (0.18)	0.32* (0.18)	0.31* (0.18)
Age of firm	-0.29** (0.12)	-0.29*** (0.11)	-0.28*** (0.11)	-0.29** (0.11)	-0.29*** (0.11)	-0.29** (0.11)
Sales	0.00* (0.00)	0.00* (0.00)	0.00* (0.00)	0.00 (0.00)	0.00* (0.00)	0.00 (0.00)
Previously formal	0.58 (0.48)	0.57 (0.50)	0.57 (0.50)	0.57 (0.51)	0.58 (0.51)	0.58 (0.52)
Combined account	-0.31*** (0.10)	-0.32*** (0.10)	-0.32*** (0.10)	-0.31*** (0.11)	-0.33*** (0.10)	-0.32*** (0.11)
Size at start-up	-0.00 (0.11)	-0.00 (0.11)	0.02 (0.11)	0.04 (0.11)	0.03 (0.11)	0.04 (0.11)
Performance discrepancy						
Below aspiration		0.22*** (0.07)	0.22*** (0.07)	0.38 (0.53)	0.03 (0.22)	0.20 (0.45)
Above aspiration		-0.21 (0.22)	-0.21 (0.22)	1.16** (0.52)	-0.47** (0.24)	0.93 (0.62)
Family embeddedness			-0.36 (0.26)	-0.13 (0.33)	-0.38 (0.26)	-0.15 (0.33)
Below aspiration X Family embeddedness				-0.20 (0.68)		-0.18 (0.68)
				(0.00)		(0.00)
Above aspiration X Family embeddedness				-1.72** (0.72)		-1.68** (0.74)

Local embeddedness			-0.00 (0.00)	-0.00 (0.00)	-0.01 (0.00)	-0.01 (0.00)
Below aspiration X Local embeddedness					0.01 (0.01)	0.01 (0.01)
Above aspiration X Local embeddedness					0.01* (0.01)	0.01 (0.01)
Constant	-1.04 (0.72)	-1.11 (0.76)	-0.74 (0.91)	-0.93 (0.87)	-0.61 (0.92)	-0.81 (0.89)
Observations	1,898	1,898	1,898	1,898	1,898	1,898
Start-employment Dummy	YES	YES	YES	YES	YES	YES
Industry Dummy	YES	YES	YES	YES	YES	YES
Funding source Dummy	YES	YES	YES	YES	YES	YES
Business location Dummy	YES	YES	YES	YES	YES	YES
Reason unregistered Dummy	YES	YES	YES	YES	YES	YES
Cost of informality Dummy	YES	YES	YES	YES	YES	YES
Country Dummy	YES	YES	YES	YES	YES	YES
City size Dummy	YES	YES	YES	YES	YES	YES
Year Dummy	YES	YES	YES	YES	YES	YES
Pseudo R2	0.241	0.243	0.244	0.247	0.244	0.247

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Figure 1 presents a diagrammatic representation of the relative likelihood of being willing to formalize among the three categories of firms. Figure 1.1 shows that the likelihood of being willing to formalize drops consistently as I move from firms performing below aspiration to firms performing equal to aspiration level and then to firms performing above aspiration. Put together, the results of the preceding analyses support hypotheses 1a and 1b.

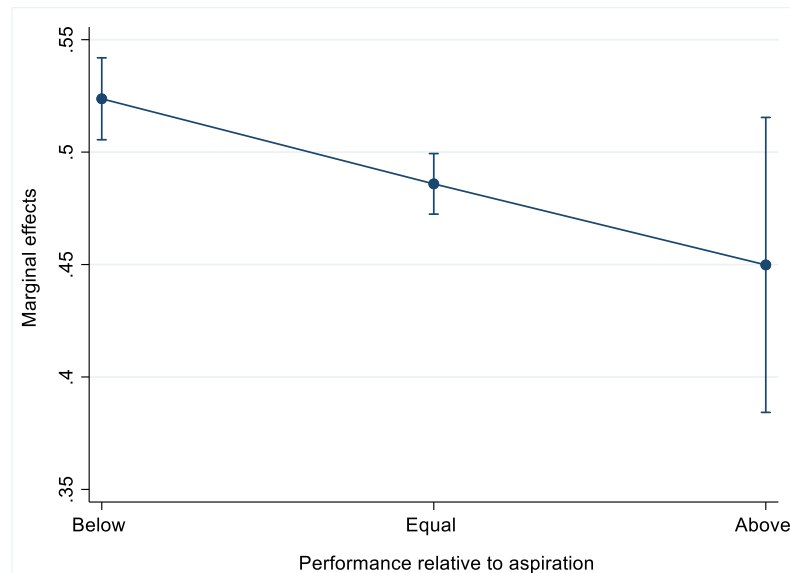


Figure 1: Marginal effects of firms at different levels of performance relative to aspiration level

Turning to the family embeddedness specific effects, Hypothesis 2a and 2b proposed that family embeddedness will negatively moderate the level of risk that informal firms performing below and above aspiration level will be willing to assume and hence their willingness to formalize. Thus, in the face of increasing family embeddedness, informal firms with performance below aspiration

level will become less risk-seeking relative to the baseline *H1a* and hence less willing to formalize. On the other hand, informal firms with performance above aspiration level will become more risk-averse than the baseline expectation in *H1b* and hence, even less willing to formalize. Though not hypothesized, Table 1.4 model 4 indicates that family embeddedness is negatively related to informal firms' willingness to formalize; however, the effect is insignificant ($b = -0.36$, $p = 0.159$). In terms of the hypothesized effects, model 4 in Table 1.4 shows a significant interaction between performance discrepancy and family embeddedness but only for performance above aspiration ($b = -1.72$, $p = 0.018$) relative to performance equal to aspiration. Results indicate that family embeddedness significantly and positively moderates the risk-aversion of informal firms with performance above aspiration level towards willingness to formalize. This result provides support for hypothesis 2b. To present a clearer picture of how family embeddedness moderates the relationship between performance discrepancy and willingness to formalize, the marginal effects of the three performance discrepancy variables were calculated at an interval of 0.001 for figures falling between 0 and 1. Figure 2 presents predictive margins for these variables

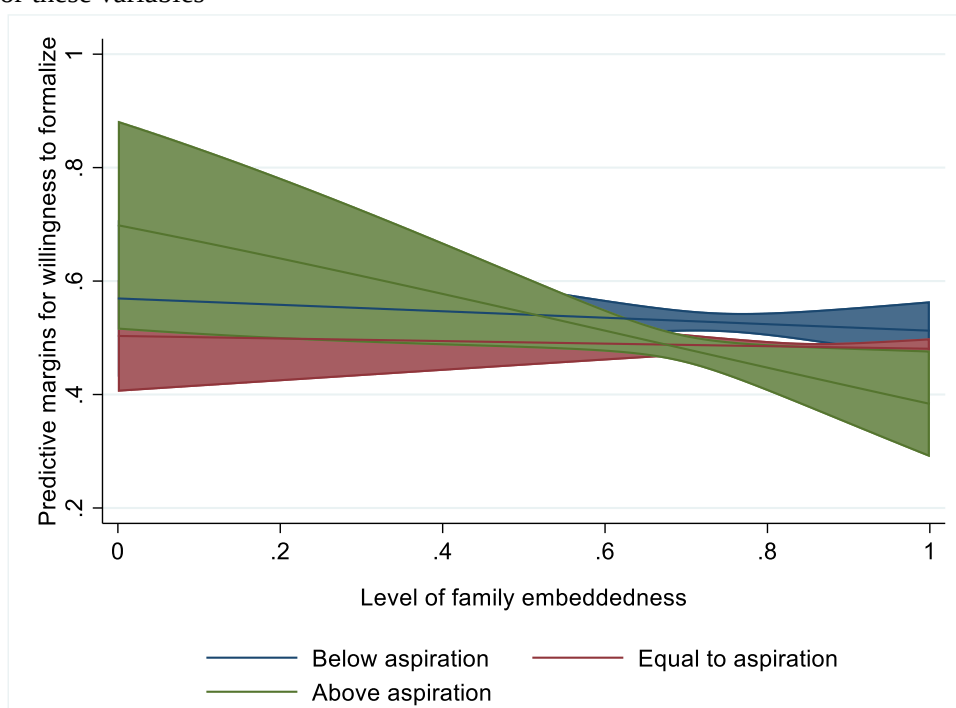


Figure 2: Predictive margining for willingness to formalize at different level of family embeddedness, with 95% CIs

at the various levels. The results, however, do not provide support for hypothesis 2a. Although the coefficient of the interaction effect is negative, it is not significant ($b = -0.20$, $p = 0.773$).

Hypotheses 3a and 3b investigate the moderating effect of local embeddedness on the relationship between performance discrepancy and informal firms' willingness to formalize. Specifically, Hypothesis 3a and 3b propose that local embeddedness will negatively and positively moderate the risk-seeking and risk-aversion of informal firms performing below and above aspiration level, respectively. Model 5 in Table 1.4. shows some interaction between performance discrepancy and local embeddedness but only for performance above aspiration level relative to performance equal to aspiration level. However, the moderating effect is opposite to hypothesis H3b and only significant at the 10% level of significance ($b = 0.01$, $p = 0.097$). Hence relative to firms performing equal to

aspiration level, local embeddedness marginally reduces the risk aversion towards the prospect of formalization for firms performing above aspiration level.

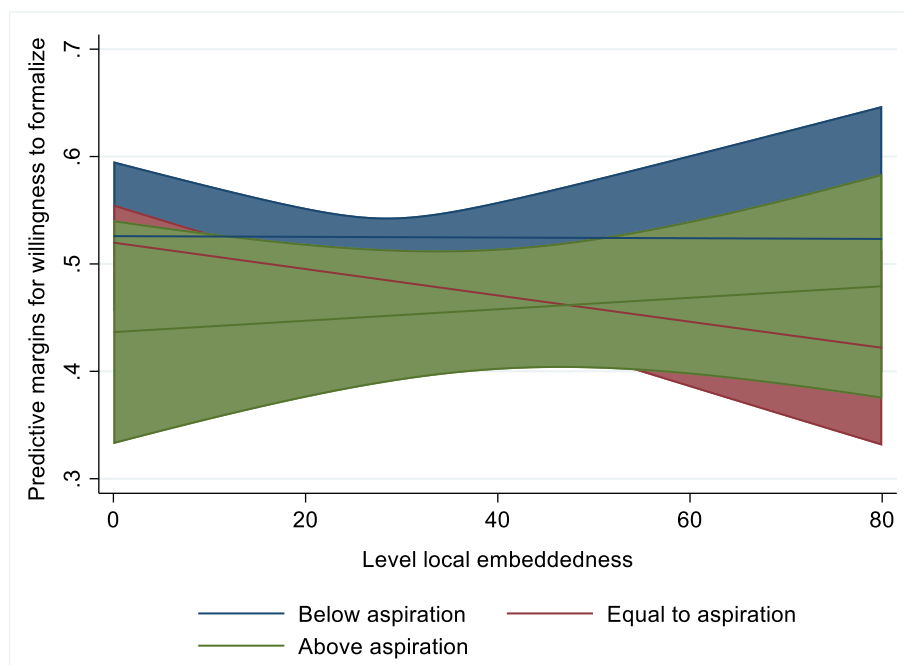


Figure 3: Predictive margin for willingness to formalize at different level of local embeddedness, with 95% CIs

Robustness checks for baseline mechanism

In the next step, I test the assumption that the perceived performance-enhancing benefits of formalization drive the higher willingness to formalize among firms performing below aspiration level. To test this mechanism, I divide the sample into two roughly equal subsamples based on whether decision-makers of the firms had above-median perceptions of the benefits of formalization or not.

I then run independent logit regressions using each sample. The expectation is that firms whose decision-makers have above-median perceptions of the benefits of formalization for their firm will exhibit stronger willingness to formalize when their firms are performing below aspiration than firms with below-median perceptions of the value of formalization. Model 3 and 4 in Table 7 present results for above-median and below-median subsamples, respectively. The results show that the effect of a firm's performance below aspiration remained robust with a slightly higher coefficient ($b = 0.23$, $p = 0.081$) and a higher marginal effect of 0.68 ($p = 0.00$) in the subsample with above-median perceptions of the benefits of formalization. This is in comparison to results from the full sample. In the subsample with below-median perceptions of the benefits of formalization, the effect of the performance below aspiration is very low and also insignificantly ($b = 0.04$, $p = 0.521$) with different from firms with performance equal to aspiration level. The coefficient is also lower than the coefficient in the above-median subsample. The marginal effect of performance below aspiration level on willingness to formalize is also lower at 0.33 ($p = 0.00$) in the below-median subsample. The sub-sample analyses thus support the assumption that the higher willingness to formalize on the part of firms with performance below aspiration is driven by the perceived benefits of formalization.

Table 7: Logit models for comparing above and below-median perceived formalization benefit subsamples to the main model.

VARIABLES	(Model 1) Main model	(Model 2) Above-median Model	(Model 3) Below Median Model
Age	0.00 (0.01)	0.00 (0.01)	0.01 (0.01)
Gender	-0.11 (0.09)	-0.04 (0.21)	-0.23 (0.14)
Managerial education	0.32 (0.31)	0.14 (0.33)	0.58** (0.29)
Managerial experience	0.33* (0.18)	0.23 (0.20)	0.56** (0.24)
Serial entrepreneur	-0.07 (0.10)	-0.03 (0.13)	0.01 (0.15)
Owner-manager	-0.17 (0.18)	-0.10 (0.41)	-0.15 (0.31)
Formalization benefit	0.71*** (0.09)	0.66*** (0.06)	1.85*** (0.23)
Firm size	0.33* (0.18)	0.35** (0.16)	0.28 (0.23)
Age of firm	-0.28*** (0.11)	-0.22* (0.11)	-0.38 (0.31)
Sales	0.00* (0.00)	0.00 (0.00)	0.00 (0.00)
Previously formal	0.57 (0.50)	0.43 (0.51)	0.94* (0.52)
Combined account	-0.32*** (0.10)	-0.38*** (0.13)	-0.59*** (0.20)
Size at start-up	0.02 (0.11)	-0.18* (0.11)	0.15 (0.19)
Below aspiration	0.22*** (0.07)	0.23* (0.13)	0.04 (0.24)
Above aspiration	-0.21 (0.22)	-0.42 (0.29)	-0.01 (0.19)
Family embeddedness	-0.36 (0.26)	-0.25 (0.28)	-0.76 (0.49)
Local embeddedness	-0.00 (0.00)	-0.00 (0.01)	-0.01** (0.00)
Constant	-0.74 (0.91)	-0.54 (0.99)	-1.10 (2.07)
Observations	1,898	982	897
Start-employment Dummy	YES	YES	YES
Industry Dummy	YES	YES	YES
Funding source Dummy	YES	YES	YES
Business location Dummy	YES	YES	YES
Reason unregistered Dummy	YES	YES	YES

Cost of informality Dummy	YES	YES	YES
Country Dummy	YES	YES	YES
City size Dummy	YES	YES	YES
Year Dummy	YES	YES	YES
Pseudo R2	0.244	0.191	0.302

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Robustness checks for moderating effects

Robustness checks were carried out using alternative measures and specifications of the moderator variables. Table B1 in Appendix B presents results for robustness checks using alternative measures of family embeddedness. I used three alternative measures of the *Family embeddedness* variable, these include *Family employed*, *High family embeddedness* and *Deep family embeddedness*. *Family employed* is the raw value of the number of family members of the largest owner employed in the business. The measure for *High family embeddedness* is achieved by splitting the main *Family embeddedness* measure into high and low based on whether the estimate is above or below the mean. Since over 50% of the sample is made up of self-employed owners (thus, the largest owner is the only employee), the mean provided a better point to split the sample into two rather than the median). *High family embeddedness* is coded 1 if the estimate is above the mean and 0 otherwise. Finally, a key feature that distinguishes family-embedded informal firms from their formal counterparts is their ability to merge the financial accounts of both the family and the business. To account for this unique feature, the third alternative measure, *Deep family embeddedness*, is coded as 1 (low) if the informal firm is coded as low for *High family embeddedness* and if the family and business financial accounts are separated. *Deep family embeddedness* is coded as 2 (medium) if the informal firm is coded as high for *High family embeddedness*, but the family and business financial accounts are separated or vice versa. *Deep family embeddedness* is finally coded as 3 (high) if the informal firm is coded as high for *High family embeddedness* in the business and the family and business financial accounts are also merged. The results for the main effect of performance discrepancy and the moderation effects remain qualitatively the same across all the three alternative measures of family embeddedness.

I also used three alternative measures of the *Local embeddedness* variable, and these include *High local embeddedness*, *Deep local embeddedness*, and *Life in city*. Table B2 of Appendix B presents results for robustness checks using alternative measures of local embeddedness. The measure for *High local embeddedness* is achieved by splitting the main *Local embeddedness* measure into high and low based on whether the estimate is above or below the mean (this was mainly done to mirror the *High family embeddedness* measure). *High local embeddedness* is coded 1 if the estimate is above the mean and 0 otherwise. On the other hand, *Deep local embeddedness* is achieved by splitting the main *Local embeddedness* measure into high and low based on whether the estimate is above or below the median. *Deep local embeddedness* is coded 1 if the estimate is above the median and 0 otherwise. Finally, *City embeddedness* is calculated as the ratio of the number of years the largest owner has lived in the city where the business is located to the total age of the largest owner. The results for the main effect of performance discrepancy and the moderation effects of local embeddedness also remain qualitatively the same across all the three alternative measures of local embeddedness.

DISCUSSION

Despite the social embeddedness of informal firms, studies investigating the drivers of formalization have generally assumed a rational decision-making process that ignores the social implications of

formalization and focuses on its financial costs vis-a-vis benefits. These studies have found that informal firms are more willing to formalize in response to positive performance (De Castro et al., 2014; Ulyssea, 2018; Nguyen, Verreynne, & Steen, 2014; Perry, Maloney, Arias, Fajnzylber, & Saavedra-chanduvi, 2010). The studies indicate that firms become more willing to formalize if positive performance leads to excess resources to cover the transaction costs of formalization or if the increased visibility that comes from positive performance increases the concealment costs of being detected by regulatory agencies (De Castro et al., 2014; Gelb et al., 2009; Nguyen et al., 2014). Further, positive performance may signal underlying human and resource capabilities that significantly reduce the adjustment costs related to formalization for such firms (Grimm et al., 2012). Firms with superior human and other resources capabilities can more effectively adjust to the institutional changes that come with formalization. Despite their important contributions, extant studies have generally ignored the role of social embeddedness, a key characteristic of informal firms, in affecting informal firms' decisions to formalize. The result is that current studies have deemphasized the boundedly rational nature of firm decision-making under conditions of social embeddedness to focus on a quasi-rational cost-benefit calculus of formalization. In effect, existing studies have sidelined to social implications of formalization for informal firms. A further consequence of cost-benefit approach is that current studies fail to account for situations where informal firms performing below their targets may be driven to be more willing to formalize by a search for performance improvements. This omission in the literature is inconsistent with the widely supported assumption that formalization is superior to being informal with respect to firm performance (Assenova & Sorenson, 2017; Benjamin & Mbaye, 2012; La Porta & Schleifer, 2014).

To augment the extant literature, I draw on the behavioral theory of the firm (BTOF) and social embeddedness literature to propose a mechanism that recognizes the boundedly rational nature of the formalization decision and further emphasizes the social implications of formalization. I first argue that formalization is a risky decision that can lead to firm failure if not successful. I then posit that informal firms performing below performance levels that they are used to in the informal economy (historical performance level) will be driven by a search for performance improvement to become risk-seeking and thus more willing to formalize. On the contrary, informal firms with performance above historical levels will use it as a good reason to avoid risky change (Baum et al., 2005; Greve, 2003) and hence will be less willing to formalize. I then highlight the moderating effect of two important dimensions of social embeddedness in the informal economy, family embeddedness and local embeddedness, on the proposed mechanism. Our findings indicate that informal firms performing below their historical performance levels become risk-seeking and more willing to formalize relative to informal firms with performance above their historical performance levels. This finding indicates that informal firms' formalization decision aligns with the bounded rationality that characterizes decision-making under risk as proposed by BTOF. Robustness checks using an extended version of the BTOF also provide support to the current findings.

I also find that the BTOF mechanism is partially moderated by family embeddedness. I find that the risk-aversion of informal firms with performance above aspiration level is positively moderated by the level to which the focal informal firm is embedded within the family of the largest owner. Thus, the willingness of informal firms performing above aspiration level to formalize is further reduced for firms that are highly embedded in the family of the largest owner. Further, contrary to expectations, I find that local embeddedness negatively moderates the risk-aversion of informal firms with performance above aspiration. The effect is, however, marginal and only significant at 10%. These findings indicate that a search for performance improvement due to performance shortfalls in the informal economy can push informal firms to become more willing to formalize. The current findings indicate that a negative discrepancy between a firm's current and historical performance triggers a

problemistic search that challenges an informal firm's *modus operandi* (Baum et al., 2005; Lant & Shapira, 2008) and makes the informal firm more open to the prospect of formalization. Informal firms performing below their historical performance levels will become more attuned to the performance-enhancing advantages of formalization and therefore become more willing to undergo the risky institutional change that comes with formalization (Sutter et al., 2017). This finding is important, in that it breaches the gap between the existing literature on informal firms' willingness to formalize and the notion that formality is superior to informality in relation to firm-level performance. This study lends credence to this by demonstrating informal firms' desire to formalize in the face of negative performance discrepancy.

Further, the findings of the study highlight how different dimensions of social embeddedness can influence informal firms' willingness to formalize. Informal firms demonstrate different levels of social embeddedness on different dimensions, including embeddedness in family, industry cluster, and ethnic groups (Uzo & Mair, 2014; Webb, Pryor, & Kellermanns, 2015; Webb et al., 2009). Our findings indicate that different dimensions of embeddedness matter differently in influencing informal firms' decisions to formalize.

The important findings of this study are, however, not without limitations. Firstly, I realize that willingness of informal firms to formalize may not necessarily translate into the actual formalization of firms, as actual behavior might be different from intentions. However, our data do not allow us to observe the actual formalization of these firms. This challenge in our study could be addressed by a longitudinal study of informal firm performance and formalization decisions. Additionally, I recognize the increasing call to conceptualize formalization on a continuum rather than a dichotomy (Bruton, Duane Ireland, & Ketchen, 2012; Godfrey, 2011). Here also, our data only allows us to observe informal firms' willingness to register with the nationally recognized agency for business registration but not with other levels of formalization such as municipality-level registrations. Further, the current data allows us only to observe firms' responses to performance discrepancies that occurred over a single month of operation. Measuring firms' response to such a short period of experience could potentially lead to underestimating the effect of performance discrepancy relative to aspiration level on firm willingness to formalize. Robustness checks that account for firm performance below aspiration level but close to firm failure and performance above aspiration and to the point of slack mimic the effects of "overly" extended periods of performance discrepancy. Hence, the robustness check to some degree addresses the concern of overestimation of the effect of performance discrepancy. Despite the challenges of the current data, the multi-country nature of our data enables us to make valuable contributions to a literature dominated by single country studies owing to the difficulty of collecting data from firms in the informal economy. The study's findings also enable us to make several contributions to the extant literature on BTOF and informal firm formalization.

Firstly, by extending BTOF to informal micro and small-scale firms operating in Latin America and Africa, I extend BTOF to firms that operate outside the dictates of formal regulations and also extend the behavioral theory of community-oriented firms (Smulowitz et al., 2020) to firms that operate in contexts where weak formal institutions are substituted by strong informal institutions. In such contexts, firms' social goals become primary aspirations or aspirations simultaneously as performance goals. This is because firms' existence and competitive advantage frequently depend on legitimacy before stakeholders of informal institutions that govern economic exchange (Webb et al., 2013, 2009). Hence, such firms may be willing to accept significant risk to performance in order to attend to the interests of stakeholders of informal institutions. For example, a family embedded informal firm may attend to the economic or socio-emotional wealth interests of the family at the expense of performance improvement (Gómez-Mejía et al., 2007), while a firm embedded in a local community or ethnic group may assist or even train current or future competitors as a responsibility to the community

or ethnic group (Slade Shantz, Kistruck, & Zietsma, 2018). On the contrary, the study by Smulowitz et al. (2020) focused on community-oriented banks in the United States of America for whom social goals are secondary aspirations that are attended to after achieving performance aspirations.

Additionally, firms that are highly dependent on informal institutions for survival may be embedded in multiple dimensions of the social environment. For example, a firm may be embedded in the family by having a large portion of the employees being family members, embedded locally by relying on localized resources, norms, and values, and at the same time be embedded in an ethnic group by engaging in products or services for which there exists an extensive value chain of closely knitted ethnic group members. Results of our study indicate that these different dimensions of social embeddedness may have different independent effects on the decision-making process in such firms. The latter contribution is particularly important because, despite the recognition of the influence of social embeddedness on informal firms' decision to formalize (De Castro et al., 2014; Thapa Karki et al., 2021), empirical estimation of its effect has been lacking. This study is among the first to provide a quantitative estimation of this effect. Further, by breaking down the social embeddedness of informal firms into family embeddedness and local embeddedness, the study lays a foundation for disentangling the nuanced effects that the different dimensions of social embeddedness can have on informal firms' decision to formalize. I find that social embeddedness affects both the risk propensities that translate negative performance discrepancy into a higher willingness to formalize. What will be interesting to explore in future studies would be if and how multiple dimensions of social embeddedness interact to influence decision making in multiple embedded informal firms.

Further, by extending BTOF to understanding informal firm formalization, I highlight an important but neglected mechanism by which informal firms become willing to formalize; the search for performance improvements as a result of performance shortfalls in the informal economy. There is increasing evidence to the effect that firms may be started in the informal economy for reasons other than necessity or inability to afford the initial cost of registration (Slade Shantz et al., 2018; Ulyseas, 2018; Uzo & Mair, 2014; Williams et al., 2017). Thus, it is possible that growth-oriented informal firms or firms that have products or services relevant to formal markets will become more willing to formalize in the face of performance shortfalls in the informal economy. Our study provides evidence supporting the assertion that firms will be driven by the performance-enhancing possibilities of the formal economy to become more willing to formalize when faced with performance shortfalls in the informal economy. This finding is in line with the highly supported assertion that formality is superior to informality in relation to productivity and firm performance (Assenova & Sorenson, 2017; Benjamin & Mbaye, 2012; La Porta & Schleifer, 2014). The finding also indicates that the effectiveness of formalization policies could be improved if such policies target 1) Firms for which formalization holds clear performance-enhancing potential and 2) firms that are dissatisfied with their performance levels in the informal economy.

Further, the findings of our study provide support to problem signaling as an effective way of drawing attention to the performance advantages of formalization and stimulating informal firms' willingness to formalize. Problem signaling refers to identifying the shortcomings with current institutional practices and thus highlighting them as unsatisfactory (Sutter et al., 2017). Sutter et al., 2017 found in their study that drawing the attention of dairy farmers in the informal economy to the suboptimal performance of their current informal business norms and practices relative to the formal farmers that use the same level of resources was effective in drawing the attention of informal farmers to the performance advantages of formalization. They argued that drawing attention to the negative performance discrepancy was an effective tool in the case of the farmers to motivate institutional change from informality to formality. Our study lends credence to using problem signaling to stimulate formalization among informal firms.

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by Sharon Zukin and Paul DiMaggio.

Appendix A

Table A1: Descriptive statistics of countries

Country	Freq.	Percent	Cum.
Argentina (2010)	80	4.21	4.21
Peru (2010)	357	18.81	23.02
Guatemala (2010)	135	7.11	30.14
Ghana (2013)	396	20.86	51.00
Angola (2010)	28	1.48	52.48
Botswana (2010)	29	1.53	54.00
Democratic Republic of Congo (2010 & 2013) ¹⁴	389	20.50	74.50
Rwanda (2011)	128	6.74	81.24
Mali (2010)	36	1.90	83.14
Kenya (2013)	320	16.86	100.00
Total	1898	100.00	

Table A2: Descriptive statistics of industries

Industry	Freq.	Percent	Cum.
Manufacturing of clothes or shoes	332	17.49	17.49
Manufacturing of baked food (Baker)	53	2.79	20.28
Manufacturing of coffee, sugar, oil, dry fruits and other processed foods	41	2.16	22.44
Manufacturing of handcrafts	45	2.37	24.82
Manufacturing of furniture	120	6.32	31.14
Manufacturing of metal products	103	5.43	36.56
Manufacturing of household items	16	0.84	37.41
Manufacturing of tools and instruments	4	0.21	37.62
Other manufacturing (not included above)	189	9.96	47.58
Selling food or Groceries	241	12.70	60.27
Selling of clothes or household items	85	4.48	64.75
Selling of other goods	98	5.16	69.92
Selling of business/computer/phone services	224	11.80	81.72
Transport Services	7	0.37	82.09
Cleaning and washing services	13	0.68	82.77
Hairdressers and barber shops	133	7.01	89.78
Professional Services	16	0.84	90.62
Repairing services	51	2.69	93.31
Construction	13	0.68	93.99
Other services (not included above)	114	6.01	100.00
Total	1898	100.00	

Table A3: Descriptive statistics of funding sources mostly used for day-to-day running of the firm

Funding source	Freq.	Percent	Cum.

¹⁴ Democratic Republic of Congo has 89 data points from 2010 and 300 data points from 2013

Internal funds	1573	82.88	82.88
Credit from suppliers or advances from customers	102	5.37	88.25
Moneylenders	28	1.48	89.73
Microfinance institutions	62	3.27	92.99
Banks	54	2.85	95.84
Friends/ Relatives	69	3.64	99.47
Other sources	10	0.53	100.00
Total	1898	100.00	

Table A4: Descriptive statistics of reason why firm is unregistered

Reason unregistered	Freq.	Percent	Cum.
Costs of the registration procedure	830	43.73	43.73
Running costs of being formal	634	33.40	77.13
No benefit for the firm if it formalizes	197	10.38	87.51
Other reasons	212	11.17	98.68
Don't know	25	1.32	100.00
Total	1898	100.00	

Appendix B

Table B1: Logistic regressions using Alternative family embeddedness variables

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)
Gender	-0.11 (0.08)	-0.11 (0.08)	-0.11 (0.08)	-0.11 (0.09)	-0.11 (0.09)	-0.11 (0.09)
Managerial education	0.32 (0.31)	0.32 (0.31)	0.32 (0.31)	0.31 (0.32)	0.33 (0.31)	0.32 (0.31)
Managerial experience	0.34* (0.18)	0.33* (0.17)	0.33* (0.18)	0.34* (0.18)	0.33* (0.18)	0.34* (0.18)
Serial entrepreneur	-0.07 (0.10)	-0.07 (0.10)	-0.07 (0.10)	-0.07 (0.11)	-0.07 (0.10)	-0.09 (0.10)
Owner-manager	-0.17 (0.18)	-0.19 (0.17)	-0.17 (0.18)	-0.18 (0.16)	-0.17 (0.18)	-0.18 (0.16)
Formalization benefit	0.71*** (0.09)	0.71*** (0.09)	0.71*** (0.09)	0.71*** (0.09)	0.71*** (0.09)	0.71*** (0.09)
Firm size	0.52*** (0.07)	0.52*** (0.08)	0.37** (0.17)	0.36** (0.17)	0.31** (0.14)	0.28** (0.13)
Age of firm	- 0.29*** (0.11)	- 0.28*** (0.11)	- 0.28*** (0.11)	-0.28** (0.11)	- 0.28*** (0.11)	- 0.29*** (0.11)
Sales	0.00* (0.00)	0.00* (0.00)	0.00* (0.00)	0.00* (0.00)	0.00* (0.00)	0.00* (0.00)
Previously formal	0.57 (0.50)	0.57 (0.50)	0.56 (0.51)	0.56 (0.52)	0.55 (0.52)	0.56 (0.53)
Combined account	- 0.32*** (0.10)	- 0.32*** (0.10)	- 0.32*** (0.10)	- 0.32*** (0.11)		
Size at start-up	0.02 (0.11)	0.02 (0.11)	0.02 (0.11)	0.03 (0.11)	0.03 (0.11)	0.06 (0.11)
Performance discrepancy						
Below aspiration	0.22***	-0.06	0.21***	0.30	0.21***	0.97***

	(0.07)	(0.33)	(0.07)	(0.25)	(0.08)	(0.19)
Above aspiration	-0.20	-0.15	-0.21	0.38	-0.21	0.43*
	(0.22)	(0.19)	(0.23)	(0.25)	(0.22)	(0.24)
High family embeddedness			-0.16	-0.01		
			(0.13)	(0.20)		
Below aspiration X High family embeddedness				-0.13		
				(0.40)		
Above aspiration X High family embeddedness				-0.93**		
				(0.39)		
Local embeddedness	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Family employed	-0.09	-0.13				
	(0.07)	(0.10)				
Below aspiration X Family employed		0.21				
		(0.23)				
Above aspiration X Family employed		-0.03				
		(0.16)				
Deep family embeddedness						
Medium					-	-0.06
					0.31***	
					(0.08)	(0.09)
High					-	-0.22
					0.57***	
					(0.17)	(0.19)
Below aspiration X Medium Deep family embeddedness						-
						0.92***
						(0.29)
Below aspiration X High Deep family embeddedness						-
						0.91***
						(0.31)
Above aspiration X Medium Deep family embeddedness						-0.36
						(0.32)
Above aspiration X High Deep family embeddedness						-
						1.17***
						(0.44)
Constant	-1.01	-0.92	-0.95	-1.04	-0.85	-1.07
	(0.79)	(0.80)	(0.80)	(0.78)	(0.79)	(0.79)
Observations	1,898	1,898	1,898	1,898	1,898	1,898
Start-employment Dummy	YES	YES	YES	YES	YES	YES
Industry Dummy	YES	YES	YES	YES	YES	YES
Funding source Dummy	YES	YES	YES	YES	YES	YES
Business location Dummy	YES	YES	YES	YES	YES	YES
Reason unregistered Dummy	YES	YES	YES	YES	YES	YES
Cost of informality Dummy	YES	YES	YES	YES	YES	YES
Country Dummy	YES	YES	YES	YES	YES	YES
City size Dummy	YES	YES	YES	YES	YES	YES
Year Dummy	YES	YES	YES	YES	YES	YES
Pseudo R2	0.243	0.244	0.243	0.246	0.243	0.248

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table B2: Logistic regressions using Alternative local embeddedness variables

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 3	Model 4
Age	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.00)
Gender	-0.11 (0.08)	-0.10 (0.08)	-0.10 (0.08)	-0.10 (0.08)	-0.11 (0.08)	-0.11 (0.08)
Managerial education	0.32 (0.31)	0.33 (0.30)	0.32 (0.31)	0.33 (0.30)	0.32 (0.31)	0.32 (0.31)
Managerial experience	0.33* (0.18)	0.33* (0.18)	0.33* (0.18)	0.34* (0.18)	0.33* (0.18)	0.33* (0.18)
Serial entrepreneur	-0.07 (0.10)	-0.07 (0.10)	-0.07 (0.10)	-0.08 (0.10)	-0.07 (0.10)	-0.07 (0.10)
Owner-manager	-0.17 (0.18)	-0.16 (0.18)	-0.18 (0.17)	-0.17 (0.18)	-0.17 (0.18)	-0.17 (0.18)
Formalization benefit	0.71*** (0.09)	0.71*** (0.09)	0.71*** (0.09)	0.71*** (0.09)	0.71*** (0.09)	0.71*** (0.09)
Firm size	0.34* (0.18)	0.32* (0.18)	0.33* (0.18)	0.32* (0.18)	0.34* (0.18)	0.33* (0.17)
Age of firm	- 0.29*** (0.11)	- 0.28*** (0.11)	- 0.29*** (0.11)	- 0.29*** (0.11)	- 0.29*** (0.11)	- 0.28*** (0.11)
Sales	0.00* (0.00)	0.00* (0.00)	0.00* (0.00)	0.00* (0.00)	0.00* (0.00)	0.00* (0.00)
Previously formal	0.57 (0.49)	0.57 (0.50)	0.57 (0.50)	0.57 (0.51)	0.57 (0.50)	0.57 (0.50)
Combined account	- 0.32*** (0.10)	- 0.32*** (0.09)	- 0.32*** (0.10)	- 0.32*** (0.09)	- 0.32*** (0.10)	- 0.32*** (0.10)
Size at start-up	0.02 (0.11)	0.02 (0.11)	0.02 (0.11)	0.02 (0.11)	0.02 (0.11)	0.02 (0.11)
Performance discrepancy						
Below aspiration	0.22*** (0.08)	0.36** (0.15)	0.22*** (0.08)	0.30* (0.16)	0.22*** (0.07)	0.42 (0.28)
Above aspiration	-0.21 (0.22)	-0.28 (0.25)	-0.20 (0.22)	-0.27 (0.27)	-0.21 (0.22)	-0.45 (0.40)
Deep local embeddedness	-0.10 (0.15)	-0.05 (0.17)				
Below aspiration X Deep local embeddedness		-0.30 (0.23)				
Above aspiration X Deep local embeddedness		0.14 (0.26)				
Family embeddedness	-0.36 (0.25)	-0.37 (0.26)	-0.38 (0.25)	-0.38 (0.26)	-0.36 (0.25)	-0.35 (0.26)
High local embeddedness			-0.14 (0.12)	-0.12 (0.15)		
Below aspiration X High local embeddedness				-0.17 (0.28)		
Above aspiration X High local embeddedness				0.13 (0.29)		
City embeddedness					-0.08 (0.19)	-0.06 (0.22)
Below aspiration X City embeddedness						-0.30 (0.34)
Above aspiration X City embeddedness						0.35 (0.46)
Constant	-0.75 (0.90)	-0.78 (0.89)	-0.75 (0.91)	-0.76 (0.89)	-0.70 (0.83)	-0.70 (0.84)

Observations	1,898	1,898	1,898	1,898	1,898	1,898
Start-employment Dummy	YES	YES	YES	YES	YES	YES
Industry Dummy	YES	YES	YES	YES	YES	YES
Funding source Dummy	YES	YES	YES	YES	YES	YES
Business location Dummy	YES	YES	YES	YES	YES	YES
Reason unregistered Dummy	YES	YES	YES	YES	YES	YES
Cost of informality Dummy	YES	YES	YES	YES	YES	YES
Country Dummy	YES	YES	YES	YES	YES	YES
City size Dummy	YES	YES	YES	YES	YES	YES
Year Dummy	YES	YES	YES	YES	YES	YES
Pseudo R2	0.243	0.244	0.244	0.244	0.243	0.244

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Part 3: Public Policy, Administration of Government and Non-Governmental Organizations

HEALTH CARE EMPLOYEES EXPERIENCE WITH COVID-19 IN AFRICA: A SCOPING REVIEW

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ABSTRACT

The purpose of this review was to analyze evidence from research studies on the impact of COVID-19 as experienced by health care employees from African countries. A scoping review was used to search materials. Findings indicate that health care employees experienced mental health problem such as depression, anxiety, distress and fear. Additionally, they experienced shortage of PPE, stigma from members of the public and risk of being infected. There was shortage of health care employees in COVID-19 treatment centers, increased workload and some had to go to work while ill. Health care employees also had sufficient knowledge of COVID-19 although accompanied by myths and falsehoods. Furthermore, they experienced lack of training on COVID-19 management, poor staff welfare such as food and transport and majority of them were poorly paid. Governments in Africa should take measures such as counselling and incentives to mitigate the impact of COVID-19 on health care employees.

Keywords: Health Care Employees, COVID-19, Health Care Facilities, Employees Experience, Africa

INTRODUCTION

In December, 2019, the world woke-up to the reality of the outbreak of Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) in Wuhan-China. The virus popularly known as COVID-19 spread quickly to other parts of the world bringing unprecedented changes in various sectors especially the healthcare system. As of January, 2022, the World Health Organization (WHO) reported that a total of 246 million people were infected with the virus, and 5.5 million people have died worldwide [59]. Similarly, in Africa, a total of 7, 933, 483 people were infected with the virus, and 162, 371 people have died [59]. According to WHO, the most affected in the healthcare system were Health Care Employees (HCEs). Reports further indicates that up to May 2021, a total of 180, 000 HCEs are estimated to have died from COVID-19. The WHO [58] define HCEs as all people engaged in actions whose primary intent is to enhance health including nurses, doctors, midwifery, pharmacists, laboratory technician, paramedic staff, psychologists, morgue attendants and hospital administrators. The importance of HCEs to health service provision cannot be overemphasized as they play a key role not only provision of health service to the larger population but also during the outbreak of pandemics. Therefore, with the outbreak of COVID-19 HCEs found themselves at the frontline treating and caring for patients. Unlike employees in other sectors who were forced to comply with hygiene protocols such as social distancing and working from home [17,20, 34], HCEs had to continue working and thus exposing themselves to risks such as contracting the virus, illness, and even death [1, 9,12,25].

This backdrop has attracted research interest from different scholars to understand the impact of COVID-19 on HCEs. Recent studies from countries of developed economies have established a strong evidence of the effects COVID -19 on HCEs stress [54], mental health [48], burnout [14], and anxiety [57]. For instance, [10] conducted a study on the impact of COVID-19 among Portuguese healthcare workers and found that 52.5% had high burnout, 66.9% anxiety, and 70.6% depression. Similarly, a study by [14] investigated the impact of COVID-19 on HCEs in Italy. The result showed that 95% experienced high risk and 77% had access to PPE. These findings are strongly supported by studies on the experience of the HCEs with the outbreak of Severe Acute Respiratory Syndrome (SARS) in 2003 and the Middle East Respiratory Syndrome (MERS) in 2012. Although these studies provide convincing evidence on the impact of COVID-19 on HCEs, evidence from low and middle- income countries such as those from Africa are extremely limited. Poor health care systems coupled with shortage of human resources have been a defining characteristics of Health care systems in Africa. Additionally, social-cultural variables such as myth and falsehoods on COVID-19 and self-medication through traditional medicinal plants played a significant role in the fight against COVID-19 and are believed to have differing impact on HCE. All these are still not known.

This study contributes to COVID-19 and HCEs management literature in several ways. First, although studies have reviewed the impact of COVID-19 on HCEs, much of the existing research has mainly focused on psychological factors leaving other factors unexplored. For example, meta-analysis studies by [47, 45, 60] assessed only articles focusing on aspects of HCEs mental health problems such as anxiety, depression, and burnout. Other factors experienced by HCEs such as lack of protective gears, stigma and information availability are not known. Therefore, understanding experiences of HCEs with COVID-19 requires a complete examination of all variables associated with employees well-being. Secondly, majority of the existing review studies covers the period between January to December, 2020 [47,45,60]. This coverage leaves a lot of evidences as experienced by HCEs unreported and therefore not known to the general public. It is almost two years since COVID-19 outbreak was reported for the first time. In this period, there has been major development in the literature and increase in publications including discovery of various COVID-19 mutated strains and commencement of vaccination program for HCEs [see 14]. Lack of inclusion of issues published within this period creates academic lacuna that this study intends to fill.

Thirdly, the current study contributes to the research on HCEs experiences with COVID-19 by covering all literature published from all countries in Africa. The existing meta-analysis studies covers HCEs experiences with COVID-19 from developed economies [11,44,47] and few from Africa done at individual country level [60,68]. Such coverage limits holistic understanding of HCEs experiences with COVID-19 in two ways. One, experiences from developed countries may not be feasible in African settings due to economic, social and cultural differences. Majority of African countries are low-income countries characterized by poor health care systems. Cultural practices influenced the use of traditional herbal medicines that were deemed to be useful for treatment of COVID-19. All these aspects were likely to limit the design and implementation of pandemic response efforts hence its effect on HCEs. Two, many African governments adopted different approach in response to COVID-19 pandemic. For instance, Tanzania adopted COVID-19-denial approach [5,6] by prohibiting release of official COVID-19 statistics. The impact of such measures on HCEs who were in the front line battling the disease is not known.

Lastly, the current study contributes to COVID-19 management literature by providing empirical evidence on HR practices experienced by HCEs during COVID-19 pandemic. As noted above, whereas much of the studies have mainly focused on physical and psychological factors human resource (HR) practices as experienced by HCEs a have not been systematically explored. HR practices such as pay, training on management of the virus, and recruitment of staff would help HCEs get physical and psychological well-being resulting to good service delivery. Therefore, understanding of these variables particularly during COVID-19 pandemic is crucial.

METHODS

Research design

As the objective of the study was to summarize and disseminate research findings, this study adopted a scoping review research approach as suggested by a [4]. Arksey and O'Malle outlined five stages of scoping review namely, identifying the research question, identifying relevant studies, study selection, charting the data and collating, summarizing and reporting the results. Guided by these stages, the study thought to answer the following research question: *What are HCEs experiences from COVID-19 pandemic in Africa?*

Database Search Strategies

In a bid to tap all the materials as possible the following data bases were used to retrieve articles: Google Scholar, PubMed, Thematic scholar, Web of Science, Cochrane Library, and ScienceDirect. This was supplemented by hand-picked materials from reference lists. The collection of data was done in February, 2022. All articles published between December, 2019 to January, 2022 which addresses COVID-19 and HCEs in African context were downloaded. This period was deemed proper as it covered the whole period of the existence of the pandemic. To ensure reliability, before embarking on a full search, piloting of the search strategy was done to enable for refinement. Cognizant of the shortage of skills for data search on the part of the authors, three librarians, one from Institute of Accountancy Arusha, University of Dar es salaam and University of Nairobi were requested to assist the authors to identify potential data base and materials. Hand-search for key journals to identify articles was also done. Key words used for search include; “Corona virus -19” “health care workers” “health care employees” “COVI -19 effects” on “health care workers” “human resource challenges” during “COVID-19”. “Corona virus” and “workplace Challenges”. Also individual country's name was added to the search key. For example, “COVID-19” and “health care workers” in “Kenya” in “Tanzania” in “Rwanda” in “Cameroon” in “Egypt” in “Africa” The downloading of articles continued until saturation point was reached.

The Selection of Studies and Inclusion Criteria

This study used all materials published in a peer-reviewed academic journals examining HCEs and COVID-19 from an African context. Additionally, guided by the guidelines of Arksey and O'Malley, reviewers, after reading the full article, and satisfied that the materials answered our research question, the decision was made to be included in the study. Original research article, commentaries, and letters to the editor were included. Abstracts, editorials, and literature reviews studies were excluded as they did not capture full scope of the written articles. Finally, due to time limit, all articles not published in English language were excluded. To avoid duplication of data, studies that were conducted in more than one country especially when the other country is not in Africa were also excluded (see figure 1).

Figure 1: Flow Chart of Article Search, Screening and Selection

Data Extraction and Thematic Construction

Information on HCEs and COVID-19 from selected studies were sorted based on guidelines provided by Arksey and O'Malley [4]. The organization and presentation of charted data from studies were presented in two ways. First, a summary of information outlining processes that were used on each study was done. Microsoft-word table was used as a data charting form whereby each information was entered into. The collection of information was based on name of the author(s), year of publication, geographical study location, study objective, research design, number of target population, data collection instruments, and study findings. Additionally, because of diversity and overlapping of methods and study findings a summary of results in the table was presented according to the alphabetical order of the authors Secondly, as Arksey and O'Malley (4) suggest that since scoping study does not seek to synthesize evidence or to aggregate findings from different studies some analytic framework or thematic construction can be used to present results. Guided by this thinking, information from study

findings were reorganized around main themes arising from the study's findings and presented in a narrative way. Two reviewers were involved in the data extraction process and a consensus was reached whenever a contraction happened.

RESULTS

Research Study Characteristics

As indicated in figure 1 and table 1 respectively, a total of 127 articles were retrieved from search data bases. Scientific screening based on abstract and titles found 16 as duplicates hence excluded. The screening on the remaining 111 based on factors such as being a literature review, not written in English, and not from African context left 39 articles which were included in the final analysis.

Three studies were from Kenya, four from Uganda, two from Tanzania, one from Botswana and Nigeria, two from Zimbabwe, six from Nigeria, two from Ethiopia, three from South Africa, one from Ghana, one from Morocco, five from Egypt, two from Cameroon, three from Malawi, one from democratic Republic of Congo and two from Zambia. One study covered 13 African countries. Additionally, eight studies adopted qualitative approach, twenty-five used quantitative approach, two adopted mix approach, two used secondary data, one used decision-analytic model and one used inductive approach. Similarly, thirty-five studies were cross-sectional, one was a longitudinal design. As all studies addressed HCEs with the composition of medical doctors, pharmacists, assistant medical officers, clinical officers, clinical assistants, nurses, midwifery, laboratory technicians, paramedic staff, and hospital administrators

Table 1: Summary of Studies, Methods and Findings

Mental Health Disorders

A total of twelve studies investigated mental health problem prevalence among HCEs during the COVID 19-pandemic. Ten studies [1,9,12,13,25,33, 35,46,61,63] identified depression, anxiety, distress and burnout as the main mental health problems experienced by HCEs during COVID 19 pandemic. Three studies [1, 13,35] reported a mild to moderate anxiety and distress, while two studies [13,61] found severe anxiety among HCEs. However, a contrasting finding was reported from Cameroon [35] that no HCE experienced severe psychological stress. Four studies [1,9,12,46] found that females HCEs experienced severe anxiety. Two studies [9,46] found that COVID-19 related anxiety was high (25.5%,) among nurses and (36.2%) for HCEs who were working in hospitals. A study from Uganda [33] identified three forms of mental health disorders experienced by HCEs namely depression, anxiety and post-traumatic disorder. On the other hand, findings from nine studies [1,9,12,13,25,33, 35,63] indicates that long working hours, lack of PPE, lack of sleep, exhaustion, and exposure to high death- rate under their care were identified as source of these mental problems. Additionally, deliberate refusal of cooperation from patients and on-the-job risks of infection were cited to influence HCEs mental problems.

Workplace Preparedness for COVID-19

Five studies [1,16,25,45,61] indicated that HCEs experienced workplace preparedness against COVID-19. A study from Ethiopia [16] confirmed that HCEs had a clear protocol for handling COVID-19 in their workplace. Similarly, a study from Uganda [45] found that 170,686 HCEs from four Provincial DoHs participated in the OSH readiness assessment. The same finding was reported from South Africa [63] who narrated that one hospital erected tents at the main gate for screening and sample collection of suspected cases of COVID-19 as part of preparation respond to COVID-19. However, three studies, gave a contrasting findings. One study [32] from Ghana suggested that there was inadequate preparedness for COVID 19 as majority of hospitals lacked isolation wards. Similarly,

another study [25] from Malawi noted that a special response team (taskforce) responsible for coordination of all COVID-19 related activities was not made known to the HCEs. This made the pandemic an overwhelming experience for HCEs. A study from Ghana [1] shows that HCEs experienced low preparedness for COVID-19 which led to higher stress and burnout.

Knowledge and Attitudes on COVID 19

Ten studies Showed that HCEs had sufficient knowledge on the origin of COVID-19, sources, symptoms, risk factors and transmission of the virus [7,27,29,38,39,43,45,54,63,64]. Additionally, they were aware of the age group commonly affected by COVID-19, that COVID contributes to mortality, and that there was no effective cure or vaccine. However, one study from Malawi [32] gave a contradicting finding that there was low level of knowledge among HCEs on treatment for COVID-19 (56%), understanding pathophysiology of COVID-19 (55%), and how to administer appropriate levels of oxygen for COVID-19 patients (42%). A study from Cameroon [63] showed that only 15.9% of respondents correctly identified the origin of SARS-CoV-2 and 35.3% correctly identified transmission routes. Respondents recognized COVID-19 symptoms (7.6±2.4). The level of knowledge among the HCEs were found to be similar irrespective of the cadre or academic qualifications [38].

Personal Protective Equipment

With few exceptions [25,35], results from ten studies shows that HCEs experienced shortage of PPE such as face masks, medications, oxygen, and gowns as they fought COVID-19. A study from South Africa [31] found that nurse managers experienced shortage of water, oxygen, drugs such as antibiotics and life support equipment. One study from Malawi [32] noted that there were lack of testing kits, few testing centers and samples were sent outside laboratories. In Nigeria, [66] reported that non-governmental and religious organizations donated safety gears and gifts to HCEs. Two studies [5,6] from Tanzania reported that there was no plan of supply of PPE to HCEs and majority resorted to using locally-made PPE. Self-purchasing and recycling of already used PPE were experienced by HCEs in Nigeria. The incidents of not being able to use them appropriate were reported by [18, 61] who found that majority of HCEs were not wearing PPEs correctly. A study from South Africa [61] suggested that emergency department would come to work in their uniform, work with it and return home wearing it. Workload increase was cited to be the source for forgetfulness in proper use of PPE. However, contrasting findings were found by two studies [25,35] indicating that HCEs experienced availability of PPE in their workplaces whenever they needed them. On the other hand, one study from Morocco [28] found a negative reaction of wearing PPE.

Perception of Risk and Fear from Covid-19

Ten studies [1,5,6,16,25,35,39,54,61,66] reported that HCEs perceived themselves at risk of being infected by the virus. One study from Cameroon [35] noted that HCEs felt unsafe working during the Covid-19 pandemic, and that it was a major public health problem. HCEs feared from being infected with COVID-19 and transmitting the infection to their families. One study from Egypt [54] documented that some of the reasons of fear mentioned were the disease was highly transmissible (90.4%), non-availability of PPE and vaccine (78.6%) or treatment (87%), the fatality of the disease (82.1%), the stigma (66.3%), crowdedness (61.4%) and ill ventilation (72%). This experience made them to even fear entering COVID-19 isolation wards and hospitals. A study [66] added that loss of patients traumatized HCEs hence perceived the disease as a risk. One study from South Africa [61] found that HCEs identified their hospital main gate with higher susceptibility to infection. At the gate, individuals exchanged pens and booklets, pedestrians, patients and drivers of vehicles had to sign in a security booklet. These practices posed a challenge of social distancing due to insufficient space. A study from Nigeria [39] concluded that 62% HCEs perceived that work place safety was inadequate and 1.67% work place safety was adequate. A study by [5] from Tanzania had an interesting report that doctors were unable to diagnose covid-19 for fear of government reprimand.

COVID-19 Stigma

Five studies [30,31,32,35, 67] found that HCEs experienced physical avoidance by their family members, close friends and even from support staff. A study from Malawi [32] documented that HCEs

were called corona virus by some members of the public, shunned from public transport, and being evicted from their houses by their landlords for being a source of COVID-19. Two studies [30,31] found that HCEs experienced self-image stigma. Working in a quarantine or fever hospital and lack of PPEs were some of the source of stigma. A study from Egypt [30] reported that HCEs perceived higher stigma related to the public attitudes (61.0, 95%) and comparatively lower stigma related to the negative self-image (57.5, 95%). The study also noted that the media increased COVID-19 public stigma against HCEs. A study from South Africa [31] noted that nurse managers were chased away from the management meetings and no one wanted to sit next to them. One study [32] found that work uniforms made HCEs easily noticed hence inviting negative comments and other stigmatizing behaviors from the public.

Myths, Falsehoods and Traditional Medicinal Treatment

A study from Uganda [45] established that HCEs experienced myths about origin, causes and prevention of COVID-19 (78%), falsehoods on causes, prevention (76%), treatment of COVID-19 (74%). A study by [63] from Cameroon cited a myth that warm temperature prevented SARS-CoV-2. The origin of coronavirus was falsely identified as the wildlife market or created in a lab in Wuhan, and that the virus was a biological weapon. HCEs were made to believe that taking doses of vitamin C and chloroquine would cure COVID-19. A study from Nigeria [39] showed that the most common source of information was through colleagues (47.67%), followed by social media (26%) and the least was town crier.

Three studies [5,6,63] reported that HCE resorted to the use of traditional herbal medicines against COVID-19. HCEs experienced information that the use of ginger, garlic and lemon juice was the best treatments for the virus. A study by [5] from Tanzania indicates that the government urged HCEs and the general public to inhale steams from a saucepan of herbs as treatment for COVID-19. Similarly, [63] from Cameroon indicated that 36.9% of HCEs said herbal remedies protected against COVID-19. A study by [40] from Kenya shows that self-medication among HCEs increased from 36.2% before the pandemic to 60.4% during the outbreak of COVID-19.

Employees Recruitment

With few exceptions [31,32,61] recruitment of HCEs was not assessed by majority of studies. These studies found that there was shortage of HCEs in various COVID-19 treatment centers. A study by [32] from Malawi, demonstrated that hospitals lacked sufficient staff, something that increased the workload of the existing employees. A study from South Africa [31] reported that the government froze vacant posts due to financial constraints, a move that created staff shortages in different hospital wards. Insufficient workforce at isolation centers was also reported by [66] from Nigeria whereby deployment of non-critical care staff was done to man the centers. Similarly, nurses who had tested for COVID-19 were requested to continue working as there was no any other option of getting replacement [31]. A study from Uganda [67] shows that many HCEs reported increased workload (59%) and inadequate staffing (58%). The outcome of human resource shortage led to stress on management and treatment of the sick. [61] from South Africa found that whereas Province A and B had a medical practitioner and nurse, Province C lacked the environmental health practitioner and wellness professionals.

Employees Training

In relation to HCEs training, a contrasting results were found among six studies. Four studies [25,35,61,66] confirmed that HCEs received proper training on management of COVID-19. A study by [66] found that Nigerian Centre for Disease Control and IPC experts in the COVID-19 response team provided training sessions to HCEs during COVID-19. Similarly, a study by [61] from South Africa found that 34,192 HCEs from forty-five hospitals were trained in the HealthWISE risk assessment for SARS-CoV-2. As some HCEs reported to receive training, [25] narrated that such experience enabled them to overcome personal fears over COVID-9 and imparted the required knowledge and expertise on management of COVID-19 patients, use of equipment, and contact tracing. However, on the job training and posters were the only methods used to receive knowledge. In contrast, four studies [18,32,45,66] reported that majority of HCEs did not receive any training related to COVID-19. A study by [45] from

Uganda documented that HCEs received certain information regarding the virus to increase their awareness. The study found that constraints was mainly on training materials and content.

Employees Compensation

One study [52] from Zimbabwe found that despite working for long hours HCEs experienced poor pay as they fought COVID-19. Poor financial allowances were also identified by [18] from Nigeria and [25] from Malawi. According to the latter, HCEs expressed their dissatisfaction with the provision of additional monetary allowances, whereby senior managers were given allowances with no provision for lower cadres. A study by [66] from Nigeria found that there was poor staff welfare such as food and resting space for HCEs and delayed payment of allowances. As noted by [52] from Zimbabwe that lack of monetary motivation led some HCEs to go on strike. Other countries resorted to other kind of motivation. A study by [25] reported that HCEs were offered with transport to and from work and a quarantine center after completion of their block of shifts. [35] from Cameroon found that HCEs attributed their motivation to continue working because they thought they were performing their duty (74.2%), they wanted to save live (60.9%), they respected their oath (50.2%) and serving their nation (46.9%). Financial motivation and learning of new things were also cited as reason for motivation.

Discussion of Findings

The current scoping review examined HCEs experience with COVID-19 pandemic in Africa. The rationale for the study emanated from the fact that despite statistics [57] showing a low rate of covid-19 prevalence across the continent, Africa has been equally hit with covid-19 pandemic. As a result, HCEs found themselves in the frontline fighting the disease amid weak healthcare systems. It is from this backdrop that understanding what HCEs went through across countries was significant. The findings from the current study suggest that majority of HCEs experienced mental health problem such as depression, anxiety, distress, burnout and fear during the COVID-19. These findings support the result of meta-analysis study by [41] from Italy and France who reported that HCEs experienced high depression, post-traumatic stress disorder, and burnout. The findings are supported by a study of [53] who reported that in United Kingdom HCEs experienced anxiety and distress during covid-19 pandemic. Factors such as long working hours, lack of PPE, lack of sleep, exhaustion, and high death rate were identified as a source of mental health problems among HCEs in Africa. Despite experiencing high mental health problems none of the studies reported on psychological support such as counselling offered to HCEs by relevant authorities. Whereas this result support that of [2] who found inadequacy of psychological support given to HCEs in South-East of Ireland, the same finding contradict that of [14] from Italy who found that 48% of HCEs received psychological support which assisted them to easy burden of the pandemic.

Mixed empirical results were also found on workplace preparedness for COVID-19. Some studies found that HCEs were satisfied with preparedness for COVID-19 done by their workplace managements. Measures such as erecting tents for the sick and having protocol for handling COVID-19 were instituted to contain the disease. This result supports the findings of a study by [2] in South-East of Ireland who found that there was high preparedness for COVID-19. However, a discrepancy was also observed within countries for instance, a study from South Africa [61] shows that some health facilities were much more prepared compared to others. This result is not surprising as COVID-19 in Africa was reported nearly a month after the first case reported in Europe. This time-difference was an alert for preparation. On the other hand, lack of preparedness for COVID-19 was also reported from several countries in Africa. HCEs experienced working in overcrowded wards, lack of PPE and even being excluded from response- team activities. Studies by [26] in china and [22] in German reported similar results.

The high level of understanding of COVID-19 was one of the unique experience among HCEs in Africa. Understanding of the virus increased HCEs negative attitudes towards the disease. With few exceptions [45,63] majority of HCEs knew about the origin of COVID-19, sources, symptoms, risk factors, age group commonly affected by COVID-19 and transmission of the virus. Having background on medical training and experience of working in hospitals is believed to be the source of high

knowledge on the virus. This finding is supported by findings from a study by [60] in Henan-China who found that more than 89% of HCEs had sufficient knowledge of COVID-19. One of the interesting findings from the African results is that of myths and falsehoods about COVID-19 which went flying around HCEs. This finding contradict that of [14] from Italy where no myths and falsehoods were reported. Lack of knowledge on health matters among African population, use of traditional medicines and believes in witchcrafts were the source of myths and falsehoods. The existence of social media platforms also facilitated the spreading of myths and falsehoods.

HCEs also experienced high shortage of PPE as they fought COVID-19. PPE such as face masks, gowns, testing kits and gloves exposed HCEs to the virus resulting to illnesses, long self-isolation and death. Other countries such as Tanzania [5] opted for local-made PPE such as face masks despite not being proven by the WHO. Additionally, HCEs experienced negative reaction of wearing PPE such as skin reactions from masks, dryness, itching and difficulty in breathing. This finding support the findings of [47] who found that prolonged PPE usage led to skin damage among HCEs, with the nasal bridge being the most common affected area. On the other hand, HCEs faced stigma from the members of the public due their exposure to COVID-19 risk factors. One of the notable experience was the name-calling of corona which greatly affected their psychological well-being. Previous studies such as that of [2] had reported similar findings. Members of the public were scared from being infected with COVID-19 as HCEs were viewed to be spreading the virus. This finding is in line with the results of [68] study found that respondents expressed fear against HCEs. However, [68] suggested that the attitude was unfounded as research on COVID-19 (Scientific Advisory Group, 2020) had shown that there was low prevalence of the virus among HCEs.

Shortage of HCEs in health facilities was a common characteristic in many African countries. Results indicates that there was lack of sufficient and qualified HCEs which in turn increased the workload of the existing staff. Shortages were frequently noted in intensive care units and isolation centers due to absence of professional HCEs resulting to poor service delivery. Staff with low experience were deployed to man these units. Freezing of recruitment due to financial constraints was one of the main reason for non-recruitment. Other shortage was reported to be caused by absence of HCEs from their workplace due to illnesses. This finding was not unique to Africa as a study by [48] reported similar findings. In relation to training, the current review found mixed empirical findings. Respondents from several countries in Africa acknowledged receiving COVID-19 training, however, majority opined that the methods used for training such as on the job training and posters were argued to be of little impact. This finding support the findings of [2] who suggested that training received by HCEs were insufficient and suggested for multidisciplinary approach. Higher wages and extra allowances were needed for boosting HCEs motivation during COVID-19. This study has found that despite working beyond their call of duty during COVID-19, HCE were poorly compensated. Poor financial allowances were reported in Zimbabwe, Nigeria and Malawi. In Zimbabwe for example, HCEs had to take industrial action to push for better pay. This finding is in line with the results of [19]. Lack of better compensation was likely to compromise better health care delivery.

Limitations and Implications of the Study

The following aspects were identified as limitations to the current study. First, lack of empirical data from other countries such as Angola, Ivory Coast, Namibia and from war torn countries such as Mali, South Sudan and Libya limit the generalizability of the findings across the continent. Secondly, methods of respond to the COVID-19 pandemic taken by some countries in Africa such as Tanzania and Burundi limits availability of detailed data on HCEs experience with COVID-19. Thirdly, majority of studies adopted a cross-sectional, online survey method, which was likely to limit response rate and biased sample. The implication of this findings is that governments should put in place coping mechanism to help HCEs fight psychological problems, prepare for future pandemic challenges, provided education to the general public to increase their awareness and reduce their negative attitudes adopt multiple approach to disseminate knowledge in the event of outbreaks like COVID-19

CONCLUSION

This scoping review focused on presenting evidence on HCEs experience with COVID-19 pandemic across Africa. The reviewed data indicated that HCEs experienced mental health problem, workplace unpreparedness, high shortage of PPE, infection exposure, and a wide spread stigma from members of the public. A valuable lesson can be drawn from these findings. African governments should adopt strategies that safeguard HCEs from health challenges such as COVID-19 outbreak. Establishment of control measures in the work places as per WHO guidelines, availability of protective gears, and strong collaborative management for policy and programs implementation is likely to reduce infection and mortality of HCEs across Africa.

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**RUNNING HEAD: THE RELATIONSHIP BETWEEN UNEMPLOYMENT: EXPLORING
THE RELATIONSHIP BETWEEN UNEMPLOYMENT, SUBJECTIVE WELL BEING AND
HEALTH IN FOUR AFRICAN COUNTRIES**

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ABSTRACT

In spite of the rampant presence of unemployment in Africa, there are a few studies on its effects on individuals. This study examines the relationship between unemployment, happiness, satisfaction with life and self-rated health in four Africa countries; Egypt, Ethiopia, Nigeria and Zimbabwe. The study also examines the impact of work values on these relationships. Hypotheses were tested using secondary data obtained from the World Values Survey conducted between 2018 and 2020 in the four chosen countries. Results indicated a mixed picture. Unemployment was related to happiness in Egypt, satisfaction with life in Egypt and Zimbabwe, and self-rated health in Egypt, Ethiopia and Zimbabwe. Work values was also found to moderate all of the above relationships. Results are discussed in light of the literature with some questions that need future investigation.

Keywords: Unemployment, Africa, health, happiness, satisfaction with life

INTRODUCTION

During the last few decades, many African economies have not been able to produce jobs at the same rate of population growth. As a result, unemployment and underemployment rates are relatively high in most African countries (African Union Development Agency, 2021). In some of the largest African countries, up to a half of the workforce is either unemployed or underemployed.

Many macro factors have contributed to this dire situation including jobless economic growth, inadequate infrastructure, political instability and inflexible labor policy (Kilishi, Adebawale, & Oladipupo, 2021; Oluwatayo & Ojo, 2018). Widespread and chronic unemployment, particularly among the youth in Africa has been blamed for the continent's rising levels of poverty, political instability, terrorism (Adelaja, & George, 2020), migration (Bariagaber, 2014), human trafficking (Onuoha, 2009) and crime (Azeng & Yogo, 2013). Although these factors are considered outcomes of unemployment they also cause unemployment, creating a vicious circle.

At the individual level, unemployment is considered a highly stressful life condition that can have significant negative financial and non-financial consequences (McKee-Ryan & Kinicki, 2002).

Examples of non-financial consequences may include loss of social status, social isolation, illness, and depression. The literature clearly shows that unemployment has detrimental effects on subjective well-being, including happiness and satisfaction with life (Di Tella, MacCulloch, & Oswald, 2001). The economist Arthur Akun has added unemployment to inflation to create a country misery index.

The impact of unemployment on physical health has also been the subject of some research. For example, Black, Devereux and Salvanes (2015) have shown the negative effects of unemployment on cardiovascular disease in Norway. They attributed these effects to life style changes such as smoking.

The above studies show that unemployment has a severe impact on its victims. However, there are several issues that warrant further attention and research, especially in countries that suffer from chronic high unemployment. One issue has to do with the moderators of the relationship between unemployment and subjective well-being and self-rated health. It is clear that unemployment does not have the same impact on all people equally, some are affected more than others. McKee-Ryan and Kinicki (2002) have suggested that the personal meaning of unemployment differs between people and this affects their well-being. Investigating the meaning of unemployment may expand our understanding of the negative effects of unemployment and how these effects may be combated. The study of work values may represent one approach to the study of personal meaning.

Values may be defined as "conceptions of the desirable that guide the way social actors (e.g., organizational leaders, policy-makers, individual persons) select actions, evaluate people and events, and explain their actions and evaluations" (Schwartz, 1999, p.24). Work values are usually conceptualized as the perceived importance of work in general and the attractiveness of specific job characteristics (Warr, 2008). Individuals vary in the meaning and importance they attribute to work. Work values also shape perception and decision-making (Ravlin & Meglino, 1987).

Although significant research has been conducted on the relationship between unemployment, subjective well-being and health in Europe and North America, only a very limited number of studies have been conducted in Africa, and almost all of them in South Africa. This is problematic because there is evidence that show that the effect of unemployment on mental well-being is higher in less developed countries (Paul, 2009). It is possible that the negative impact of unemployment depends on several contextual variables such as the state of economic development.

The purpose of this study is to investigate the relationship between unemployment, subjective well-being and self-rated health in four African countries: Egypt, Ethiopia, Nigeria and Zimbabwe. To achieve this aim, we ask two specific questions. First, what is the impact of unemployment on subjective well-being and self-rated health in these countries? Second, how do work values, conceptualized as the importance of work, moderate the relationship between unemployment and subjective well-being and self-rated health in these countries? We attempt to answer these questions using secondary data reported in wave seven (2017-2020) of the World Values Survey (Haerpfer *et al.*, 2022).

1. Literature Review

Below we discuss the relevant literature on the relationship between unemployment and subjective well-being, and unemployment and health in more details. Afterwards, we discuss the role of work values in such relationships. Although the relationships we examine in this study are very sensitive to contextual factors such as culture and economic conditions, we did not restrict our literature review to Africa. This is important as the number of African studies were very limited and because we wanted to expand our understanding of the relationships examined in this study.

UNEMPLOYMENT AND SUBJECTIVE WELL-BEING

Subjective well-being has been the focus of much research recently (Diener, Oishi, & Tay, 2018). "Subjective well-being is understood as having an affective (emotional) component, of the balance between positive and negative affect, and a cognitive component, of judgments about one's life satisfaction" (Linley *et al.*, 2009, p. 878). As such, subjective well-being may be conceptualized as a complex construct that is composed of happiness and satisfaction (Diener, Oishi, & Tay, 2018).

Happiness is an important trait for Humans. The World Health Organization has introduced happiness as a main component of health (World Health Organization, 2012). There are research

evidences that indicate significant correlations between happiness and general health outcomes (Stephoe, 2019).

The detrimental effects of unemployment on happiness of the individual is well document in the current literature. At the country level of analysis, several studies have shown how micro levels of unemployment are associated with reduced happiness (Di Tella, MacCulloch & Oswald, 2001; Frey & Stutzer, 2010; Cimpoeu, in press). Using suicide as a proxy for happiness, Sameema and Buryi (2019) showed that among U.S states, happiness was negatively related to unemployment levels. At the individual level of analysis, Bockerman and Ilmakunnas (2006) showed that in Finland, unemployment was associated with reduced happiness but had no effect on satisfaction with life. Hastings and Roeser (2020) also conducted a study that showed that religiosity (religious service attendance, belief in life after death, and trying to carry one's religious beliefs over into other dealings in life) substantially buffered the effect of unemployment on happiness.

We could not locate any studies that have examined the relationship between unemployment and happiness in Africa. However, some studies that have examined issues that are relevant to this relationship. For example, Kollamparambil (2021) showed that happiness was negatively related to income inequality in South Africa. Van der Merwe and Greeff (2003) and De Witte, Rothmann, and Jackson (2012) studied 82 and 381 unemployed South African men, respectively. Both studies concluded that their participants reported several negative psychological outcomes such as stress, boredom, loneliness, uncertainty about the future, emptiness and conflict. Because, both studies did not include employed participants, they could not test if their results vary by employment. More recently, Posel, Oyenubi, and Kollamparambil (2021) used panel data collected from a South African nationally representative sample to show that that adults who retained paid employment during the COVID-19 lockdown had significantly lower depression scores than adults who lost employment. Contrary to the previous studies, Okpako, Lawrence, and Falaye (2021) found that among Nigerian graduates, unemployment did not negatively affect subjective well-being. They attributed their finding to their subjects' financial dependence on their parents and hope for future opportunities. Thus, we test the following hypothesis:

H1: Employment level (employed/unemployed) is related to happiness in the four African countries.

Turning to the relationship between unemployment and the second component of subjective well-being, satisfaction with life, we located several studies that have examined this relationship. Lucas and his colleagues (2004) showed that unemployment lead to a reduction in satisfaction with life and that this effect remind many years after re-employment. This results indicates that the damage of unemployment sometimes persist many year after the event. Similarly, Oesch and Lipps (2013) showed that the negative effects of unemployment not only persist but they also exist even when there are high levels of unemployment in the community. Boyce, Wood and Gordon (2010) also found that unemployment was associated with lower satisfaction with life. This effect was stronger for individuals high on conscientiousness.

In South Africa, Ebrahim, Botha and Snowball (2013), and Hinks and Gruen (2007) showed that unemployed people have lower levels of life satisfaction than the employed, even when controlling for income and relative income. Thus, we test the following hypothesis:

H2: Employment level (employed/unemployed) is related to satisfaction with life in the four African countries.

Unemployment and Self-Rated Health

The relationship between unemployment and physiological health has also been investigated by researchers. With regards to objective health, unemployment has been linked to mortality. For example, Sullivan and von Wachter (2009) found that there was relationship between unemployment and mortality among high-seniority American males. They estimated that unemployment caused a loss in life expectancy between 1.0-1.5 years for a worker displaced at age forty. Similarly, Lundin *et al.*, (2010) reported that unemployment was associated with mortality caused by many factors including suicide and cardiovascular disease. In their study, they reported data from a sample of about 50000 Swedish men. Their results showed that there was a strong association between exposure to unemployment for at least 90 days and mortality several years afterwards (Lunden *et al.*, 2010).

However, after controlling for illness prior to the employment, the relationship became insignificant. This suggested that mortality and employment may have been both caused by the illness. Schmitz (2011) also found that illness before unemployment was responsible for the detrimental health effects after unemployment.

Concerning self-rated health, Minelli and her colleagues (2014) found that among Italians, unemployment was negatively related to self-rated health. In Sweden, Norström, Janlert and Hammarström (2017) found that unemployment had a long term negative impact on self-reported health among young adults.

In Africa, Sulemana, Anarfo and Doabil (2019) studied the impact of employment on self-reported health in Ghana. Their results showed that unemployment was negatively associated with health. Contrary to their hypothesis, these results were not moderated by gender. Thus, we propose the following hypothesis:

H3: Employment level (employed/unemployed) is related to self-reported health in the four African countries.

The Moderating Effect of Work Values

Peoples' work values define the meaning and importance they assign to paid work (Rosso, Dekas & Wrzesniewski, 2010). Accordingly, values shape perception and subsequent work behavior. In spite of their importance, work values have not received much attention in studies examining the effects of unemployment. Nevertheless, we located a few studies that have examined the moderating impact of constructs that were relevant to work values. For example, Fidelis and Mendonça (2020) showed that in Brazil, intrinsic work values were associated with better well-being during long, but not short-term unemployment. Paul and Moser (2006) conducted a meta-analysis of published studies that investigated the moderating impact of commitment to work on the relationship between unemployment and psychological well-being. Their results showed that higher commitment exacerbated the negative effects of unemployment on psychological well-being. They attributed this effect to cognitive dissonance. In other words, when individuals value work, their unemployment status will conflict with this value leading to tension and stress. Thus, we suggest the following hypothesis:

H4: Work values moderates the relationship between employment level (employed/unemployed) and a) happiness, b) satisfaction with life, and c) self-rated health, in the four African countries.

RESEARCH METHODOLOGY

This study used secondary data collected by the World Values Survey (WVS) from four African countries to test the above four hypotheses. The countries are Egypt, Ethiopia, Nigeria and Zimbabwe. These countries were chosen for several reasons. Firstly, all are belonging to different geographical regions in the continent and have relatively large populations in the region (they present around 30% of Africa). Secondly, these four countries are suffering from relatively high unemployment. According to the World Bank, unemployment in 2021 was 9.3% in Egypt, 3.7% in Ethiopia, 9.8% in Nigeria and 5.2% in Zimbabwe (World Bank, n.d.). These numbers should be viewed with caution, as they often conflict with statistics reported by other sources. For example, the Nigerian National Bureau of Statistics report unemployment at 33.3%. Our final reason for selecting these four countries is that, with the exception of Nigeria, none of the countries has been covered in any published studies on the negative effects of unemployment. Therefore, we would expect that focusing on such topic by exploring it in these four selected countries would add a value to the existing literature; which is really rare in such area in Africa.

The WVS is a global research project that collects data from different countries to monitor the evolution of value changes within and across these countries. Since its inception in 1981, the WVS has been implemented in seven waves, with latest being between 2017 and 2020. All data is publically available on the WVS website (www.worldvaluessurvey.org).

Research Sample

The used sample was a stratified random sample based on the data that had been collected from the four countries based upon the WVS global survey. One of the advantages of using this sampling design is the ability to generalize the findings. The main sample size from each country were; Egypt (N= 1200), Ethiopia (N= 1230), Nigeria (N= 1237), and Zimbabwe (N= 1215). The specific design and implementation of the sampling plan was performed by local, mostly academic researchers in the four countries during the period from 2017 to 2020 according to the WVS. For more information concerning the full details of the individuals who participated was reported on the WVS website. In this research, we are interested in exploring the employment category only, therefore, the used sample for the current research is a sub-set of the main sample listed above. This research focused on the two employment categories; fully employed and unemployed, with a sample size of 1657 as a total sample from the four countries Egypt (N=384), Ethiopia (N= 335), Nigeria (N= 359), and Zimbabwe (N= 579). The difference between this sub sample and the main sample is that we removed the partially employed and housewives from our data set to focus only on our main variable. Table 1 shows the sample used in this current study.

Table 1. Study sample size and employment level by country

Country	Employed (%)	Unemployed (%)	Total sample
Egypt	329 (86%)	55 (14%)	384
Ethiopia	230 (69%)	105 (31%)	335
Nigeria	134 (38%)	225 (62%)	359
Zimbabwe	124 (22%)	455 (78%)	579
Total	817 (49%)	840 (51%)	1657

Measurement Instrument

The WVS collects data using a standard paper questionnaire that has been designed by a large team of cross-disciplinary researchers. The questionnaire is composed of about 290 items/questions that gauge a variety of attitudes and values on various life domains including work, religion, science, economy and politics. The questionnaire also had measured several demographic variables such as employment status.

Because the original questionnaire was designed in English, it was translated to Arabic for Egypt, Amharic, Afan Oromo, and Tigrigna for Ethiopia, Hausa, Igbo, and Yourba for Nigeria, and Ndebele and Shona for Zimbabwe. The translation from English to Arabic was performed by the WVS secretariat. However, the translation to the other languages were performed by the local data collection teams, each in their respective country.

Four different measures were employed in this study; **Work values** was measured using four items; 1) work is important in life, 2) people who do not work turn lazy, 3) work is a duty towards society, and 4) work should come first even if it means less spare time. Responses were measured on a five-point scale that ranged from 1 (agree strongly) to 5 (disagree strongly). **Satisfaction with life** was measured with the “All things considered, how satisfied are you with your life as a whole these days?”. Responses were measured on a 10-point scale that ranged from 1 (completely dissatisfied) to 10 (completely satisfied). Health was measured with the question “All in all, how would you describe your state of health these days?”. The response scale ranged from 1 (very good) to 5 (very poor). **Happiness** was measured with the question “Taking all things together, would you say you are ...”. Responses were measured on a four-point scale that ranged from 1 (very happy) to 4 (not at all happy). Finally, **employment status** was measured by a categorical variable that included: full time employment (more than 30 hours of work per week), part time employment, self-employment, retired, housewife, student, and unemployed. As pointed out above, we only examined full time employment and unemployment.

Data Analysis

Data was analyzed between-individuals, within each country. Because the independent variable in this study is dichotomous (employed-unemployed) we used Chi-square goodness-of-fit to test our first three hypotheses. The moderating impact of work values was measured by conducting two-way analysis of

variance (ANOVA). To assess the uni-dimensionality of the work value items, we used Principle Component Analysis. All analysis was performed using SPSS 28.0.1.

RESULTS

The Reliability and Factor Structure of the Work Values Scale

Since work values was the only variable that was measured with a multi-item scale, it was important to assess its reliability and factor structure before using the data. Data analysis for all four countries indicated that the scales' reliability as measured by internal consistency was satisfactory, with a Cronbach's alpha of 0.75 for Egypt, 0.72 for Ethiopia, 0.76 for Nigeria and 0.78 for Zimbabwe, all are above the 0.70.

The scale's factor structure was assessed with principle component analysis using the combined data for the four countries (n=1657). Results showed that one component best reflects the relationships between the items (see Table 2 and 3). This suggests that we can add the scores of all four items to create a composite total score reflecting the strength of work values in the four countries.

Table 2. Work values communalities

	Initial	Extraction
Important in life: Work	1.000	.547
People who don't work turn lazy	1.000	.580
Work is a duty towards society	1.000	.611
Work should come first even if it means less spare time	1.000	.561

Table 3. Work values component matrix

	Component Extracted
	1
Important in life: Work	.617
People who don't work turn lazy	.693
Work is a duty towards society	.782
Work should come first even if it means less spare time	.749

Extraction Method: Principal Component Analysis.

Hypothesis Testing

The first hypothesis suggests that there is a relationship between employment level and happiness in the four African countries. The results shown in Table 4 indicate that the hypothesis is supported for Egypt, but not for Ethiopia, Nigeria or Zimbabwe. The data also shows that in Egypt employment, as compared to unemployment, was associated with higher levels of happiness.

Table 4. Employment level and happiness by country

Country	Employment	Very Happy	Rather Happy	Not very Happy	Not at all Happy	Chi-Square
Egypt	Employed	69.3	8.5	18.5	3.7	7.12*
	Unemployed	56.4	9.1	23.6	10.9	
Ethiopia	Employed	57	26.5	13.5	3	0.76
	Unemployed	61.9	22.9	12.4	2.9	
Nigeria	Employed	26.1	51.5	18.7	3.7	5.29
	Unemployed	24.1	46	19.6	10.3	
Zimbabwe	Employed	30.1	20.3	31.7	17.9	1.15
	Unemployed	34.3	17.3	29.7	18.7	

* (P < 0.05); ** (P < 0.01)

The second hypothesis suggests that there is a relationship between employment level and satisfaction with life in the four African countries. The results shown in Table 5 indicate that the hypothesis was supported for Egypt and Zimbabwe, but not for Ethiopia or Nigeria. The data also shows that in Egypt and Zimbabwe, employment, as compared to unemployment, was associated with higher levels of satisfaction with life.

Table 5. Employment level and satisfaction with life by country

Country	Employment level	Dissatisfied	2	3	4	5	6	7	8	9	Satisfied	Chi-Square
Egypt	Employed	3.4	0.6	6.7	8.2	24.4	14.6	11.9	13.1	9.1	7.9	24.19*
	Unemployed	11.1	5.6	7.4	9.3	20.4	9.3	22.2	5.6	3.7	5.6	
Ethiopia	Employed	15.7	1.7	3.9	7.4	22.6	14.8	8.7	8.7	3.9	12.6	11.99
	Unemployed	12.4	4.8	2.9	15.2	20.4	12.4	10.5	8.6	6.7	6.7	
Nigeria	Employed	7.6	5.3	8.3	12.9	9.1	9.1	15.9	12.1	6.1	13.6	6.73
	Unemployed	11.6	6.3	11.2	8.5	10.3	12.1	11.2	11.2	4.4	13.8	
Zimbabwe	Employed	21	5.6	5.6	6.5	25.8	7.3	7.3	5.6	3.2	12.1	20.63*
	Unemployed	34.1	3.7	4.6	8.8	12.5	4.8	3.5	5.1	3.1	17.8	

* (P < 0.05); ** (P < 0.01)

The third hypothesis proposes that there is a relationship between employment level and self-rated health in the four African countries. The results shown in Table 6 indicate that the hypothesis was supported for Egypt, Ethiopia and Zimbabwe, but not for Nigeria. The results also shows that for Egypt, Ethiopia and Zimbabwe, employment, as compared to unemployment, was associated with higher levels of self-rated health.

Table 6. Employment level and health by country

Country	Employment level	Very Good	Good	Fair	Poor	Very Poor	Chi-Square
Egypt	Employed	8.5	59.3	28.9	2.7	0.6	11.18*
	Unemployed	20	40	34.5	5.5	0	
Ethiopia	Employed	47.4	43.5	7.8	1.3	0	11.47**
	Unemployed	30.5	50.5	16.2	2.9	0	
Nigeria	Employed	43.7	39.3	14.1	1.5	1.5	4.27
	Unemployed	38.9	38.1	15	5.3	2.7	
Zimbabwe	Employed	17.1	30.9	35	10.6	6.5	8.84*
	Unemployed	11.6	22.6	39.6	17.1	9	

* (P < 0.05); ** (P < 0.01)

The fourth hypothesis which suggests that work values moderates the relationship between employment level and happiness, satisfaction with life and self-rated health, was tested with ANOVA. The results shown in Tables 7 indicate that indeed work values moderates the relationship between employment level with happiness, but only for Egypt. Table 8, shows the work values also moderates the relationship between employment level and satisfaction with life for Egypt. But not for Ethiopia, Nigeria or Zimbabwe. Finally, Table 9 shows that work values moderates the relationship between employment level and self-rated health in Egypt, Ethiopia and Zimbabwe.

Table 7. The moderating effect of work values on the relationship between employment level and happiness by country

Country	Source of variance	Sum of squares	df	Mean Squares	F
Egypt	Employment level	1.933	1	1.933	4.58*
	Work Values	5.444	2	2.722	6.45**
	Interaction	1.415	2	0.708	1.677
	Error	158.64	376	0.422	
	Total	167.43			
Ethiopia	Employment level	0.026	1	0.026	0.051
	Work Values	0.176	2	0.088	0.176
	Interaction	1.890	2	0.945	1.89
	Error	164.21	328	0.501	
	Total	167.68			
Nigeria	Employment level	1.412	1	1.412	1.535
	Work Values	2.131	2	1.065	1.157
	Interaction	0.651	2	0.325	0.353
	Error	314.68	342	0.920	
	Total	318.87			
Zimbabwe	Employment level	0.001	1	0.001	0.001
	Work Values	1.094	2	0.547	0.557
	Interaction	0.548	2	0.274	0.279
	Error	557.69	568	0.982	
	Total	559.47			

* (P < 0.05); ** (P < 0.01)

Table 8. The moderating effect of work values on the relationship between employment level and satisfaction with life by country

Country	Source of variance	Sum of squares	df	Mean Squares	F
Egypt	Employment level	35.048	1	35.048	6.918*
	Work Values	54.107	2	27.054	5.336*
	Interaction	51.136	2	25.568	5.043*
	Error	1894.83	376	5.07	
	Total	2035.12			
Ethiopia	Employment level	6.838	1	6.838	0.921
	Work Values	17.289	2	8.645	1.165
	Interaction	5.915	2	2.957	0.398
	Error	2434.38	328	7.411	
	Total	2455.26			
Nigeria	Employment level	29.564	1	29.564	3.829
	Work Values	69.979	2	34.989	4.531
	Interaction	1.597	2	0.799	0.103
	Error	2640.91	342	7.722	
	Total	2739.23			
Zimbabwe	Employment level	60.376	1	60.376	5.554*
	Work Values	40.659	2	20.330	1.871
	Interaction	81.520	2	40.760	3.750
	Error	6184.29	568	10.869	
	Total	6366.84			

* (P <0.05); ** (P < 0.01)

Table 9. The moderating effect of work values on the relationship between employment level and self-rated health by country

Country	Source of variance	Sum of squares	df	Mean Squares	F
Egypt	Employment level	3.039	1	3.039	6.05*
	Work Values	7.111	2	3.555	7.083*
	Interaction	7.128	2	3.564	7.099*
	Error	188.667	376	0.502	
	Total	205.95			
Ethiopia	Employment level	5.015	1	5.015	9.94**
	Work Values	5.868	2	2.934	5.821*
	Interaction	5.815	2	2.907	5.768*
	Error	165.38	328	0.504	
	Total	183.54			
Nigeria	Employment level	2.459	1	2.459	2.796
	Work Values	2.128	2	1.064	1.210
	Interaction	4.117	2	2.058	2.340
	Error	301.67	342	.882	
	Total	309.86			
Zimbabwe	Employment level	6.657	1	6.657	5.58*
	Work Values	10.125	2	5.062	4.243*
	Interaction	1.935	2	0.968	0.811
	Error	677.73	568	1.193	
	Total	701.26			

* (P < 0.05); ** (P < 0.01)

DISCUSSION

One of the objectives of this study was to test the hypothesis that the level of employment is related to happiness, satisfaction with life and health in four Africa countries. The results presented in this study, show that employment level is related to happiness in Egypt, satisfaction with life in Egypt and Zimbabwe, and self-rated health in Egypt, Ethiopia and Zimbabwe. As such, all of the hypotheses were supported in Egypt and none were supported in Nigeria.

According to the literature, unemployment has significant negative impact on many psychological and physical indicators of well-being (Paul, 2009). Our results raise then the question of why we did not find all of these relationships in all four countries?

There are factors that may weaken the connection of unemployment with happiness and satisfaction with life. First, all of the countries examined in this study suffer from high and chronic unemployment. It is possible that this condition reduces the stigma associated with being unemployed. In other words, stigma does not form when it is common to be unemployed in a society. The reduced stigma may decrease the stress or tension caused by being unemployed. Second, long-term unemployed individuals may be able to adjust through habituation and adaptation to their situation. By habituation, we mean that unemployed individuals may become used to their condition, and so over time its effect on them is weakened. Third, we also believe that the collective nature of many African society and the strong extended family networks (Amoako-Agyei, 2009; Darley & Blankson 2008), may buffer much of the negative damage done by unemployment. For example, unemployed individuals may receive financial support from extended family members during times of unemployment. These arrangements may play the same role played by governmental unemployment protection programs in developed countries. In Nigeria, Lawrence and Falaye (2021) suggested that unemployed university graduates did not experience any psychological because their families supported them financially.

Another finding is that while unemployment was related to happiness in one country, and satisfaction with life in two countries, it was related to health in three of the four countries. So why

was unemployment related to health in more countries? It is possible that while culture and institutional settings may reduce the impact of unemployment on happiness and satisfaction with life, it cannot weaken the impact of unemployment on health.

The second objective of the study is to examine the moderating impact of work values on the relationship between unemployment, happiness, satisfaction with life and self-rated health. The results showed that work values did not moderate all the significant relationships. In other words, work values did matter when there was a main relationship between employment level and happiness, satisfaction with life and self-rated health. This shows the importance of work values. These results are consistent with Paul and Moser (2006), and Hammarström (1994) who showed that attitudes towards work did moderate the relationship between employment and psychological and physiological well-being.

Limitations and Future Research Directions

This study has three important limitations. First, there are concerns about the generalizability of the results of this study to the populations of each country. The original sample design used by the WVS in each of the four countries is a probability stratified random sampling, which allows generalization of the results. However, in this study we only used a subset of that sample. It is possible that the subset we used is biased and thus should not be generalized. Second, the design of this study is cross-sectional, which prevents us for testing or inferring any causal relationships between our variables. Accordingly, we should not interpret the results as meaning that employment level causes happiness, satisfaction with life or self-rated health. A time series analysis of data across time with a panel sample is best suited to answer to the question of causality. Finally, the data was collected using mono-method, mono-source techniques, which raises concerns over common method bias (Podsakoff *et al.*, 2003). Future studies, may avoid this problem by collecting data from multiple sources or across different periods.

CONCLUSION

Although unemployment represents a major problem in many African countries, its effects on well-being has not received much attention from management scholars. The purpose of this study was to examine the relationship between employment, subjective well-being (happiness and well-being) and self-rated health in four African countries. We also wanted to know if the strength of work values moderated the above relationships. These relationships were tested using secondary data gathered by the World Values Survey between 2018 and 2020.

The results showed that there were important differences between the four African countries studied. Specifically, in **Egypt** unemployment was negatively associated with happiness, satisfaction with life and self-rated health. In **Zimbabwe**, unemployment was related to satisfaction with life and self-rated health. In **Ethiopia**, unemployment was associated only with self-rated health. Finally, in **Nigeria**, unemployment was not associated with any of the studied outcomes.

These results show that contrary to the literature from the developed countries, unemployment did not always relate negatively to subjective well-being or self-rated health in the selected four African countries under investigation. This unexpected finding requires further investigation to understand why these Africans countries are resilient in the face of unemployment.

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UPSCALING AND THE INCOME GAP: HOW INEQUALITY INFLUENCES INNOVATION ADOPTION RATES OF SMALLHOLDER FARMERS IN RURAL TANZANIA

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ABSTRACT

Poverty and inequality are commonly more prevalent in developing countries than they are in developed countries. Adoption of innovations can help to reduce poverty in rural communities. Nevertheless, adoption rates in developing countries, including Tanzania, remain low. In this paper, we aim to understand why this counter-intuitive dynamic persists by studying rejection rates of multiple, inhomogeneous innovations in rural Tanzania. To this end, we examine the hitherto under-explored influence of inequality between households on innovation adoption rates. Theoretically, we employ expected utility maximization theory. Empirically, we use data gathered from 516 rural households in Tanzania, and specify a random effects logistic model of adoption decision to obtain estimates. Our findings suggest that innovation adoption behaviour varies strongly (1) between households, and (2) between different types of innovations (production; processing; consumption) offered to households. Our study contributes to the literature on innovation adoption, and income inequality in Sub-Saharan Africa.

Keywords: Income Inequality; Innovation Adoption; Adoption Behaviour; Household Level; Smallholder farmers

INTRODUCTION

Over 80% of the rural population in developing countries worldwide are engaged in subsistence agriculture. Poverty and inequality are nowadays most commonly observable in developing countries' rurality. In Sub-Sahara Africa, where two in five people live in extreme poverty and 'amid some of the world's starkest wealth and income inequality' (Manero et al., 2020), this duality is particularly pronounced.

Previous literature suggests that Tanzanian economic and social inequality has been growing substantially over the course of the last twenty years and continues to contribute to an increasing difference in wealth endowment between individuals and whole segments of society (cf. Atkinson & Lugo, 2010; Green, 2015). In Tanzania, about 3 in 4 households conduct daily (small-scale) agricultural

business or production and approximately one third of the population is actively endangered by problems persisting to insecurities in agricultural production (Derksen-Schrock et al., 2011; Kuntosch & König, 2018). Economic growth is considered one of the key components for reducing poverty in the long run (Dollar & Kraay, 2002; Fosu, 2017). However, when trying to reduce poverty, the distribution of growth and inequality also needs to be accounted for. The relationship between economic growth, poverty reduction, and inequality is of particular interest for rural areas, where poverty is widespread (Manero et al., 2020). It is well established that initial inequality can hamper economic growth and, in the long run, the respective conversion of economic growth to poverty reduction. It is furthermore well understood that higher initial inequality within a country leads to less pro-poor growth where poor individuals will benefit less from economic growth (Bourguignon, 2004; Heshmati, 2006; Ravallion, 2004; Balakrishnan et al., 2013; Klasen, 2016). Innovations introduced in respective areas bear the potential to stimulate rural income as they contribute to increases in agricultural productivity (Iheke & Nwaru, 2013).

Nevertheless, adoption rates of innovations, which possess the potential to improve both everyday agricultural life and business conduction of smallholder farmers remain low throughout Tanzania (Kuntosch & König, 2018). Marenja and Barrett (2007), Teklewold et al. (2013), and Kassie et al. (2015) have found that technology use in Tanzania is often among the lowest in Sub-Saharan Africa (SSA), with rates of adoption ranging between 4 and 46% vs. 19 and 80% in other countries, depending on the innovation. In this paper, we aim to contribute to a broader scholarly understanding of why this counterintuitive dynamic persists.

A growing body of scholarly literature has been trying to explain the phenomenon of low innovation adoption rates in rural Tanzania. Pertinent accounts have examined adoption barriers to innovations such as improved grain legume seeding systems (Ojiewo et al., 2020), water conservation technologies (Jha et al., 2019; Manero et al., 2019; Mdemu et al., 2020), practices of conservation agriculture (Ndah et al., 2015; Ngoma et al., 2021), as well as to food security problems more generally (Kuntosch & König, 2018). While all these accounts provide valuable insights into the specific dynamics of innovation adoption, a comprehensive framework that explains the low adoption rates observed at the rural Tanzanian household level has thus far remained absent.

One reason why this void persists may be that the overarching amount of rural development and innovation literature with a focus on Tanzania consists of single innovation studies and does not compare activities (i.e. differences between adoption rates of *various innovations*). In other words, because existing scholarly accounts have focused mostly on the assessment of single innovation studies, more generalizable, far-reaching statements cannot be deduced. Given the above mentioned research gaps, our research questions read as follows:

1. What are the current rates of innovation adoptions and levels of inequality in rural Tanzania? 2. Do different household determinants influence the adoption of different types of innovations in varied ways?

To help fill said research gaps and answer our research questions, we examine innovation adoption from a *non-discriminative* point of view as we employ predominantly (socio-)economic explanatory variables, which set apart single households in a pool of potential innovation adopters. Following up on a recent IFAD (International Fund for Agricultural Development) meta-analytical study on improved agricultural technology adoption in various African countries (Arslan et al., 2020), we draw on the explanatory power of socioeconomic and wealth inequalities between rural households to explain why adoption rates remain low despite the seemingly existing need for improved agricultural production in rural Tanzania. The IFAD synthesis of the existing micro-econometric literature on innovation adoption in Africa is the first of its kind that has conclusively hinted at the underexplored importance of wealth indicators with respect to understanding what determines innovation adoption rates in African countries. However, even this continent-wide empirical meta-analysis was unable to ‘come to any sweeping conclusion about the impact of wealth-related determinants’ (ibid.: 26). Our approach is established on this finding.

We employ expected utility maximization theory, implementing the relevant determinants in the quoted IFAD study to add to and extend previous work. In practice, we assume that smallholder farmer adoption decisions are based on the desire to maximize future expected value of a utility of some

sort and that the respective decision-maker can account for all known constraints that may inhibit said value maximization (Kangogo et al. 2021; Meyer, 1987; Rola & Pingali, 1992). In line with the prevalent literature, we assume the utility value to be predominantly linked to profitability, safety and food security (Umar, 2014; Tan, 1994; Tversky & Kahneman, 1981). Empirically, we test our framework against the decision to adopt an innovation in general and against three different types of innovations in particular. Specifically, we compare adoption rates of a rainwater harvesting (production) innovation, an improved cooking stove (processing) innovation and a kitchen garden (consumption) innovation (Graef et al. 2014). In so doing, we devise a larger conceptual framework of innovation adoption for the Tanzanian Case.

We assume that smallholder farmers are faced with a multiple-choice problem of innovation adoption at two discrete points in time. First, at the point of the initial adoption decision (t_1) and second, when they decide whether or not to continue using a respective innovation (t_2). Since the three innovations studied in this paper were available to all smallholder farmers initially (at t_1), we presume that all respondents unequivocally considered their decisions based on a subjective assessment of which innovation would maximize their expected utility, given various adoption and production constraints (cf. Dorfman, 1996; Kangogo et al., 2021).

Our findings reveal that the different household characteristics have varying influences on the adoption of certain innovations/upgrading strategies. Furthermore, the level of inequality within a smallholder community shows an effect on the adoption decision of smallholder farmers for at least one upgrading strategy. By providing a comprehensive answer to our research questions, we contribute to the existing body of literature in Sub-Saharan African development in three major ways. First, we prove that various household characteristics of smallholder farmer households affect different types of innovations in dissimilar ways. Second, we show that inequality between households at village level may influence the adoption rates of some innovations but certainly not of all types of innovations. Third, we find that extreme poverty of households by itself does not constitute a determinant for non-adoption.

Our contributions add to the recent string of scholarly works that aim to provide a better understanding of what shapes a ‘conducive environment’ for innovation adoption (Ojiewo et al., 2020; Orr, 2018). Importantly, we address the prevalent call in the literature to provide a cohesive account of detrimental impacts of inequality at the *non-national level* in Tanzania (cf. Atkinson & Lugo, 2010; Kinyondo & Pelizzo, 2018; Maliti, 2019) by extenuating previous presumptions in regards to a strictly negative influence of inequality.

This paper is structured as follows. The subsequent chapter opens with a review of the existing literature on innovation adoption in Tanzania. Following a brief overview of existing explanatory frameworks, we demonstrate that most adoption-centric papers have failed to include conclusive theoretical ground to be able to predict adoption behaviour. In the third chapter, we present our conceptual framework of how household determinants influence the adoption of innovations. In chapter four, we illustrate the case selection of households in Dodoma and Morogoro and present our methodological approach. Chapter five provides an account of the random effects logistic regression testing for all innovation categories and the results obtained. Following thereupon, we proceed to a discussion of the results in the sixth chapter and, in doing so, outline avenues for future research. The seventh chapter rounds off the work, providing a brief summary of the most important insights gained and concluding with a note on the generalizability of our findings.

LITERATURE REVIEW

In this chapter, we review the literature on innovation adoption and its determining factors in Tanzania. We pay particular attention to displaying the missing link between inequality and the decision-to-adopt at household level. To this end, we illustrate the absence of plausible theoretic reasoning in contemporary academic research on innovation adoption in developing countries.

We begin by defining ‘Adoption’ and ‘Innovation’ as the core terms of our study. The literature on agricultural technology uptake in developing countries commonly refers to ‘Adoption’ as one of the main ‘governing process[es] of the utilization of innovations’ (Sunding & Zilberman, 2001), next to ‘Diffusion’, which is not studied here. ‘Adoption’ of agricultural innovations therefore, as defined in this paper in line with all recent scholarly work of the same nature, concerns the implementation of

‘innovations’, i.e. the management of all customs, practices, devices and methods employed to undertake a respective improvement (Jha et al., 2019; Ndah et al., 2015; Nkonya et al., 1997; Ojiewo et al., 2020).

The adoption of innovations by rural households has been a core issue emphasised in African/SSA development literature since the Green Revolution (Arslan et al., 2020). Feder et al. (1985) provided an early account of why adoption studies matter in particular in developing countries. They showed that unequal endowments between households in underdeveloped regions could cause differing adoption rates and potentially lead to a renewed increase in (wealth) inequality in the long-term, which could then cause distorted adoption rates between households by itself again (Feder et al. 1985). This thought, however, has not yet been fully explored empirically for SSA countries.

Most recently, the IFAD study by Arslan et al. (2020) provided a partial remedy in this matter. The ‘meta-analysis for Africa’ on improved agricultural technologies provided a review on agronomy, agro-forestry, livestock, post-harvest and energy system innovation adoption across twenty-three African countries (Arslan et al., 2020). In regards to their obtained results, three aspects are particularly striking. First, almost 60% of all coefficients in their data (187 studies distinct by theme with > 5000 data points) are insignificant. Second, out of the eleven determinants related to the adoption of improved agricultural practices, the greatest relative group of explanatory variables relate directly to household wealth endowment. Third, with respect to the aforementioned wealth indicators, the authors conclude that the precise way in which those factors influence innovation adoption across various upscaling techniques remains unclear (Arslan et al., 2020). While suggesting that wealth-related indicators have not received enough attention in the adoption literature, the authors remain inconclusive in regards as to how far innovation adoption is tangibly influenced by these determinants.

What complicates matters further, is that only 8 studies reviewed took place in Tanzania (Arslan et al., 2020: 16). We follow up on the findings by examining relevant agricultural innovation adoption studies that focus solely on Tanzania to assess in how far household wealth- and inequality-related determinants have been assigned weight in the literature.

Ojiewo et al. (2020) found that increased uptake of improved grain legume seeds in Tanzania between 2007 and 2019 was connected to stronger government support for crops of low interest to the private sector. The adoption of high-quality seed innovations seems to be influenced by funded capacity building partnerships between farmers, companies and extension workers. The authors concluded, however, that a ‘need to improve understanding of why and under what circumstances farmers decide to adopt improved varieties, i.e. of the drivers of adoption, persists (Ojiewo et al., 2020).

Concurrently, improved fertilizer uptake in rural Tanzania seems to be dependent, at least in part, on the cost of technology implementation and monitoring, i.e. a household’s ability and ‘willingness-to-pay for higher quality’ (Michelson et al., 2021). The access to agricultural inputs for smallholder farmers, for example through relieves of constraints on credit or cash supplies, constitutes a persistent problem in this connection (Benson et al., 2012; Cameron et al., 2017). Studies on fertilizer technology uptake suggest that the willingness-to-adopt, in particular in remote areas, is detrimentally influenced by smallholder farmer uncertainty concerning investment returns (Benson & Mogue, 2018; Harou et al., 2017; Palmas & Chamberlin, 2020). Evidence from the literature on seed and fertilizer innovation adoption in Tanzania overall reinforces the meta-level suggestion by the IFAD study that some form of unequal resource (wealth) endowment seems to hamper smallholder farmer household ambitions to upscale. The precise impact however, remains unaddressed.

Similar to the literature on seeds and fertilizers, findings of recent studies on water conservation, rain water harvesting and irrigation innovations suggest that research should focus more on unequal wealth endowment. When evaluating the impact of irrigation determinants on increased farm yield and productivity in irrigation schemes in southern Tanzania in conjunction with human, social and financial variables, Manero et al. (2019) found that long-standing explanatory factors such as proximity to intake, location advantages and head-end user characteristics of farmers decline in relevance. Mdemu et al. (2020) suggest that the costly maintenance of water storage innovations could cause adoption rates to be dependent on the pre-existing ability to increase and sustain productivity. This raises the question whether Tanzanian farmers at the bottom end of the income distribution may be disincentivized to adopt an irrigation innovation, if the associated risk to not increase one’s output enough is perceived as too great (Mdemu et al. 2020).

The question of how unequal endowments of households can potentially impact on the dissemination of water system innovations has been touched on by Tumbo et al. (2013). While not the core objective of their study, the authors found evidence to assume that the economic status of a household directly relates to its contribution to empowerment and village cohesion, which, in turn, leads to greater innovation adoption and diffusion. With low inclusion levels being most prevalent amongst poorer farmers, innovations can potentially spread at a much scarcer rate there (Tumbo et al., 2013). Jha et al., (2019) provided further evidence, demonstrating that the uptake of improved water conservation technologies amongst smallholder farmers in Tanzania is most notably influenced by ‘perceptions on rainfall instability, household wealth, and food security’ (Jha et al., 2019). Similar to the general observation by Kuntosch and König (2018), the authors report ‘strikingly low’ adoption rates of water conservation innovations (only 17% of all participating farmers) across a population of 701 smallholder farmer households (Jha et al., 2019). The self-perception of a household’s wealth status, relative to the rest of the community, matters for deciding on whether or not to adopt a given innovation. However, the households mostly focus on access to micro-credits and public funds, as well as household savings (Jha et al. 2019) and do not compare unequal resource endowments and inequality, or perceptions thereof, between households. They close with a call for future research to further investigate the ‘fundamental’ importance of farmer perceptions in regards to their innovation adoption behaviour and strategic agricultural decision making at household level (Jha et al. 2019).

The evidence reviewed echoes within adoption studies of other kinds as well. While conservation agriculture (CA) innovations, for example, have been credited with a high potential to increase ‘sizeable medium and long-term productivity’ (Ngoma et al., 2021) of agricultural business and thus help fight hunger and poverty in Tanzania (Owenya et al., 2011), adoption rates thereof continue to be ‘extremely low’ (Ndah et al., 2015). Market access capabilities and particularly adaptations and improvements of devices and methods (e.g. machinery and seeds) seem to constitute insurmountable adoption barriers (Ndah et al., 2015).

For innovations such as improved cooking stoves (processing innovation) and kitchen gardening nutrition (consumption innovation), a similar picture persists. Whereas the uptake of cooking stove innovations is positively associated with local design as well as manufacturing, and ‘willingness-to-adopt’ may increase depending thereupon (Hafner et al., 2018), overall adoption rates in Sub Saharan Africa are often initially low and/or decrease further over the course of respective study programmes (Jagger et al., 2019). This is caused by economic considerations of households in regards to the uptake of improved stoves, such as cash or credit shortages (Kulindwa et al., 2018), household space limitations (Uckert et al., 2017), as well as limited household understanding of how the uptake of a respective innovation could benefit (Hafner et al., 2020).

Nutrition improvement innovations focus on the scaling up of nutritionally sensitive techniques in the face of land, water, health and credit endowment constraints. While crucial to improving day-to-day household living structures in regards to cleaner production, consumption and improved health, innovation roles continue to be underappreciated, not least due to limited understanding of how to manage them appropriately (Mbwana et al., 2016; Ryback et al., 2018). Recent scaling up assessment highlights the importance of including local definitions of kitchen gardening, co-operation between farmer extension groups and access to agricultural services for the implementation of kitchen gardening nutrition innovations (Bonatti et al., 2017). Aside from this, little has been done to provide a stringent framework for understanding innovation adoption behaviour in rural Tanzania.

Overall, a clear framework of adoption is missing at the Tanzanian household level. While the variety of determinants reviewed in the context of different types of (agricultural) innovation adoption studies illustrates the difficulty of creating a consistent framework of adoption, it has nonetheless become clear that explanatory factors such as household wealth, resource endowment and inequality between households are underappreciated in the literature. The adoption studies reviewed unanimously call for a greater investment of research into understanding what drives adoption and how wealth related determinants play into the decision-to-adopt across different types of innovations (cf. Arslan et al., 2020; Jha et al., 2019; Ngoma et al., 2021; Ojiewo et al., 2020). In the next chapter, we introduce our conceptual framework that provides a remedy in this matter.

Conceptual Framework

To provide an adoption framework at household level, we focus on household endowments prior to the actual decision to adopt. Most studies reviewed in the previous chapter provide little to no understanding in this connection as they focus on ex-post behavioural observations only. Diverging from the previous literature, we accord with the statement by Glover et al. (2019) that constructing a new typology of (ex-ante) ‘generic’, comparable indicators based on existing evidence will enable greater insight into understanding technology uptake in smallholder agriculture (Glover et al., 2019). Combining this statement with the IFAD study’s finding that wealth and socioeconomic inequalities matter greatly with respect to understanding innovation adoption (Arslan et al., 2020), we suggest two conditions that a comprehensive adoption framework should necessarily fulfil. First, it should be able to test the influence of household endowments on the likelihood to adopt and continually utilize any type of innovation. Second, and diverging from the previous literature, it should be *non-discriminative*, meaning that it can be applied to different types of innovations. To fulfil the specified conditions, we require solid theoretical background that could be applied to any of the single-innovation studies reviewed above.

Our framework is grounded in two main pillars of expected utility maximization theory. First, we presuppose that smallholder farmer adoption decisions are always undertaken in regards to the maximization of an expected value of a somehow defined utility function (Meyer, 1987; Rola & Pingali, 1992). Second, we assume that whoever makes the respective innovation adoption decision is always able to account for any known, existing constraints that can inhibit the adopted innovation’s potential to contribute to the maximization of the expected value (Kangogo et al., 2021). Since our framework focuses on the modelling of adoption decisions based on *ex-ante* indicators, the second condition is assigned particular weight here. For every smallholder farmer in our sample, notwithstanding the respective innovation adopted, we assume that the *ex-post* maximization of the individual utility function can always be modelled as the maximization of some arbitrary aggregate consumption utility that satisfies the respective household’s need (Kadigi et al., 2021). Whether such utility is operationalised through profitability, safety or food security (cf. Umar, 2014; Tan, 1994; Tversky & Kahneman, 1981), is of no importance.

We model the decision to adopt an innovation based on the assumption that smallholder farmers decide along a distinct hierarchy of preferences, accounting for all known wealth inequalities and socioeconomic constraints in the lead up to the respective point in time. Since smallholder farmers possess full information about the environment within which a given innovation is adopted, we can confidently assume that they rank the expected utility, to be drawn from the respective innovation that they choose to adopt, along an ordinal hierarchy of preferences if multiple innovations are offered to them. It is important to note that we assume farmers to purely rank the expected utility, and not the expected profit of the innovation to be adopted. This is done for two major reasons.

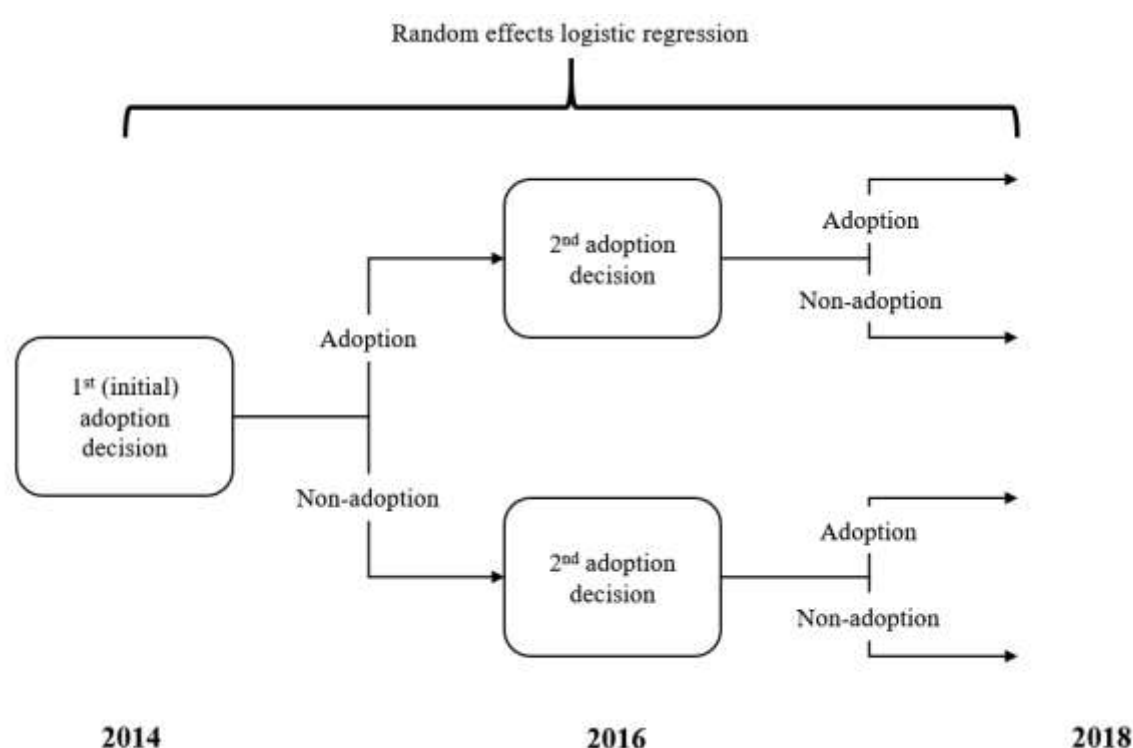
First, if the expected profit was treated as a cognitive determinant of the adoption decision, it would be reasonable to assume a ranking of preferable adoption decisions along at least an interval hierarchy of preferences (the subjective) utility derived from an innovation. When thinking about whether to adopt or not adopt a given innovation out of a set of innovations offered, the adoption decision can be expected to be based on subjective perceptions of what is possible under the given circumstances, i.e. on assumptions about the probability distribution of the derived utility (profitability; safety; food security etc.) of the adopted innovation (Abadi Ghadim & Pannell, 1999).

We assume that smallholder farmers face a multiple-choice problem of adoption at various points in time. Whenever they decide on whether to adopt, continue or reject an innovation, they account for socioeconomic and wealth determinants of the respective household, as well as the environment in which they are embedded when ranking the expected utility of all innovations offered to them. The latter point is of particular importance here. Since our framework does not only capture the initial adoption decision but has a multilevel outlook, we assume that for decisions whether to continue or halt an innovation adoption, smallholder farmers account for accrued constraints known to them about their own household and others in the period of initial adoption and the moment in which they decide whether to continue. The accrued constraints in regards to others relate to inequalities in household size, wealth, socioeconomic endowments and generally all comparable endowments (such as plot sizes, asset scores, network dynamics in village etc.). The reasoning behind integrating (perceived) inequality is that for any adoption decision point in time other than t_1 , we assume that farmers compare their endowments

to those of others in the village and essentially “re-rank” the innovations offered to them along their ordinal preference hierarchy.

We thus propose a generalizable *multi-step non-discriminative* framework of innovation adoption in which the decision to adopt for each smallholder farmer observed is conditional on previously existing endowments, known constraints and inequality between households. For each point in time, when an adoption decision takes place, the relevant household authority re-evaluates the own endowments as well as the endowments of other households which may or may not have adopted different innovations and decides thereupon whether to adopt, continue or reject an innovation practice. Figure 1 below visualizes the framework.

Figure 1: Conceptual Framework of Innovation Adoption



A necessary precondition for our framework to be applied empirically, and extended in future works, is that all smallholder farmers observed thereunder must have initially had access to the same pool of innovations. If this was not the case, then the framework logic would fail at the latest during the second adoption decision and it would effectively only capture a multitude of single-innovation studies over time, which we criticised before. The appropriate operationalisation is key in exploring our framework’s full potential. We therefore now turn to a description of the study site and methodology used to test the empirical applicability of the approach.

STUDY AREA, DATA AND METHODOLOGY

Study Area and Data Collection

The United Republic of Tanzania (URT) displayed a human development index (HDI) of 0.529 in 2020, and thus belongs to the least developed countries in the world on rank 163 out of 189 in the world (UNDP, 2020). The low level of development is accompanied by a high level of poverty. In 2017, almost half (49.4%) of the population in Tanzania lived under the poverty line of 2011 PPP USD\$ 1.90

per day and Tanzania's Gini coefficient of 0.405 in 2017 was below the SSA average of 0.451 (World Bank, 2021). The household panel data set used in this paper covers two distinct regions, namely the district of Kilosa in the Morogoro region and the district of Chamwino in the Dodoma region (Figure 2). Morogoro is characterized by semi humid climate with 600-800 mm annual precipitation and bimodal rain patterns (Graef et al., 2014), Dodoma has a semiarid climate with an annual precipitation rate of 350-500 mm and a unimodal rainfall regime (Mnenwa & Maliti, 2010). These differences in the climate conditions lead to a more diverse agricultural production in Morogoro compared to Dodoma (URT, 2012; Mnenwa & Maliti, 2010).

The data was collected over the course of three survey waves (in 2014, 2016, 2018 respectively) and covered 516 rural farming households with reference period of one year. The selection process of the households followed a two-step sampling procedure. In the first step, three villages being representative for the respective district were selected together with local experts (Morogoro, Kilosa district: Changarawe, Ilakala, and Nyali; Dodoma, Chamwino district: Iloilo, Idifu and Ndebwe) covering 70-80% of the typical farming systems in Tanzania (Graef et al., 2014). In the second step, 150 households per village were randomly selected from

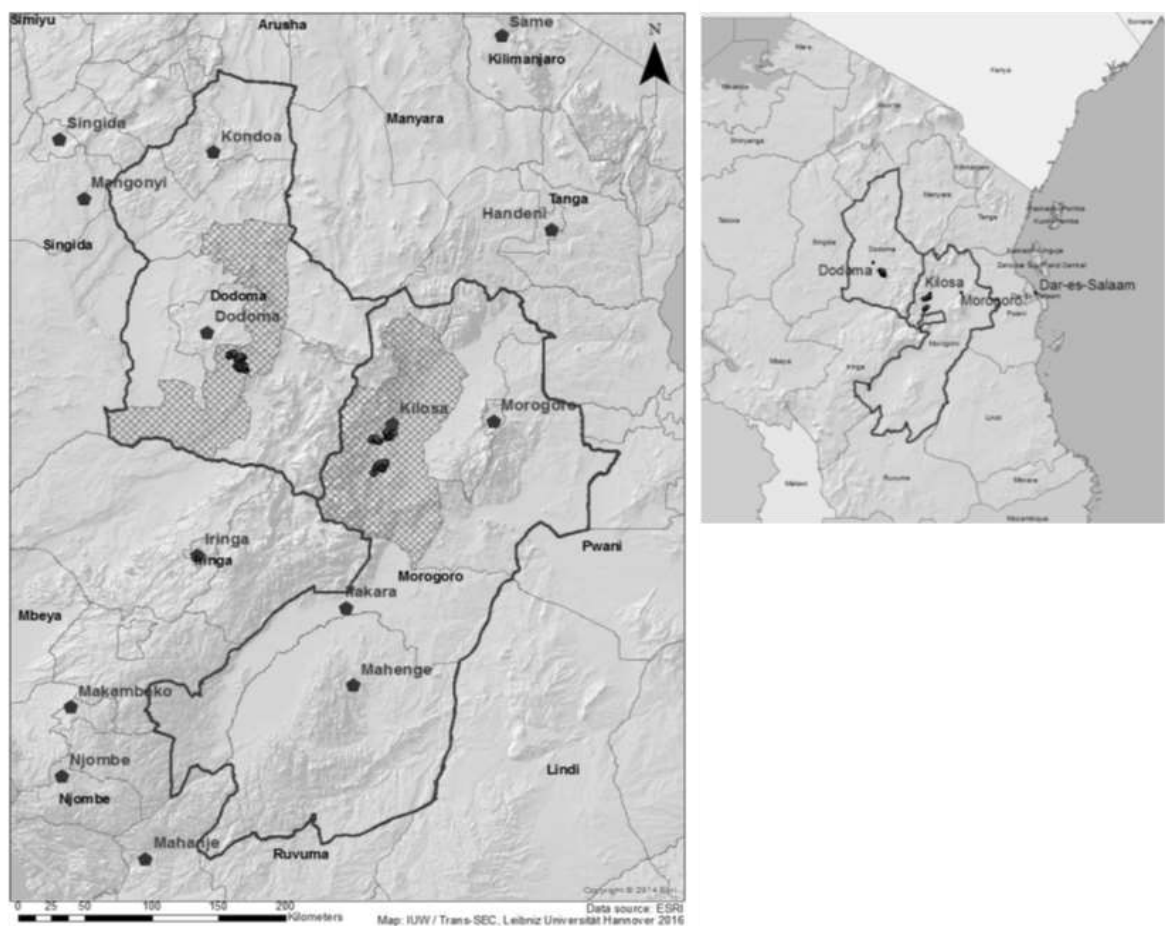


Figure 2: Location of Tanzania and the sample sites. The study sites are located in the Kilosa district in the Morogoro region and the Chamwino district in the Dodoma region (dashed area). Source: Own data

village household lists, proportionally to the village size. In each district, two villages were offered the potential eleven innovations and one village served as the control group. This paper deals with innovation adoption decision, therefore only the treatment villages are of interest.

Every household in the treatment villages was free to pick up as many innovations as the respective inhabitants wanted. The eleven innovations and their respective adoption rates are listed in the appendix (Table A.2). Some of the innovations, however, were only available to certain villages because the innovations (for example chicken farming or sunflower production) required specific

natural resource endowments which were not present everywhere. Since the practical innovations implemented during the field study were denoted as ‘Upgrading Strategies’ (UPS), we employ the notions of ‘UPS’ and ‘innovation’ interchangeably when talking about one or more of the innovation(s) studied from now on. The upgrading strategies rainwater harvesting (UPS 1), improved stoves (UPS 6) and kitchen garden training (UPS 10) were available to the same extent in all villages surveyed. To avoid an initial selection bias, these three were selected for empirical testing of our framework.

Innovation Adoption Rate and Gini coefficient

For the purpose of this study, an adopter is defined as a household that either adopted one of the three innovations singled out above, or adopted at least one of the eleven possible UPS in general, regardless of the type of innovation. All other households that had the possibility to adopt but did not act, are treated as non-adopters. The Kruskal-Wallis test was applied during the empirical analysis to visualize differences between the villages in their respective adoption rate since it tests the hypothesis whether several samples derive from the same population (Kruskal & Wallis, 1954). Furthermore, we tested whether significant changes in the adoption rate in each village could be observed over time. The Wilcoxon matched-pairs signed-rank test was used to test the equality of matched pairs of observations (Wilcoxon, 1945). The null hypothesis denotes that the median of the differences is equal to zero. No further assumptions are made about the distribution of variables (Snedecor & Cochran, 1989).

The Gini coefficient, mostly applied for measuring inequality, measures the degree to which a given distribution in a society differs from a perfectly equal distribution. It can range from 0 (perfect equality) to 1 (perfect inequality) (Gini, 1912; UN, 2015) and is based on the representation of the Lorenz curve, which plots cumulative income vs. cumulative population. It is calculated as follows:

$$G = \frac{cov(y, F(y))}{\bar{y}}$$

where cov is the covariance between the income levels y and the cumulative distribution of the same income $F(y)$ with the average income of $\bar{y}$.

Random Effect Logistic Regression

The random effect logistic regression was applied due to the dichotomous nature of the dependent variable (adoption vs. non-adoption) and the multilevel characteristics of the panel dataset. It allows for the estimation of the impact of given factors on the likelihood that the household is adopting an innovation or not. The main idea behind the random effects specification is that, unlike in the case of a fixed effects model, the variation across individuals is assumed to be randomly distributed and uncorrelated with the independent variables in the model (Greene, 2008). Random effects models are able to capture the effect of differences in the independent variables between individuals and can include time-invariant variables (i.e. gender). In the fixed effects model, these variables would be captured in the intercept (Greene, 2011). The estimated random effects logistic model provides a binary outcome ($Y=0$ or $Y=1$) and regresses the log odds of the outcome probability on various independent variables to estimate the probability that $Y = 1$ happens, given the random effects. In accordance with Lingsma et al. (2011), we denote the two-level model as follows:

$$\ln \left(\frac{P(Y_{ij} = 1 | x_{ij}, u_j)}{P(Y_{ij} = 0 | x_{ij}, u_j)} \right) = \alpha_1 + \sum_{k=1}^K \beta_k x_{kij} + u_j$$

$$u_j \sim N(0, \sigma^2) \quad j = 1, 2, \dots, J \quad i = 1, 2, \dots, n_j$$

Here, Y_{ij} is the binary outcome (1=adoption, 0=non-adoption) of the i^{th} individual in the j^{th} center. The covariates are represented by $x_{ij} = (x_{1ij}, \dots, x_{kij})$, α_1 is the intercept and β_k denotes the k^{th} regression coefficient. The random effect of the j^{th} is denoted by u_j . The underlying assumption of u_j is that it follows a normal distribution with a mean of 0 and variance σ^2 . The coefficients β_k measure the impact of changing x_{kij} by one unit on the log odds ratio. The independent variables used for the random effects logistic regression and their expected influence on the adoption decision are presented in the appendix (Tab. A.1).

Marginal effects were calculated indicating the change in probability when the independent variable increases by one unit. For continuous variables, this represents the instantaneous change given that the unit may be very small. For binary variables, the change is from 0 to 1, so one unit as it is usually thought (Norton et al., 2019).

Binary choice models for panel data, such as the random effect logistic regression, are widely used. An overview can be found in Greene (2011). To decide which model, fixed or random effects, fits better; the Hausman test was applied. The null hypothesis is that the preferred model is random effects; the alternate hypothesis is that the model is fixed effects. Essentially, it tests whether the unique errors (u_j) are correlated with the independent variables or not, (Hausman, 1987). The results of the Hausman specification test are presented in Table A.4.

RESULTS

Innovation Adoption rate and Income inequality

The innovation adoption rate, the respective percentage point changes as well as the level of inequality for the four villages between the two periods of adoption (*first period* = 2014 to 2016; *second period* = 2016 to 2018) are presented in Table A.2. The results show that overall adoption rates range from 61% in Ilakala to 75% in Changarawe in the first period. A significant change in the overall adoption rate is only recognisable in Changarawe. Here, the adoption rate decreases by 12 percentage points from the first to the second period. In all other villages, the total adoption rates do not change significantly at the 10 percent level.

Focusing on rainwater harvesting (UPS 1) in particular, the village of Idifu displays the highest adoption rate in the first period with 47 percent, while the village of Changarawe faces the lowest adoption in regards to UPS 1 for the second period with 21 percent. The adoption rate of UPS 1 is increasing for Ilolo and Ilakala between the first and second period, while it is decreasing for Changarawe and Idifu. Idifu continues to display the highest adoption rate (40%) compared to all other villages in regards to UPS 1. Ilakala displays a significantly increased adoption rate throughout the same time period (6 percentage points). Throughout the second period, 36 percent of the households in Ilakala adopted UPS 1, which is lower compared to the adoption rate in Idifu (40%), but higher than in Changarawe (21%) and Ilolo (31%).

The adoption rates for improved stoves (UPS 6) are lower than for UPS 1 and display different changes. Idifu is the only village with significant changes in the adoption rate. The adoption rate in Idifu increases by 10 percentage-points between the first and second period. Idifu furthermore displays the highest adoption rate compared to all other villages with 27 percent in the second period. The adoption rates in Changarawe and Ilakala are increasing, while fewer households in Ilolo are adopting UPS 6 over time.

In regards to kitchen gardening (UPS 10), Changarawe displays the highest (19%) and lowest (6%) adoption rates. The 13-percentage point decrease is the only significant change that can be observed for the adoption rates of UPS 10. Furthermore, UPS 10 is the only innovation where the number of adopters decreases unanimously throughout all villages from the first to the second period.

The income inequality measured through the Gini coefficient ranges from 0.615 in Ilakala during the first period to 0.481 in Idifu during the second period. The income inequality decreases in Ilakala from 0.615 in the first period to 0.560 in the second period and in Idifu from 0.524 to 0.481 respectively. Throughout the same frame of time, the inequality was increasing in Changarawe from 0.564 to 0.603 and from 0.518 to 0.535 in Ilolo.

Overall, no uniform picture of respective changes of adoption rates persists over time and/or location. The same can be inferred for the observed level of income inequality. It differs in its severity and changes over time between the villages.

Determinants of Innovation Adoption decision

To analyse the determinants of the decision to adopt a particular innovation, random-effects logistic regressions were applied. The regression results are presented in Table A.3. When comparing the four models, it becomes apparent that all models are significant except for the model of UPS 6.

Eight out of the thirteen explanatory variables are significant within at least one of the three remaining, significant models, even if they behave differently between the respective innovations.

With respect to inequality at the village level, households that are living in a community with higher levels of inequality are significantly less likely (-0.742) to adopt the rainwater harvesting innovation, while the level of inequality has no significant effect on either the overall decision to adopt or on the decision to adopt the kitchen gardening innovation (UPS 10). If the household head is male, the probability that the household is adopting a UPS increases by 0.075 compared to female-headed households. Next to gender, age can also have an effect on innovation adoption, as shown in our analysis. If the household head is older, the likelihood of that household to adopt a kitchen garden decreases. Furthermore, the size of a household has an effect on the overall decision to adopt an innovation and seems to matter specifically for UPS 10. If the household size increases by one unit, the household is more likely to adopt a UPS on average (0.024) or UPS 10 in particular (0.022).

Besides the characteristics of the household head and the household itself, the quantity of agricultural production also has a significantly positive effect on adoption, even if the amount of change is comparably low. In connection therewith, it can be inferred that households which are selling a higher share of their produced agricultural goods have an on-average higher probability (0.001) to adopt an innovation. If the distance between the agricultural plots and the homestead is increasing by one unit, the likelihood of adopting a UPS is significantly lower (-0.001). In regards to UPS 10 in particular, households that were affected by an agricultural shock display a significantly decreased (-0.076) probability of adoption. The asset score of households proves to be another deciding factor in regards to innovation adoption, as it has a significant positive effect on the probability of adopting a given innovation. At the same time, an increase in non-food consumption is associated with a lower probability of adopting a UPS.

In conclusion, the determinants of innovation adoption differ between the various upgrading strategies analysed. Some variables display a strong positive effect on the decision to adopt while others either display a (strongly) negative effect or no effect whatsoever.

DISCUSSION

The analysis conducted in chapter five proves that innovation adoption decisions at the Tanzanian rural household level can hardly be interpreted in an unequivocal manner. As we have laid out in the theoretical section, adoption behaviour has hitherto been studied almost entirely through single innovation studies, which appears reasonable, given the diverse results obtained.

While the identified determinants of adoption decisions do vary, we nevertheless find strong support for our proposed *multi-step non-discriminative* framework of adoption. Recall that the proposed framework is conditional on *ex-ante* makings and factor endowments, presupposing that social and wealth indicators, such as inequality, gender, age, land-owned property or asset endowment, amongst others, should have an impact on the adoption of innovation although they can differ among various upgrading strategies. This assumption is reflected in our findings. Across all UPS examined, gender, age and household size (Tab. A.3) matter greatly for the decision to adopt at any given point in time. This finding supports the generally accepted notion by Rogers (2003) that generic indicators matter for the adoption and continued spread of innovations. More importantly however, in our case, the latter variable (Household size) is of specific interest. Since the regions of Dodoma and Morogoro are particularly marked by their extreme poverty and resource scarcity, the amount of disposable manpower, in the absence of other comparable endowment factors, should matter greatly for the decision whether to adopt a given innovation at any point in time because it effectively delineates a household's capability to undertake (labour-intensive) practices, devices and methods associated with the implementation of any innovation. The conceptual framework specified that for each adoption decision, a household re-evaluates the known endowments and constraints and, if necessary, re-ranks its ordinal preference hierarchy of adoption. In the case of predominantly agricultural regions, household manpower can confidently be assumed to constitute the greatest endowment, as it effectively allows for an improved discharging of said preference hierarchy by any given household.

These findings are particularly relevant when being cross-referenced with the findings for exceptionally poor household status, that is, households located underneath the poverty line. The latter

variable exerts no significant influence on a given household's decision to adopt an innovation. At the Tanzanian rural household level, subjective economic endowment and standing seem not to matter in regards to adoption decision. We can confidently show that households finding themselves at the bottom end of the income distribution are not influenced by this fact in their decision to adopt a given innovation. Thus, the question raised in chapter two whether smallholder farmers at the bottom end of the income distribution may be disincentivized to adopt an innovation based on a subjective future-oriented risk assessment can be negated here. Importantly, this finding holds true across the board for all innovations in general as well as across the different categories of innovations (including rainwater harvesting) examined here. Contrary to popular belief, we prove that extreme poverty alone does not constitute a clear determinant for non-adoption.

Much rather, the decision whether to adopt an innovation, or not, seems to be conditional on households believing that their internal resource endowment, notwithstanding their environment, is sufficient. This insight extends the previous finding of the IFAD study that wealth indicators arbitrarily influence the decision to adopt an innovation in a particular direction. The subjective wealth assessment of the households included in the analysis further adds to this, delineating that observed unequal endowment statuses between households have no influence on adoption decision. This finding is particularly important because it runs converse to the observations made in recent irrigation adoption literature that household wealth perception subjective to other households within a village community matters for adoption (cf. Jha et al. 2019). Our findings show that household wealth status compared to others neither influences adoption of innovations in general nor in the specific case of a production innovation.

Our finding broadens earlier understanding of this matter since previous research that came to this conclusion was only focusing on the category of production innovations and did not consider inequalities between households but differences in public funding received. In the absence of stimulating external factors and if compared across various types of innovations, subjective wealth perception considerations seem to greatly loose explanatory power.

Notwithstanding, we do observe that factual inequality between households matters greatly for production and, in part, for processing innovations, i.e. in our case for the rainwater harvesting and for the improved cooking stove innovations, respectively. We can reaffirm the respective line of findings in the relevant strings of literature reviewed earlier (Mdemu et al. 2020; Ojiewo et al. 2019), and support our previous conclusion as inequality levels at the Tanzanian village level derive directly from a respective household's ability to increase output of any sort which is without a doubt tied to the pool of absolute human resources available to the households treated in the present study. Tied-in therewith, the significant positive influences of greater quantities of agricultural production value as well as higher household asset scores on innovation adoption delineate that a generic decision to adopt an innovation foremost depends on household-internal factor endowment and production capacity.

However, it is extremely important to note that when focusing on the generic dimension of adoption decision alone, we find that inequality does not exert a significantly negative influence. Contrary to previous presumptions made (Atkinson & Lugo, 2010; Kinyondo & Pelizzo, 2018; Maliti, 2019), therefore, we can clearly show that while it holds true that inequality matters for the adoption decision of some types of innovations, it certainly does not do so for all types of innovations unequivocally. This highly relevant finding significantly extends our understanding of behavioural dynamics of innovation adoption at the non-national Tanzanian level.

For each point of adoption in time, we can confirm the framework assumptions made, namely that the household-internal factors, which present themselves *ex-ante* to both the first and the second adoption decision considered, significantly influence the decisions of the households observed. While the proven empirical applicability of our framework in the Tanzanian case shows that moving away from single-innovation studies does indeed open up new pathways to understanding innovation adoption behaviour, we must nonetheless briefly address the stark differences observable in regards to the different types of innovations studied. Perhaps the most important insight that our study provides in this connection is that of the generalizable *ex-ante* indicators, several strong predictors seem to function mutually exclusive for different types of innovation. While greater factual inequality and previous agricultural production quantities influence the adoption of production (rainwater harvesting) and processing (improved cooking stoves) innovations in our study, a greater pool of disposable manpower particularly benefits the adoption of a consumption (kitchen garden) innovation. In regards to process

innovations, we further add to the recent string of literature that identified economic considerations such as financial resource shortages to detrimentally influence adoption behaviour (cf. Kulindwa et al., 2018). In regards to consumption innovations, a strongly under-researched field, our analysis adds household demographic structure to the growing list of relevant determinants for adoption.

Lastly, we want to address an important avenue for future research that our analysis has brought to light. While we can credibly prove that household factor endowment contributes significantly to the decision whether or not to adopt a given innovation, the economic status of a household alone echoing underneath the poverty line does not influence an adoption decision. Furthermore, inequality between households only influences some types of innovations but not others and does not necessarily always detrimentally influence the generic decision to adopt. In the scope of the research assignment delineated here, this puzzling finding should motivate adoption researchers to analyse decision-making processes from a household-internal perspective and not focus solely on comparisons between households, especially when researchers study only one specific innovation, as it is often the case for Tanzania. At the grander stage of cross-regional or even country-wide comparative development assessment, however, future research should closely examine this puzzling finding and identify the concrete threshold points, above and below which households' decision-making vary so starkly.

CONCLUSION

Efforts to understand agricultural innovation adoption dynamics in Tanzania have long been underappreciated in relevant scholarly literature. While drastic levels of extreme poverty continue to devastate long-lasting rural development efforts, academic understanding of the drivers of under-development remains flawed. One particular problem is the well-known underappreciation of innovations introduced by international cooperation projects to empower rural development. No matter whether innovations are introduced to upscale agricultural production, processing or household consumption, researchers have been confronted with extremely low rates of adoption on average. This has been particularly striking because at face value, one might regard the innovations studied in our paper as well as in many other relevant scholarly contributions to constitute highly beneficial practices in various different areas of daily agricultural business conduction and rural household life in general.

We believe that the continuing lack of credible holistic understanding in this connection is at least in part based on the nature of scholarly approaches to understanding adoption behaviour in the Tanzanian case. Since all relevant innovation adoption studies in the last decade have concerned themselves with single innovation evaluations, it is not surprising that insights which could potentially advance general innovation research have remained sparse.

This study set out to provide a remedy in this matter by studying various different types of innovations (production, processing and consumption) and provide readers with generalizable expectations in regards to which determinants matter for the adoption of innovations, notwithstanding their specific type, on average.

Following this research angle, our paper, to the best of the authors' knowledge, is the first of its kind that introduces a generalizable framework, which has been tested across different types of innovations and within different Tanzanian regions at the same time. Our ultimate goal in doing so, has been to provide a generalizable framework for studying any type of innovation adoption in the future.

The two-step adoption framework developed in this paper focuses on providing a generalizable approach to predicting adoption behaviour based on the assumption that an adopter's expected utility considerations follow an ordinal hierarchy of preferences based on objective factor endowment. Our corresponding random-effects logistic regression analysis has credibly shown that across different types of innovations, general adoption decision-making is heavily influenced by objectively comparable *ex-ante* internal characteristics such as existing household demographics, size and levels of production value. Answering our second research questions, we find that while innovation adoption rates and inequality levels vary arbitrarily across the four different villages and two different regions studied, the identified adoption determinants influence different types of innovation starkly differently but nonetheless provide the generalizable conclusion that household-internal factual endowment of manpower, production value potential and asset possession can be expected to influence adoption behaviour for any type of innovation.

Importantly, we come to some extremely interesting conclusions in regards to inequality and poverty levels that diverge from previous scholarly understanding. First, we find that the often-scolded determinant inequality detrimentally influences the adoption of some but definitely not all types of innovations. Second, we find that even if a given household suffers from drastic poverty, this does not legitimize credibly assuming that the respective household will not adopt an innovation offered.

The research carried out in this paper provides important practical implications for innovation scholars, African development study research and development practitioners alike. We have proven that on-average predictive models of innovation adoption behaviour must pay closer attention to the significance of household characteristics, no matter the type of innovation studied. Furthermore, we have shown that insights gained from single-innovation studies do not necessarily contribute to advancing holistic understanding of innovation adoption patterns because various characteristics of smallholder farmer households affect different types of innovations very dissimilarly. Future research will need to take particular care when assigning relevance to adoption determinants in this connection. Finally, we have shown that while inequality detrimentally influences the adoption of some innovations, this does not necessarily validate a practical approach that focuses on the poorest households only.

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Appendix

Table A.1: Preliminary list of variables employed for analytical computing

Variable Name	Description	Exp. Sign	Reference
Revenue from livestock sales	The higher the sales value, the greater the high income of the household and hence the ability/potential to sustain the adoption of Innovations	+	Jha et al. 2019; Ndah et al. 2015
Revenue from fishing, hunting, collecting, logging	The greater the revenue generated by the household, the greater the chance to be financially sound and able to sustain Innovation Adoption	+	Manero 2016, 2018
Revenue from crop sales	The higher the prices the more income can potentially be generated and the greater the potential financial soundness of the respective household	+	Kuntosch & König 2018; Jha et al. 2019; Ojiewo et al. 2020
Processing crops at a business enterprise	If crops are processed in a business enterprise, this indicates the existence of some form of business network at the rural level which acts as an "enabling condition" and is expected to significantly increase the households awareness with respect to any activities that further the household, such as the adoption of innovations	+	Manero 2016; Orr 2018; Tumbo et al 2013
Remittances received	The higher the amount of money received, the more money in the household pool, the more likely it is for a household to purchase/sustain an innovation	+	Kinyondo, Pelizzo 2018 (quoted Mpedi 2009), Manero 2016
Income of off-farm hh members	The higher the income, the more money could have been sent to Household potentially to contribute to sound finances	+	Manero 2016; Mdemu et al. 2020
Household Savings	If a household displays a greater rent-seeking behavior, it is more likely to adopt an innovation due to the greater financial soundness	+	Kinyondo, Pelizzo 2018; Green 2015

Household asset value	The greater the total amount of asset value at present, the more well-endowed the household and the greater, in theory, the potential for Innovation Adoption	+	Atkinson & Lugo 2010
Household asset value - when obtained	See above - A higher obtained asset value indicates that the Household is financially sound and can make greater investments, increasing the probability to adopt a given Innovation	+	Atkinson & Lugo 2010
Household income fluctuation	Stark income fluctuation (in uncertain environments) prevents or reduces ability to plan long-term and reduces the potential to adopt an innovation	-	Jha et al. 2019; Orr 2018
Lending	If a household lent money or goods to others, the household is potentially wealthy enough to afford Innovation Adoption	+	Maliti 2019; Nkonya et al. 1997
Lending - Amount	The higher the amount of money lent, the more probable for a household to adopt a given innovation	+	Maliti 2019; Nkonya et al. 1997
Borrowing	If a household borrowed money or goods in the past, the household should be regarded as being potentially rather poor and thus unable to sustain an Innovation Adoption	-	Green 2015; Marwe 2014
Borrowing - Amount	The higher the amount of money borrowed, the lower the probability for a household to have adopted an Innovation	-	Green 2015; Marwe 2014
Borrowing - Remaining Debt	The higher the remaining debt, the lower the financial soundness and thus the potential to adopt an Innovation	-	Green 2015; Marwe 2014
Public Transfers to Household	The higher the amount of public transfer payment to a household, the greater the potential to sustain a new innovation	+	Maliti 2019; Orr 2018
Credit Access Necessity	If a household is dependent on credit access for the adoption of an innovation, this indicates lower financial endowment and hence less potential for innovation adoption overall	-	Jha et al. 2019
Land Rental rate per year	The greater the rental rate, the greater the income generation for a household renting out and the smaller the income for a household renting in -> leading to more/less potential for Innovation Adoption	+/-	Nkonya et al. 1997, Ndah et al. 2015
Off-farm employment	Off-farm employment indicates potentially less labor on the farm and could therefore lower the possibility of adoption due to less innovation required on the farm	-	Jha et al. 2019; Mdemu et al. 2020
Non-farm self employment	Non-farm self employment indicates potentially less labour on the farm, lowering the need for innovation	-	Jha et al. 2019
Non-farm Sales Volume	The greater the sales volume, the more money can be sent back to the household to sustain the adoption of new innovations	+	Jha et al. 2019
Region/Household Location	Since Morogoro is a wet region and Dodoma is a dry region, this may have a particular influence on the adoption of a specific innovation	+/-	Jha et al. 2019
Non-family employees	More non-farm employees indicate a larger farm complex and a greater financial soundness of the Household, which in turn should enhance Innovation Adoption Potential	+	Nkonya et al. 1997
Household social expenditures	The greater the amount of expenditures, the lower the potential resources for innovation adoption	-	Tumbo et al. 2013
Household transport/communication expenditures	The greater the amount of expenditures, the lower the potential resources for innovation adoption	-	Orr 2018
Religion	Religion as an indicator for cohesion and inclusion, where more traditionalist values promoted corresponds to a reduced innovation adoption potential	-	Tumbo et al. 2013; Mulongo 2021
Gender of Household Head	Tanzania is a primarily patriarchal society, where male household heads mostly own decision-making power.	-	Jha et al. 2019; Mulongo 2021

	Female-led households face labor and time constraints, resulting in a lowered (if female) Innovation Adoption Potential		
Household size	A greater household size is assumed to increase the potential to adopt innovations because it facilitates the division of labor and better time management	+	Jha et al. 2019; Nkonya et al. 1997
Risk behavior	Greater tendencies to indulge in risk-oriented behavior indicates curiosity and should therefore generically increase the potential for innovation adoption	Positive	Jha et al. 2019; Ndah et al. 2015
Literacy (Ability to read and write)	Literacy indicates greater cognitive capabilities to understand and process the advantages of new innovations, thus increasing the potential of their respective adoption	Positive	Jha et al. 2019
Food Insecurity	Food Insecurity could either (1) lead to lowered innovation adoption potential because the household focuses on providing a baseline of secure food instead of on upscaling or (2) could influence innovation adoption potential positively because the household aims at escaping food insecurity through upscaled innovation/processing	Positive or Negative	Kuntosch & König 2018
External Shock Income Loss	The greater the loss of income generated from an external shock, the lower the probability of innovation adoption	Negative	Orr 2018
Future Income loss Risk	If a future shock will impact upon the household's income, this will reduce the probability of innovation adoption	Negative	Jha et al 2019; Ndah et al. 2015
Land Value	A greater land value indicates a more financially endowed household, which is more likely to possess the potential to adopt any given innovation	Positive	Nkonya et al. 1997
Crop production expenditure	A great amount of expenditure for crop production (if applicable) suggests a great influx of resources which can both lead to a reduced income (too much input) or an increased income (right amount of input for maximized output). Since 3/4 of Tanzanian households (approx.) engage in crop production of some sort, it is relevant to control for this type of production expenditure on its own	Positive or Negative	Ndah et al. 2015; Ojiewo et al. 2020

Table A.2: Adoption rate (%) and level of inequality in Morogoro and Dodoma on village level

Adoption rate (%) and Inequality in Morogoro (n=250)						
Upgrading strategy	Changarawe (n=131)		% -points change	Ilakala (n=119)		% -points change
	2014-2016	2016-2018		2014-2016	2016-2018	
UPS All	75	63	-12**	61	64	3
UPS 1	23	21	-2	30	36	6*
UPS 6	18	21	3	13	17	3
UPS 10	19	6	-13***	15	13	-2
Gini coef.	0.564	0.603	.	0.615	0.560	.

Adoption rate (%) and Inequality in Dodoma (n=266)						
Upgrading strategy	Idifu (n=134)		% -points change	Ilolo (n=132)		% -points change
	2014-2016	2016-2018		2014-2016	2016-2018	
UPS All	73	67	-6	62	63	1
UPS 1	47	40	-7**	30	31	1
UPS 6	17	27	10***	15	14	-1
UPS 10	18	10	-8	17	14	-3
Gini coef.	0.524	0.481	.	0.518	0.535	.

Table A.3: Factors that influence the adoption decision of upgrading strategies (UPS) in Tanzanian rural households - estimates from the Random-Effects Logistic Regression

Variables	UPS Overall		UPS 1		UPS 6		UPS 10	
	Coef	m.e.	Coef	m.e.	Coef	m.e.	Coef	m.e.
Inequality	-4.031 (2.886)	-0.555 (0.395)	- 10.344** (5.191)	-0.742** (0.357)	-11.111* (5.786)	-0.328* (0.183)	-2.500 (4.368)	-0.159 (0.277)
Gender (0=female, 1=male)	-0.336 (0.304)	-0.046 (0.042)	1.048* (0.612)	0.075* (0.043)	2.019*** (0.675)	0.060*** (0.026)	-0.771 (0.489)	-0.049 (0.031)
Age (years)	-0.008 (0.008)	-0.001 (0.001)	-0.005 (0.015)	0.000 (0.001)	-0.009 (0.016)	0.000 (0.000)	- 0.049*** (0.014)	- 0.003*** (0.001)
Risk Attitude (1=low - 10=high)	0.056 (0.041)	0.008 (0.006)	-0.009 (0.068)	-0.001 (0.005)	0.058 (0.079)	0.002 (0.002)	0.054 (0.063)	0.003 (0.004)
Hh Size (Number)	0.171*** (0.061)	0.024*** (0.008)	0.066 (0.115)	0.005 (0.008)	0.044 (0.125)	0.001 (0.004)	0.351*** (0.099)	0.022*** (0.006)
Hh under poverty line (0=no, 1=yes)	-0.227 (0.287)	-0.031 (0.039)	-0.466 (0.486)	-0.033 (0.035)	0.105 (0.554)	0.003 (0.016)	-0.522 (0.436)	-0.033 (0.028)
Quantity crop production (kg)	0.000 (0.000)	0.000 (0.000)	0.000** (0.000)	0.000** (0.000)	0.000** (0.000)	0.000** (0.000)	0.000 (0.000)	0.000 (0.000)
HCI (%-share sold on production value)	0.008** (0.004)	0.001** (0.001)	0.003 (0.007)	0.000 (0.001)	-0.003 (0.008)	0.000 (0.000)	0.007 (0.006)	0.000 (0.000)
Average distance plots from homestead (min)	-0.009* (0.004)	-0.001* (0.001)	-0.005 (0.008)	0.000 (0.001)	-0.011 (0.009)	0.000 (0.000)	-0.007 (0.006)	0.000 (0.000)
Hh affected by shock (0=no, 1=yes)	-0.339 (0.300)	-0.047 (0.041)	-0.375 (0.483)	-0.027 (0.034)	1.251 (0.591)	0.037 (0.018)	- 1.201*** (0.436)	- 0.076*** (0.026)
Wealth compared to other (1=much worse off - 5=much better off)	-0.024 (0.117)	-0.003 (0.016)	0.006 (0.197)	0.000 (0.014)	-0.084 (0.227)	-0.002 (0.007)	-0.236 (0.177)	-0.015 (0.011)
Asset Score	0.002* (0.001)	0.000* (0.000)	0.002 (0.001)	0.000 (0.000)	0.001 (0.001)	0.000 (0.000)	-0.001 (0.002)	0.000 (0.000)
Non-food consumption (PPP USD 2011)	-0.001** (0.000)	0.000** (0.000)	0.000 (0.001)	0.000 (0.000)	-0.002** (0.001)	0.000** (0.000)	-0.001 (0.001)	0.000 (0.000)
Cons	3.548** (1.803)	- -	2.901 (3.280)	- -	0.640 3.663	- -	1.415 2.742	- -
Wald chi2(13)	28.450** *		14.540		25.140**		30.820** *	
Prob > chi2	0.008		0.337		0.022		0.004	
Log likelihood	-609.536		-512.199		-384.388		-360.817	
LR test of rho	61.780		242.480		175.270		65.740	
Number of obs.	1,034		1,034		1,034		1,034	

Standard error in parentheses; marginal effects are displayed for random-effects logistic regression; p-values: * p < 0.10, ** p < 0.05, *** p < 0.01.

Table A. 4: Results of the Hausman specification test on random vs. fixed effects logistic regression for different upgrading strategies

	UPS All	UPS 1	UPS 6	UPS 10
Chi2(12)	16.58	12.84	5.38	4.49
Prob > chi2	0.1659	0.2325	0.3712	0.9226

Test H0: difference in coefficients are not systematic

ADVANCING EPISTEMOLOGY IN CREATIVE ARTS RESEARCH IN THE GLOBAL SOUTH: A CRITICAL REVIEW OF GHANA

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ABSTRACT

The search for artistic and creative knowledge persists across the globe. Literature shows the epistemological ways of knowing continue to widen in a two-fold dimension between the global north and global south. Though Ghana's Creative Arts Industry is perhaps the oldest and most vast, literary works on Ghanaian creative art point to dominant Euro-American writings about it, leading to a paucity of indigenous Ghanaian scholarship contributions to the country's creative art studies. Deploying a critical review, extant literature was explored to examine a few of the creative art studies and Ghanaians' engagement in creative arts debate. Results from the review point at a minimal art scholarship on the global south. Reasons being creative art curricula issues and their implementations, lack of African scholars' interest in creative art scholarship on Ghana, a lack of critical local participation in creative arts discourse, and art scholarship being awash with epistemological perceptions which projects the proponents of Western urban contemporary creative art as the compelling archetype of 'global' creativity. It is hereby recommended for creative art epistemic change through the creation of creative Art-based local platforms for indigenous voices. Also, constant creative artistic engagements and mixed perspectives among academia and creative art practitioners for a fine balance of the current Euro-American dominant epistemologies in the field are equally recommended. Organization of annual creative art conferences, development and publishing of special issues and special sections on creative art on Ghana are highly recommended.

KEYWORDS: Creative art scholarship; Creative arts research; Global south; Global north; Ghana.

INTRODUCTION

This paper joins the global conversation on the creative art conversation relative to the phenomena of minimal creative art scholarship from the global south. Despite the African continents' centuries of local artworks, scholarly works in the field are predominantly Euro-American authored. For example, Labi (2015) argued that though traditionally, Ghana is noted to have some significant art forms, extant works on Ghanaian artwork epistemologies papers to be predominantly Euro-American. This suggests the historical dearth of Ghanaian scholarly contributions to the country's art studies. Labi (2015) does not mince words, in his assertion that, the huge European interest shown in African art and scholarship, resulted to the reparation of artworks from parts of Africa to European homes and museums. Similarly, Araeen (2005) expressed concern on the lack of African scholarly writings on art and encouraged African scholars to make a deliberate effort to participate in a lot more scientific artistic discussions based on theory, Araeen (2005) further cites that the appreciation and

recognition of artistic works of prominent Africans by Africans themselves is woefully inadequate. This implies a lack of the African's visibility in their own artistic intellectual spaces, thereby limiting the art research scope on Global South. This further means African art scholars are not able to engage meaningfully to provide an indigenous system which can analyse and translate the works of local African artists. Araeen (2005) noted the works South African Ernest Mancoba's compositions as a case of the neglect of the African artists' contribution to global art studies. Other cases worth mentioning, which suffered from this academic neglect are the works of prominent Ghanaian artists, such as Amon Kotei, Oku Ampofo and Kobina Bucknor. What exist on these artist are but a few lines about them in exhibition brochures and a brief mention in studies on contemporary art in Ghana.

On the origin of art education in the continent of Africa, Labi (2013) posited that African art as a new field of study first surface as an area of study in Euro-American universities in the 1950s century, and was then subsequently introduced into higher education institutions In Ghana in 1952. The first to graduate and to be awarded a Doctor of Philosophy Degree in African Historical Art, was Roy Sieber, obviously, an American student from the State University of Iowa (Blier, 1990).

The persistent unresolved issue found in literature is centred on a lack of critical mass in local participation in the creative arts scholarly discourse from the global south perspectives (Araeen 2005, Blier, 1990 & Labi 2015). Therefore, the broken thread between the study and production of Art in Ghana, constitute both knowledge and theoretical gaps to be bridged. It implies that the creative artistic knowledge globally, and within the African and Ghanaian context, remained undiversified. Ndlovu-Gatshenti (2018) in the *'Epistemic Freedom in Africa,' argued for* an epistemic local content. What this means is that Africans should conceptualise the world and present it from African perspectives, unencumbered by Eurocentrism. There is, therefore, the need for scholarly engagement towards an artistic diverse way of knowing, which works against the epistemic lines of duality between the global north and global south (Ndlovu-Gatshenti 2018). The current literature review, therefore, is a contribution to creative art epistemology on the Global South's aim at balancing the perspectives in the field of creative art studies. This is so important because, creative art study is an becoming more important and rapidly growing sub-sector of cultural studies in Ghana, with a growing interest for academics, researchers, industry players and policymakers. The questions that arise here are as follows: (i). Why Euro-American epistemic domination in creative entrepreneurship research from the global south? (ii) What epistemologies for creative entrepreneurship research in the global south could be identified to complement the overly reliance on Euro-American epistemic approaches towards the conception of contextualized study frameworks?

REVIEW METHOD

This paper draws on an extant literature review to question the Euro-American dominance in creative art scholarship. In view of this, various databases and search engines were deployed to maximize information for the study. Such databases include JSTOR, Emerald, Wiley, SAGE Journals online, Taylor and Francis, Springer, Elsevier, Google Scholar, Annual Reviews and Abstractions were used to generate the topology of the database. A combination of keywords like Creative Arts Research, Epistemology, Global South, Global North were used for the main data search to ascertain a topology of database search outcomes.

RESULTS AND ANALYSES

In all 45 papers were downloaded and screened for eligibility: One paper was duplicated (Annku & Lodonu, 2012). Two papers were excluded for an ineligibility after examining the full papers (Blawatt, 1998 & Coe, 2002). Forty-one (41) papers were found eligible and reviewed (Seidou, 2014a; Santos, 2018; Florida, 2004; Alacovska & Gill 2018; Labi 2013a; Araeen 2005; Blier 1998; etc). The Year of papers publication ranged from 1961 to 2021 (Kyerematen, 1961; Kwami 2012; Nunu-

Amateifio, 2017; Ahmed & Ahmed 2021). The area of the study was assessed to give a sense of the geographical spread of the papers:

Euro-American papers were 23, African papers were 9, and Ghanaian papers were 10. The papers were further categorized thematically in relation to the following themes: Art epistemology papers were 14, African Art papers were 11, papers on Art studies on Ghana were 7 and Artistic Entrepreneurship papers were 10. Creative arts scholarship/epistemology papers were dominated largely by qualitative methodologies i.e., participatory observations, interviews, focus group discussions, artistic workshops and exhibitions (Van deVaart, Gwenda & Huigen 2018); while other papers also used quantitative methodologies i.e., structured surveys (Neergaard & Ulhøi 2007; Ahmed & Ahmed, 2021). However, the current paper deployed a systematic review as a methodological departure from earlier quantitative and qualitative studies.

Artistic Epistemicide within Ghanaian Creative Art Space

Regarding the epistemicide on a creative art scholarship in the Ghanaian context, the emerged results found minimal art scholarship due to creative art curricula and implementation challenges in Ghana (Seidou, 2014a). A perceived lack of African scholars' interest in creative art discourse (Araeen, 2005 & Labi, 2015), and art scholarship being perceived westernized (Alacovska and Gill, 2018). According to Labi (2015), even though formal education in Ghana began in the nineteenth century, it was not until the establishment of the Achimota School in 1927 that Art was introduced into the curriculum. In addition, African Art as a discipline in Art Historical Studies emanated from the European and American universities in the mid-twentieth century (Labi, 2013, p. 18), and there has been a gap between art production and art scholarship in Africa and Ghana in particular, giving rise to debates on how the scholarship and practice gap could be closed (Labi 2015). It is also evidenced that, colonial art educational policies in Ghana produced brought about the vestiges of benchmarking of the curricula with institutional memory of materials and competences from the era of Ghana's independence (Seidou 2014a and Seidou 2014b). Seidou (2014a) notes that Art education in Ghana has certain colonial traits that are contrary to Art. This is because the basis upon which Art education in Ghana was established was for the development of skilled manpower in a make-believe colonial industry. A manufacturing agenda for the colonial commonwealth was to train technical and manual labour with a set of curricula adaptations. This form of training favoured pure cultures like clay and pigments, because of their implications on industrial design and productions. Even though creative Art is part of the pre-tertiary formal education curriculum, national apathy is rife. Thus, the content of Art education has not robbed on the Ghanaian cultural environment (Edusei 2004; Seidou 2014b). As a result of this, the Visual Art education in Ghana is full of inefficiencies and misconceptions related to the teacher and student apathy and tutorial relationships. (Opoku-Asare, Tachie-Menson & Essel 2015).

Seidou (2014a; 2014b) further argued that in spite of the several adaptations of , the Art curricula in Ghana, there are still industrial requirements to the neglect of proper development of Art. The Art curriculum in Ghana is also traditional, compartmentalised into conventional basketry, ceramics, graphic design, jewellery, painting, sculpture and textiles, topped with general knowledge in art and defy overlapping even when it is suggested (Heijnen 2015). Administration of art programmes at the Senior High School (SHS) level rather hinges on what pertains in institutions of higher learning in art. Among these are documentation of the educational system. (Seidou 2014a; 2014b), the body of knowledge of the tutors at the SHS (Flolu 1997; Seidou 2014a; 2014b), the structure of the courses and the curriculum (Tonah 2009) and end of study examination requirements by the West African Examination Council. All these conditions do not take into account contemporary requirements of students and the body of knowledge of SHS teachers who emanated from the same educational system.

In 2015, Labi listed 193 publications including books (e-books not inclusive), journal articles and exhibition catalogues dedicated to Ghana's art, These were written in English between 1927 and 2014, and available in University of Ghana libraries and in Labi's personal collection. The list was significant : 143 books, representing 74.9% of the publications were not written while 50 entries, representing 25.9% were authored by Ghanaian writers. Out of these 193 publications, 72 were books and the remaining 121 comprised chapters in books, which had references to Ghana's art, catalogues

and articles. Also, 43 of the writers of these 72 books were not written by Ghanaians, while 29 entries were made by local scholars in the form of books, book chapters and catalogues.. Another survey on African Arts, by Labi, from the 1967 to the 2015 issue of the Legon Journal of Humanity provided 121 articles on Ghana's creative Arts. The Journal is a peer-reviewed periodical, devoted to the study of humanities, operationally conceptualized to report not just the arts and languages but also social science disciplines, such as cultural studies, human geography, international affairs, management studies, political science, psychology, and sociology, published by the College of Humanities, University of Ghana. Again, according to the survey Ghanaians wrote only 18 of the papers, representing 14.8%, while 103 papers making 85.1% were not written by Ghanaians. This implies, the Ghanaian papers are not measured to a critical mass to ensure a sustained paper mixing in the journal. Similarly, the Journal of African Arts & Culture (JAAC), an online open-source open- platform for academic discourse relating to African Arts and Culture. Its artistic scope consist of such media as sculpture, painting, pottery, rock art, textiles, masks, personal decoration, and jewellery. In 1979, the Journal dedicated a special issue to the study of art in Ghana to provide avenue for dissemination of emerging and insightful creative art research. Labi (2015) lamented that, no local scholar from Ghana contributed to that special issue call. The paper is of the view that, this example of non-Ghanaian contributions corroborates Araeen's assertion that Africans are not engaging enough in the production of Art knowledge. It is equally similar to Drewal's (1990) observation that, Euro-American scholars have taken the lead in African art scientific scholarship.

Though recent years witnessed an increase in studies on creative art, however the emphasis does not reflect diverse evidence. On the contrary, pervasive scholarship with a philosophy of superiority which frames typical contemporary Western creative art producers as the compelling representatives of 'global' creative work. This is what Santos' see to be a philosophical orientation of cognitive injustice. On this score, this paper explores critical perspectives on art scholarship in Ghana, taken into account indigenous thought in art discourses. Similar to Labi's 2015 call for local epistemologies without subjecting them to western scrutiny. We argued that, African art epistemologies in the form of crafts, films, music, textile, architectural designs among others have the potential of telling the African story to the entire world. As the perspective of the West becomes available to everyone, things are elevated to a global and universal mechanism of action (Harding, 1993: 63). Despite often being critical of contemporary debates about 'creative cities' and 'creative nations' (Florida, 2002), studies of creative art almost exclusively concentrate on the urban post-industrial places in the West.

Artistic Epistemicide Beyond the Ghanaian Creative Art Space

The results showed change processes, witnessing Afrocentric creative artistic scholarships. This means a balance to the overly reliant Euro-American epistemic approaches towards the conception of contextualized study frameworks. The formal teaching of art in Achimota school epitomizes a regime of Afrocentric art (Labi 2013 & Woets 2014). Achimota started to apply art principles to inspire new generation of students with interest in African and Ghanaian arts, which influenced and shaped the school's programs (Nunu-Amateifio, 2017). This followed with setting up the College of Art at Kwame Nkrumah University of Science and Technology in 1964; the School of Performing Arts, University of Ghana, Legon; and the National Film and Theater Institute. These and other universities were established by the government of Ghana as public Institutions of Higher Learning with faculties and departments in dance studies, music and theater arts. Others include general art studies, painting and sculpture, industrial art, film and television production, all aim at promoting and popularizing creative arts in Ghana.

The results showed that the study of African art should go beyond that of interest but extend to getting a better grasp of African creativity In view of this, contemporary Ghanaian art works have been reviewed. Notable among them are El Anatsui's *Gawu* (2003-2008), Ibrahim Mahama's *Non-Orientable Nkansa* (2017); Annku, & Lodonu's *consumption of Visual Art Forms in Contemporary Ghana* (2012); Edusei's *overview of Visual Art Education in Ghanaian Schools* (2014); and Flolu's *music in Ghanaian Education* (1997). Others include Opoku-Asare, Tachie-Menson, and Ampeh's *Instructional strategies for effective teaching and learning of creative arts: the dilemma of generalist*

teachers in Ghana (2015). Seidou, Ampratwum, Kissiedu and Riskin's *Silent Raptures: Emergent Art of the Kumasi College of Art* in 2015. sei'dou's adaptive art education in Achimota College (2014b); Araeen's *Modernity, modernism, and Africa's place in the history of art of our age* (2005); Cole and Ross's *the arts of Ghana* (1977). These among other Ghanaian revolutionary artistic scholarly works demonstrate a clear breaking of barriers and building of art epistemology bridges on Ghana. Also, Ephraim Amu and the significance of Music in Ghana is eminent. A first music master in Achimota school, prolific composer and choir master. His works were introduced into the school curriculum and provided soundtrack for life in the school and in later years for the nation as well. Ephraim Amu used his Art to educate people on African values and norms. Music was a huge subject in teaching of creative arts in most Ghanaian schools. It was not only employed for scholarly reasons but also for entertainment and religious rites (Nunu-Amateifio, 2017). Kwami (2012) confirms all these by saying that, artists at the time were held in high esteem and their works enjoyed high patronage under the first president Kwame Nkrumah.

Ghana produced some finest writers for the country's growing literary culture. It is observed by Kofi Baku, a historian, that lots of books are now being written by Africans on Africa for Africans. Hitherto, most of the Ghanaian art books were written by English or American authors and dealt with events far from Africa. The emergence of critical and incisive writers on the African reality. The likes of Kwame Nkrumah, Ayi Kwei Armah, Kofi Awoonor and Cyprian Ekwensi are worth mentioning. Others include Efua Sutherland, Kwesi Brew, Atukwei Okine and Ama Ata Adu. They were part of a generation of African intellectuals who wrote extensively on the dreams of African Liberation in the 1950s and 60s. This art Afrocentric assertion is equally shared by Price (1975) that, many Western trained African artists who were hitherto imitating Western styles, now turned to the arts of their own people and expressing themselves as Africans. This artistic consciousness implies a game change to open Ghanaians' minds towards a de-westernization of art epistemologies. Studies on Ghana's art have produced a better understanding culled from models from different disciplines, including art, sociology, anthropology, archaeology and history. Kyerematen's 1961 works on *Regalia for an Ashanti durbar* is an example. Significant part of his works are photography and scripts he wrote when commissioned by the government to mount an exhibition for Queen Elizabeth II's visit to Ghana in 1959, which were published in 1964. Kyerematen co-authored one article with Allen Basing in 1972 and published his last known work in 1977 (Labi 2015). Also, art historians and scholars deemed it imperative to pay attention to local Ghanaian art studies which were of academic material. One of the first which is worthy of mention were Antubam's studies on Osei Bonsu, one of the greatest Ghanaian sculptors. Fagg (1968) was one of the first European art historians to recognize the contribution of Bonsu to the study of Ghana's art history. The creations of Vincent Kofi, Ablade Glover, Ato Delaquis and others have prompted the study of contemporary Ghanaian arts as significant area of inquiry (Labi 2015). Other works that explored Ghanaian artists and their genres include Chernoff (1977), Kristen (1980), Falgayrettes-Leveau (2003) and Ross (2014a/2014b). Recent works of Hess (2006a), Kwami (2012), Labi (2013a), and Woets (2014) have contributed to the studies on Ghana's modern and contemporary art. A maiden mobile exhibition in 2010 at Museum of Modern Art, New York, was dedicated to the works of a Ghanaian-born El Anatsui, resident in Nigeria, an indication of the recognition of Ghana's contemporary art and the global contribution of Anatsui. The four essays written by Olu Oguibe, Chika Okeke-Agulu, Robert Storr and Appiah in the catalogue (Binder, 2010), discussed the early years of Anatsui's work and demonstrate the changes in style and materials in his sculpture. Fosu (1986) wrote on contemporary art in Africa, citing some Ghanaian modern and contemporary artists. Fosu (1986) further wrote on the dynamics and aesthetic satisfaction in visual innovations in Ghana's cities in the postcolonial era, where many unskilled people from the countryside are confronted with challenges of modernity. These cities have become centers for the interaction of ideas and artistic expressions attracting American icons and other influences through hairstyles and thought-provoking creative art designs and writings on trotro, mini-buses, studio backdrops and a wide range of other imaginative compositions depicted in urban street art (Quarcoopome, 2009).

Beyond the epistemicide witnesses efforts being made to decentralize and diversify creative art geographies (Gibson, 2010), and being aware of predominance of global North as site of empirical work, some scholars are exercising epistemic resistance (Santos, 2007) by refusing to 'go North' and

rather turning their investigative lenses on remote places such as global South (Gibson, 2010). Scholars are trying to ‘re-contextualize’, ‘re-localize’ and hence ‘re-socialize’ creative work (Alacovska, 2018; Banks, 2006; McRobbie, 2016). Plurality of knowledge is a critique to dominant paradigm of western modern science (Santos, 2007). This means, alternative paradigms or many ways of knowing and being should be promoted and encouraged.

DISCUSSION

This paper examined existing epistemologies for creative entrepreneurship research in the global south perspectives to balance the overly reliant Euro-American epistemic approaches towards the conception of contextualized study frameworks. On artistic epistemicide in global south, the paper points to a delay in introduction of art education in Ghana due to delay in art curriculum introduction in Ghanaian schools, perceived lack of African scholars’ interest in creative art discourse and art scholarship being perceived westernized, despite many years of continental and national art practice (Alacovska and Gill 2018; Seidou, 2014a; Araeen 2005). This has resulted in a gap between art creativity and its scholarship in Ghana, raising concerns about how this artistic gap could be bridged (Labi, 2015). The paper further showed how African art as fields of study originated rather from European and American contexts in mid-twentieth century (Labi, 2013, p. 18). No wonder some art historians expressed shock on just a handful of art books on Africa being written by Africans, leaving majority of art books on Africa authored by Euro-American scholars (Araeen, 2005; Labi, 2015). The delay in art educational and curriculum introduction and implementations means the future development of art education in the country was affected. This implies, students, could not artistically **learn about themselves, their culture and their communities**. By the delay in taking art classes, students could not even visualize the world differently early enough.

The minimal Ghanaian scholarly contribution (Labi, 2015), compelled the current paper to question ‘why abundant literature on Ghanaian art, yet the authors are largely Euro-Americans? Labi’s 2015 work mentions various reasons, including apathy and inadequate skills. This suggests that while Euro-American authors seem to be more enthusiastic on African art and customs their Ghanaians are somewhat apathetic to their culture. This phenomenon of non-Ghanaians being more interested in conducting research on Ghanaian art rather than Ghanaian scholars could be attributed to two things. Firstly, that non-Ghanaians have more resources and secondly Ghanaians underestimate their arts value. Therefore, we view the epistemic break as an admittance of knowledge differentials between what is being done elsewhere and what pertains among Ghanaian scholars. The Ghanaian challenge has to do with how art-based theoretical frameworks are taught and used. Another challenge is how to apply established art-based methodologies to research. Unavailability of local art journals, galleries and museums to make use of the he outcomes of research. A lack of art lovers, art foundations to provide funding and lack of governmental support are critical challenges.

Beyond the epistemicide, efforts towards Afrocentric artistic scholarship abounds (Labi 2015; Alraeen 2005; Seidou 2014). This implies their belief in effecting change and bridging the art epistemological gaps between the global north and global south. The paper hold the view that, the general understanding of the world of art and art epistemologies by far exceeds the limited Western projections and understanding of art. In this regard, Santos (2018) never minces words in arguing that, there is no global social justice without global cognitive justice. Hence the failure to recognise and appreciate the different forms of art knowledge and how people across the globe run their lives and provide meaning to their existence is a worry. Going by Santos(2018) arguments, we may intuit that, Western art domination has profoundly marginalised art knowledge and artistic wisdom that had been in existence in the global South. Scholarly marginalization rooted in disciplinary and identity-based biases, is theorized to act as another barrier to different ways of knowing and universal scholarship, what Settles, Jones, Buchanan and Brassel (2021), referred to as an eepistemic exclusion. It is contended in this paper that it is imperative to recover and valorize the artistic epistemological diversities of the world – a fine blend of both South and North epistemologies in art scholarship. More especially as Africa and Ghana’s Creative Art is perhaps the oldest, and includes dance, theatre, music, crafts, painting, sculpture, artifacts and fine garments (Nunu-Amateifio, 2017). Banks, Lovatt, O’ Connor,

Raffo (2000) argue that the cultural industries stand in unique relation to aspects of risk and social trust because they exhibit distinctive forms of motivation, organisation and working practice, that are guided by, and constitutive of, characteristic forms of risk management and trust development identified as central to social transformation in the late modern period.

The epistemology of global south and its situated and contextualized dynamics are receiving increasing research recognition. According to McRobbie (2002) creative work is ‘de-spatialized’ as well as ‘de-socialized’ and hence also ‘de-politicized’. Hence, scholars are making efforts to ‘re-contextualize’, ‘re-localize’ and hence ‘re-socialize’ creative works (Alacovska, 2018b; Banks, 2006; McRobbie, 2016). Plurality of knowledge is highly subscribed to and a critique to dominant paradigm of hegemonic western modern science (Santos, 2007), hence alternative paradigms or many ways of knowing and being are promoted and encouraged. We are of the view that, plurality of knowledge contributes to a more sustainable, equitable and democratic world. In this scholarly march towards an epistemic justice, emphasis has been on breaking of knowledge structural barriers and building bridges for artistic mobility and equality (Visvanathan 2009). Santos (2018) is of the view to recover and valorize the epistemological diversity of the world. Santos further argued, epistemologies of the South is characterized with bottom-up cosmopolitanism, featuring conviviality, solidarity and life triumph against the logic of market-ridden greed and individualism.

CONCLUSION

Results from the current study suggest the phenomena of minimal creative art scholarship in Ghana due to delays in introduction of art curriculum, perceived lack of African scholars’ interest in creative art discourse and art scholarship being perceived westernized, despite many years of continental and national art practices and engagements. This provides an answer to the first research question: ‘why Euro-American epistemic domination in creative entrepreneurship research from the global south?’ However, beyond the epistemicide, the paper identifies a regime of change, witnessing Afrocentric creative artistic scholarships aim at balancing the overly reliant Euro-American epistemic approaches towards the conception of contextualized study frameworks. For example, the introduction of formal teaching of art as a course in Achimota school, the school’s application of art principles to inspire new generation of art students, the set-up of schools and colleges of Art at various public universities in Ghana with faculties and departments in various art programs as well as emerging creative art research publications by Africans / Ghanaians on Africa / Ghana for Africans / Ghanaians. This also provides an answer to the second research question: ‘what epistemologies for creative entrepreneurship research in the global south could be identified to complement the overly reliant of Euro-American epistemic approaches towards the conception of contextualized study frameworks?’

Effort towards art epistemologies of the South among scholars and relevant stakeholders imply a belief and commitment in equity between different ways of knowing art and different kinds of artistic knowledge. This in the view of the paper will promote diversity and inclusivity in art scholarship, a prerequisite for epistemological hybridity and artistic-driven social innovation. Indeed, a wide global and diversify understanding of art by far exceeds the hegemonic, monocultured Western-centric understanding of the subject. Therefore, plurality and diversity of knowledge in art scholarship is highly recommended. Such ecology of knowledge in modern art is fundamental to uncover epistemology of the south. Epistemologies of the south are tools to accomplish global cognitive justice. It is the south that resist and produce alternatives in relation to imperialism and colonialism of the north. These epistemologies of the south when explored, will rescue the non-visible artistic experiences. The paper is of the view that, artistic epistemologies from the south gives a loud voice and amplify the meaning of art innovations, what this paper coined as ‘art of emergence’.

In working towards an artistic epistemic balance between the global north and global south, the paper hereby recommended that, in respect with paucity of artistic knowledge from the global south, a trend change through creation of creative Art-based local platforms for indigenous art voices is recommended. The local platforms will encourage interactions and exchanges on teaching, learning and

research on African art. Also, constant engagements and mix perspectives among academia and experienced creative art practitioners to diversify the current Euro-American inspired epistemologies in the field is commendable. Research by Ghanaian scholars from diverse backgrounds, will lead to new art-based models, definitions and terminologies taking into consideration language, myths, beliefs, inputs from traditional leaders and cultural custodians. The outcomes of such research will gradually lead to increase in local viewpoints and enhance art discourse. Equally critical for a sustained art-based interest is the formation of strong art-based associations and clubs, organization of annual creative art symposia, travels, conferences, development and publishing of special issues and special sections on creative art from the global south perspectives.. Collaborative art-based research projects with both local and international universities, and scholars, as well as projects across borders in the sub-region to trace origins, histories, artistic styles, forms and influences will surely strengthen sub-regional creative art capacities. This implies an increased discourse in schools and on university campuses. The promotion and popularizing of African and Ghanaian art should not just be for novelty, but to foster knowledge and respect for Africans. It should advertise African art, and place it a par with global artistic traditions and scholarly discourses.

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Part 4: Strategy and International Management

ENTREPRENEURIAL IDENTITY & STRATEGIC RESPONSE IN THE INFORMAL ECONOMY

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ABSTRACT

While entrepreneurs generally confront many challenges in running their businesses, those in the informal economy must do so in a state of constant environmental change outside the boundaries and support of formal institutions. The nuances and fluidities of the informal economy mean that entrepreneurs operating in such environments may have to rely on different mechanisms in dealing with adversity than their formal counterparts. Applying the lens of entrepreneurial identity, this article sheds light on the heterogeneity of informal entrepreneurs and how entrepreneurs respond to contexts of adversity in the informal economy. As a result of our exploratory research of informal entrepreneurs in Ghana, we find that their response is closely associated with their entrepreneurial identity. We discuss the theoretical and practical implications of these findings.

Keywords: Entrepreneurship, entrepreneurial identity, informal economy, exploratory research design, Ghana.

INTRODUCTION

Entrepreneurial identity is a crucial determinant of variations in entrepreneurial strategies, behavior, and outcomes (Radu-Lefebvre et al., 2021). It is generally referred to as ‘who an entrepreneurs is’, as a result of which group(s) s(h)e belongs to (e.g., national, ethnic or otherwise), what s(he) does (Ireland & Webb, 2007; Navis & Glynn, 2011; Sarasvathy, 2001), or what activities in the venture creation process an entrepreneur is passionate about (Cardon et al., 2009). More recently, entrepreneurs’

occupational identity has been conceptualized as what society expects of the entrepreneur (Slade Shantz et al., 2018).

In developing countries, the lion's share of entrepreneurship occurs outside the formally established institutional rules (Portes & Haller, 2005). For example, a recent report from the International Labor Organization (ILO) finds that 48% of the labor force works in the informal economy in North Africa, 72% in Sub-Saharan Africa, 51% in Latin America, and 65% in Asia (ILO, 2018). The informal economy encompass "those actions of economic agents that fail to adhere to the established institutional rules or are denied their protection" (Feige, 1990: 990). Informal entrepreneurs endure or cope under conditions that would be daunting to entrepreneurs in the formal economy (Thai & Turkina, 2014). While this type of activity is widely acknowledged for its entrepreneurial dynamism (Webb et al., 2009), it is also apparent that such activities are closely associated with extreme forms of adversity, resource constraints, and uncertainty (Sutter et al., 2019).

In this article, we explore how the identity of entrepreneurs shape their responses to such situations of adversity that characterize the informal economy. Conventionally, informal entrepreneurs are often viewed as a homogeneous unit of poor, street vending sellers. Hence, many studies relating to the informal economy are designed to focus on street vendors (e.g. Martínez et al., 2017). However, this view is at odds with the reality of informal entrepreneurship, as Hart (2012: 3) refers to as "*activities of bewildering variety*". Indeed, La Porta and Schleifer (2008: 294) observe that informal entrepreneurs are more than just self-employed workers:

"In the context of poor countries, the term 'informal firm' evokes the image of street hawkers selling goods out of baskets, or of eateries in front of homes. In fact, such an image is a good description of how the very poor make a living. However, the informal firms in our sample do not fit that image. For example, firms accounting for roughly 85 percent of the observations in the Informal and Micro Surveys have, in addition to the entrepreneur, two employees or more."

In addition, scholars have argued that informal entrepreneurship is necessity driven (Williams et al., 2017) and often used as a survival strategy (Kistruck et al., 2011; Lee & Hung, 2014; Williams, Shahid, & Martínez, 2016) to circumvent formal institutional voids (Webb et al., 2013). This research has examined the impact of the resource scarcity facing the entrepreneurs on their productivity. Notably absent from this conversation is the social orientation of informal entrepreneurship. We draw on the entrepreneurial identity literature to expose the heterogeneity in informal entrepreneurship by specifically highlighting the socio-economic interactions that motivate strategies adopted by informal entrepreneurs.

We argue that the fluidity in the regulatory environment of the informal economy presents a unique opportunity for understanding how entrepreneurial identity is determined by the interplay of both formal and informal institutions (Webb et al., 2010; Webb et al., 2009). Specifically, the absence of institutional support inspires unique entrepreneurial strategies that foster emergent forms and nuances of entrepreneurship. Compared to entrepreneurs in the informal economy, entrepreneurs in the formal economy are substantially less constrained by formal institutions voids, such as absent intellectual property protection, weak legal support and protection, unreliable transportation infrastructure, and fragile financial support (Godfrey, 2011; Mair & Marti, 2009; Webb et al., 2009). While the existence of such institutional support for entrepreneurs may be taken for granted in the formal economy, entrepreneurs in the informal economy must strategize around these uncertainties and resource constraints. To better understand how informal entrepreneurs respond to situations of adversity, we will therefore explore variation in entrepreneurial identity in the informal economy.

We employ an explorative research design that involved 92 interviews from informal entrepreneurs in Ghana, a country with high levels of informality and a collectivist culture (Adom & Williams, 2014; Offori-Atta, 2020; Slade Shantz et al., 2018). We conducted fieldwork in five informal clusters, where a complex web of institutions (e.g. tribal, vocation, regulatory and locational) influences entrepreneurial behaviour. Despite being confronted with high levels of uncertainty and resources scarcity, informal entrepreneurs in these clusters employ high levels of risk tolerance by devising creative solutions in their entrepreneurial endeavors. Therefore, the context holds promise for a greater understanding of entrepreneurial identity and responses in the informal economy. We analyzed our in-

depth interviews and direct observation data following the Gioia method (Gehman et al., 2018; Gioia et al., 2013).

A key finding of our research is that entrepreneurs in the informal economy rely on their identities to guide their strategic responses to changing state of the informal economy. We uncover four different types of entrepreneurial identities (guardians; survival entrepreneurs; canvassers; and growth-oriented entrepreneurs) and explain how these are associated with three discovered strategies (succumb; improvise, and push boundaries). Specifically, we find that (1) guardians define their identity—be it an inherited or acquired status—as a result of societal expectations, and thereby succumb or improvise in their responses accordingly; (2) survival entrepreneurs are more likely to improvise with the purpose of sustaining their existence; (3) canvassers constantly seek new opportunities and thereby respond by improvising mainly through exploring new markets, and (4) growth-oriented entrepreneurs respond to adversity by improvising and constantly push new boundaries for growth prospects.

These findings are important for how we understand entrepreneurial identity and responses in the informal economy. In particular, we find that guardian entrepreneurs' strategic responses are largely driven by their perception of who society thinks they are—be it an acquired or inherited status. As such, we contribute to research on entrepreneurial identity to emphasize the impact of not only who entrepreneurs are or what shared understanding society has of their role, but also their perceptions of what society thinks of them and how such perceptions guide their responses to adversity. More generally, we contribute by developing an understanding of how resource scarcity and uncertainty shape underdog entrepreneurial behavior (Miller and Le Breton-Miller, 2017). Responding to recent calls by management scholars to take a keen interest in the entrepreneurship and strategy nexus (Hitt et al., 2001; Ott et al., 2017; Wright & Hitt, 2017), we add important insights by extending the boundaries of how entrepreneurs use atypical resources in the informal economy.

THEORETICAL BACKGROUND

Entrepreneurship in the informal economy

The informal economy has been subject to research in the disciplines of economics, geography, and sociology, but lately also management and entrepreneurship (Bruton et al., 2012; Godfrey, 2011; Siqueira et al., 2016). Castells and Portes (1989: 12) define informal activity as “all income-earning activities that are not regulated by the state in social environments where similar activities are regulated”. While this definition could encompass illegitimate activities, we focus on business activities that are largely unregistered and/or fail to have the requisite legislative and regulatory approval to operate but are otherwise considered legitimate. Consequently, we focus on entrepreneurs who are primarily governed by informal norms, values, and beliefs (Webb et al., 2009, 2013).

Entrepreneurship is widely considered to emerge from uncertainty (Fisher, 2012; Sarasvathy, 2001). Entrepreneurship in the informal economy can be argued to be surrounded by even more uncertainty as entrepreneurs have ambiguous relationships with state agencies and their functionality may undermine political institutions (Portes & Haller, 2005). The informal economy in the African context is shrouded in high levels of uncertainty that is further exacerbated by the “interconnectedness of the formal and informal economies” (Zoogah et al., 2015: 8). Zoogah and colleagues (2015) argue that the nature of uncertainty in the informal economy in the African context is underlined by competing psychological, institutional, and sociocultural logics. The unstable nature of regulatory regimes encourages economic activities to be conducted in the informal economy, where firms “move between formal and informal arrangements based on regulations and regulatory changes” (Godfrey, 2011: 257), and thereby pick and choose which regulations to abide by, especially where there are grey areas. This unstable regulatory environment triggers market uncertainties that may extend to consumer and institutional spheres. By combining these perspectives, we view uncertainty in the informal economy to consist of dynamics and interaction of consumers, community, and institutions. For instance, the absence of effective policy, legal and regulatory framework leads to high levels of imitation and stiff competition (Fonchingong, 2005; Godfrey, 2011). Therefore, others can easily appropriate the value created by informal entrepreneurs (Alvarez & Barney, 2004, 2014; Webb et al., 2019).

Generally, informal entrepreneurs face extreme resource scarcity and operate in disparate conditions compared to their formal counterparts (Sutter et al., 2019; Webb et al., 2013). They have

limited physical capital and often lack tools, equipment, technology, machines, and premises from which to operate (Darbi et al., 2018). They have limited information and options regarding funding and lack capital to start or expand their business (Lyles et al., 2004; Webb et al., 2013). Similarly, they often encounter financial challenges because they lack the collateral needed to take loans and face very high interest rates from microfinance institutions (Olarenwaju & Olabisi, 2012; Webb et al., 2013). This scarcity is exacerbated by the inefficient regulations governing land tenure systems and property rights (Olarenwaju & Olabisi, 2012). Additionally, informal entrepreneurs are less able to draw on highly skilled human capital (Darbi et al., 2018). Typically, informal entrepreneurs face low levels of formal education; inadequate or low levels of skills and experience; absence of specific business skills; and a lack of training and technical support (Galdino et al., 2018; Lyles et al., 2004; Sutter et al., 2017). These challenges culminate into inefficient labor-intensive operations (Sutter et al., 2017). Moreover, with no intellectual property protection from formal regulators (Webb et al., 2009, 2014), entrepreneurs are challenged should they wish to protect their innovations.

Entrepreneurial identity

To understand how informal entrepreneurs respond to situations of adversity, we explore the role of entrepreneurial identity. Entrepreneurial identity provides a frame of reference with which entrepreneurs define ‘who they are’, ‘what they do’ and ‘how they relate to others’ (Ashforth et al., 2008; Fauchart & Gruber, 2020; Powell & Baker, 2014), and is seen as pivotal in starting, running, or exiting an entrepreneurial venture (Cardon et al., 2009; Radu-Lefebvre et al., 2021; Rouse, 2016). Consequently, entrepreneurial identity underlies decision-making, resource mobilization, strategy, and venture outcomes (Cardon et al., 2009; Howard et al., 2021; Radu-Lefebvre et al., 2021). Hence, entrepreneurial identity is a potent theoretical lens that enables us to understand entrepreneurs as both economic and social actors (Mmbaga et al., 2020; Radu-Lefebvre et al., 2021).

Building on social identity theory (Tajfel & Turner, 1979), entrepreneurial identity is seen as the frame of reference that enables entrepreneurs as members of a group (or groups) to interpret their experiences and evaluate what to do (Alsos et al., 2016; Powell & Baker, 2014; Radu-Lefebvre et al., 2021). This perspective moves the field of entrepreneurship beyond the classical entrepreneurs whose basic motive is of self-interest or profit, to draw attention to other types of entrepreneurs whose basic motivation is a concern for others (Fauchart & Gruber, 2011, 2020; Gruber & MacMillan, 2017). In this respect, Fauchart and Gruber (2011, 2020) argue that an entrepreneur’s social identity shapes his/her motivations, and explains the differences among three basic entrepreneurial motives, namely; serving self-interests (Darwinian), serving community interest (Communitarian), or serving political interests (Missionary). These basic motivations have a variety of implications for entrepreneurial strategies (Alsos et al., 2016; Fauchart & Gruber, 2011; Mmbaga et al., 2020).

Both formal and informal institutions drive entrepreneurial identity. Scholars have shown that entrepreneurial identity is influenced by formal educational, and informal relations with family members, mentors, peers, role models, and community members (Fauchart & Gruber, 2011; Radu-Lefebvre et al., 2021; Stryker, 1968). Given that entrepreneurial identity serves as a cognitive frame that constrains entrepreneurs to enact actions that are consistent with their identities, we would expect that entrepreneurs with different identities will respond differently in the face of adversity and changing environmental situations (Powell & Baker, 2014, 2017; Wry & York, 2017).

While there is a general tendency to ignore the heterogeneity of informal entrepreneurs, we believe there are important reasons to expect variations to the concept of entrepreneurial identity. In this respect, the literature on entrepreneurial bricolage (defined as “making do by applying combinations of the resources at hand to new problems and opportunities” (Baker & Nelson, 2005: 333)) suggest that strategies related to redefining, recombining and repurposing resources in unaccustomed ways to create breakthrough solutions and new sources of value. Entrepreneurs engaged in bricolage do not engage in deep cognitive exercises of formulating strategy but rather act on the fly by drawing on their meager resources to overcome their current limitations. The solutions created by bricoleurs may or may not become part of their long-term strategy (Ott et al., 2017). The quality of these solutions varies widely, with some being near perfection (Garud & Karnøe, 2003) and others substandard and imperfect (Lanzara, 1999). Additionally, making do, implies that entrepreneurs refuse to enact limitations by constantly testing conventional limitations to determine their future course of action (Phillips & Tracey, 2007).

Thus, assuming that informal entrepreneurs experience significant heterogeneity in how they ‘make do’ with lack of resources and challenging environments, our purpose is to unpack the concept of entrepreneurial identity within the informal economy. Importantly, this will allow us to understand how informal entrepreneurs make strategic decisions about their products and markets in response to situations extreme adversity. Hence, the following research questions guide our subsequent analyses: (1) What are the types of entrepreneurial identities in the informal economy? (2) How do different informal entrepreneurs strategize when faced adversity?

METHODOLOGY

Setting

The study is set in Ghana, a West-African country with about 90 percent of economic activity being informal (Offori-Atta, 2020). Ghana has long been recognized as a country with high levels of informality across many sectors (Hart, 1973, 2016). The Ghanaian economy is dominated by self-employed entrepreneurs and small owner-run firms, usually operating micro, small and medium-scale businesses (Adom, 2014). Most of these businesses are typically informal by not complying with formal regulatory requirements. However, as the government has started to acknowledge the significance of the informal sector, it has proposed policies that continue to align informal firms with formal regulatory requirements such as registration with local municipal assemblies, assigning tax identification numbers, and registration of employees for social security. Currently, the regulatory environment continues to evolve implying that informal firms have to comply with some formal regulatory requirements and procedures when operating (Aryeetey, 2015; Darbi & Knott, 2016; Zurek, 2019).

We conducted an exploratory study to understand the strategic responses of entrepreneurs in the informal economy. The exploratory design is well suited as it helps highlighting the situational aspects and subtleties of informal entrepreneurship. Additionally, it is useful in providing a deeply contextualized understanding of how individual dispositions influence entrepreneurial behavior under conditions of resource scarcity and uncertainty. We interviewed entrepreneurs operating in five industrial clusters in Ghana. Our sampling of the clusters was purposeful (Patton, 1990). We focused on informal clusters that were engaged in manufacturing, enabling us to have rich information of a variety of processes that entrepreneurs were engaged in, as opposed to ‘buy and sell’ businesses that the informal economy is often associated with. Again, a heterogeneity and contrasting criterion was used to achieve variation among the clusters (Miles & Huberman, 1984; Neergaard & Uhløi, 2007). In addition to the overall regulatory change in the informal sector, the clusters in the sample experienced other environmental changes (e.g. technological, economic, socio-cultural and geographical) constituting them into negative, extreme and countervailing cases (Miles & Huberman, 1984). As such, the ventures in the clusters experienced varied levels of uncertainty depending on their industrial sectors, physical environment, location and degree of government intervention. The industrial clusters are further described in Table 1.

Table 1: Description of clusters in the sample

Cluster Name	Description	Environmental Changes
Suame Manufacturing	It is one of the biggest clusters in Africa, with more than 9,000 firms and an estimated 200,000 informal workers (Hart, 2016). It hosts firms involved in among others; manufacturing, vehicle repair, metalworking, and sale of engineering materials.	Technological- Less educated entrepreneurs struggle to cope with New technology i.e. computer programming knowledge to repair newer car models.
Sokoban Wood Industrial Cluster (SWIC)	Hosts 8,000 workers and is a wood-based industrial cluster making varied furniture products. Most of the entrepreneurs in the cluster have not registered their businesses nor paid tax to the central government.	Geographical- It was relocated to a new town

Accra Newtown	Hosts firms involved in a wide variety of printing services; such as analogue and digital printing, designing, separation, engraving, lamination and binding, as well as, the sale and servicing of inputs required in printing.	Technological and economic-difficulty in acquiring and using new machine models and fierce competition from external firms
Moro market cluster	Located in Kumasi hosts 500 informal entrepreneurs. It is the smallest cluster in the study and constitutes firms that are predominantly in the footwear industry for example, shoemakers, traders, and service providers of complementary inputs to the footwear making business.	Economic: Fierce competition from China
Bonwire Kente	It is rural based steeped in traditional Ghanaian culture. Bonwire indigenes are famous for making handwoven textiles that are reserved for social and sacred functions in Ghana. Most of the entrepreneurs are home based because weaving has to be done in sheds in cool environments. About 800 households are engaged in Kente weaving in Bonwire.	Economic: Fierce competitions from China and irregular supply

Sample

We sampled 92 entrepreneurs across the five clusters. In order to increase the variety and provide more robust empirical data, we selected entrepreneurs based on the richness of the information we expected to gain from them (Patton, 2014). To identify the relevant entrepreneurs, we firstly considered entrepreneurs in the manufacturing sector because manufacturing symbolized (re-)combination of scarce resources right from raw materials to finished products and commercialization. Secondly, the study started with firms that were located in the principal streets of the industrial clusters. However, as data collection continued, it was realized that most of entrepreneurs who were operating in ‘temporal’ structures were more resource constrained in comparison to those along the principal streets. Hence, we focused on those with fewer resources as they represented extreme cases. This resulted in a diverse sample of entrepreneurial identities (outlined in Table 2) within different entrepreneurial behaviors and strategies, which facilitated a comparative approach (Miles, Huberman, & Saldana, 2013). Table 2 provides a summary description of 15 entrepreneurs, representative of the 92 respondents. It depicts their – age, educational qualification experience in business, and their firm size (number of employees) and the main sectors represented.

Table 2: Summary description of entrepreneurs

Respondent	No. of Employees	Nature of Business	Age of entrepreneur in Years	Number of Years in Business	Years of formal Education
R1	4	Electric Welding and Fabrication (EWF)	38	6	9
R2	5	EWF	47	11	9
R3	3	Book/Printing	45	8	9
R4	4	Book/Printing	46	5	9
R5	4	Book/Printing	50	20	9
R6	2	Book/Printing	35	8	9
R7	3	EWF	40	15	12
R8	3	Carpenter	43	18	8
R9	1	Carpenter	31	8	0
R10	4	Carpenter	30	14	9
R11	2	EWF	49	16	9
R12	1	Carpenter	35	15	6
R13	1	Carpenter	45	23	6
R14	1	Book/Printing	62	46	9

Data Collection and Analysis

Data collection took place from late December 2019 to early February 2020 and was conducted in person by the first author of this article. The data was collected qualitatively using a combination of interviews and informal observation. The primary data source was interviews with entrepreneurs. The in-depth interviews lasted 52 minutes on average and were semi-structured. The interview protocol (see Appendix 1) served only as a guide and was loosely followed to allow for more natural conversations structured around a set of overall themes related to the entrepreneurs' personal and firm background, the ventures' challenges and strategies, resource use and the relationship to the local community. The interviewer probed further on interesting themes that emerged from the interviews.

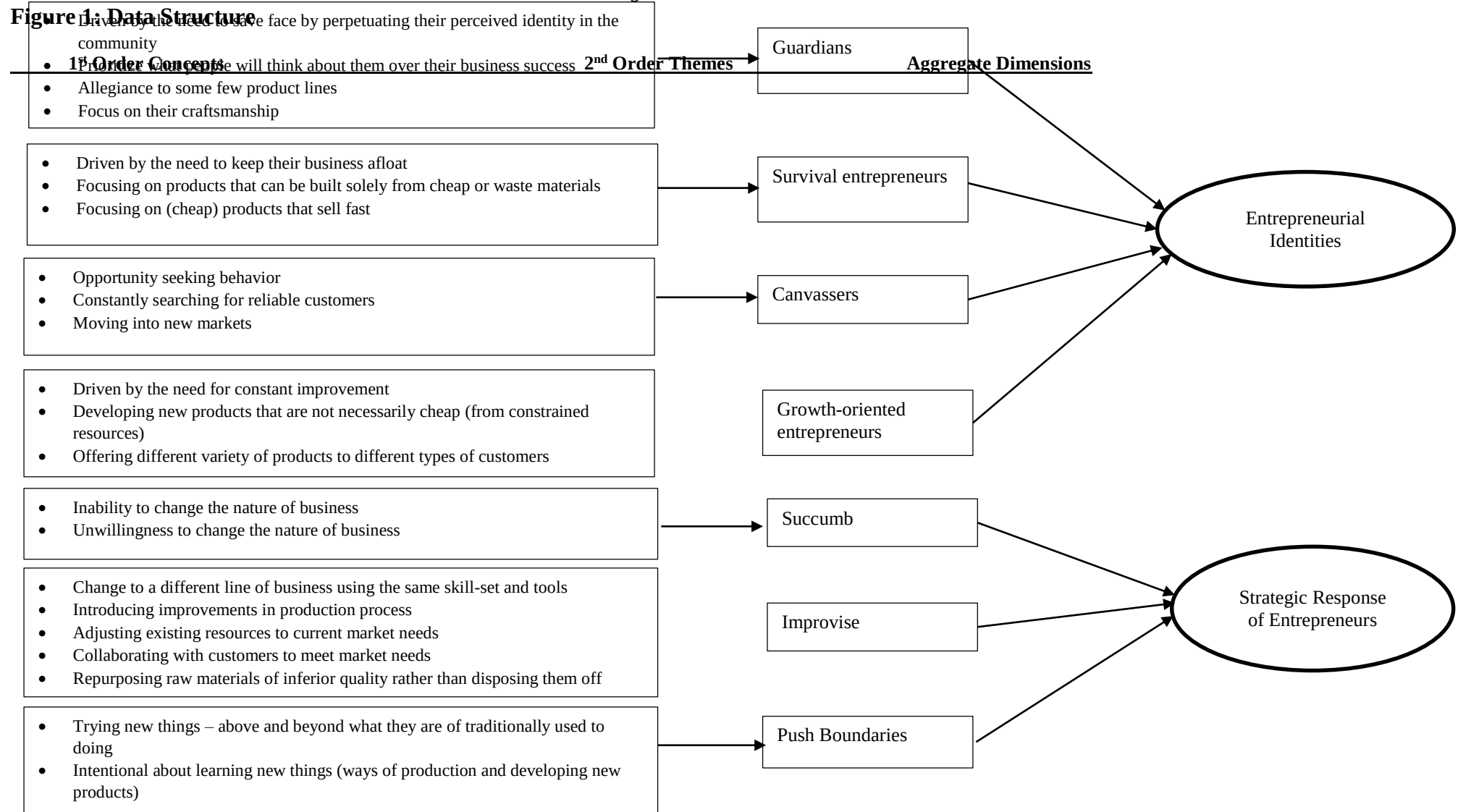
Credibility strategies in achieving rigor in qualitative studies (Krefting, 1991) were followed in the data collection process. To boost familiarity and increase confidence, the interviewer engaged actively with cluster leaders by seeking permission from association leaders and using the local language (mainly Twi, and occasionally Ewe or English). Interaction with leaders and community was significant in familiarizing the researcher with contextual nuances and subtleties in each cluster.

In analyzing the qualitative data, we relied on the Gioia method (Gehman et al., 2018; Gioia et al., 2013). Following this method, we systematically demonstrate the progression from data to theory by showing first-order codes (drawn from interviewees' words), second-order themes (immediate emerging concepts), and aggregate dimensions (more abstract theoretical concepts). The interviews were first coded individually using in vivo codes that give voice to informants by capturing the words and phrases of the informants (Saldana, 2009). Giving voice to informants helps in uncovering new concepts (Gioia et al., 2013). The next stage of coding was to group an initial 117 codes into categories in accordance with the similarities and differences as some idiosyncratic categories were dropped (Saldana, 2009). The 22 first-order categories/concepts were generated from the initial list of 117 codes that included 'using condemned raw materials,' 'canvassing for market,' 'building machines that are easy to operate,' 'focusing on core products in peak season,' and 'following the path of my master'. In this round of coding, we paid attention to how these entrepreneurs conducted business in the informal economy amidst their resource constraints.

The second-order themes were arrived at as a result of discussions among the authors as well as some feedback from other scholars who had been exposed to the project. The seven second-order themes were arrived at by grouping and linking first order concepts into themes as researchers acted as 'knowledgeable agents' in assigning meaningful terms to the data (Gioia et al., 2013). Finally, taking note of the relationships between the categories and themes while analyzing the data, second-order themes were organized into aggregate dimensions (Gioia et al., 2013). The data structure (see Figure 1) shows the systematic process of moving from raw data to theoretical constructs (themes and aggregate dimensions). Thus, the data structure was reached through an iterative process of moving back and forth between the theoretical concepts emerging from the analysis and the raw data.

--- Figure 1 about here---

Figure 1: Data Structure



FINDINGS

We found that entrepreneurs in the informal economy in our sample can be classified into four distinct identities. Next, we present the findings related to the entrepreneurial identities (guardians, survival entrepreneurs, canvassers, and growth-oriented entrepreneurs), before we present the strategic responses of the entrepreneurs (succumbing, improvising, and pushing boundaries).

Entrepreneurial Identities

It emerged from the data that there are differences in how entrepreneurs identify themselves. These differences are underlined by either their need to save face by perpetuating an identity they hold in society, their need for survival, an opportunity seeking behavior, or the need to grow their business. Most of the entrepreneurs sampled can be classified into one of the four identities with each identity differing from the other. These differences are underlined by their core beliefs and values about who they are and their motivations for being in business. We identify four identities of entrepreneurs that dominate in the informal economy: Guardians; Survival entrepreneurs; Canvassers; and Growth-oriented entrepreneurs. As such, we build on research that has developed different entrepreneurial identities (Fauchart & Gruber, 2011, 2020), but not within the informal economy. Specifically, while we find three distinct strategic responses of entrepreneurs in the face of adversity (succumb; improvise; push boundaries). In the following, we first outline the four identities before we discuss the responses. We then discuss the implications of each entrepreneurial identity for the strategic response that the entrepreneurs may choose.

Guardian entrepreneurs: The first type of entrepreneur that we find in this study is the guardian entrepreneur. Guardian entrepreneurs may refuse to explore new opportunities because they place more value on their perceived identity in society. Guardians' behavior is driven by their commitment to preserve the identity they perceive that the local community in which they are embedded holds of them. They prioritize this social identity over the success of their business. Consequently, the guardians' strategies are shaped by their beliefs about 'who they are' in society and what the community in which they operate perceives of them.

In the informal economy, entrepreneurs are often identified with the products that they predominantly produce. Guardians typically produce few product lines and stay true to those products. Guardian entrepreneurs have a high desire to perpetuate an identity in society, be it inherited or acquired. On one hand, such identities are inherited when guardians believe that they owe allegiance to society, or their masters (those who they learnt the trade from), or their family members (usually an uncle or father if he had been in the trade or is currently in it) to stay committed to a particular line of products. On the other hand, the identity is acquired when the entrepreneurs introduce new lines of business and remain committed to these over a period.

Irrespective of how this identity is gained, we find that guardians have a high sense of commitment to remain true to their social identity. This sense of commitment has implications for the practices in which these entrepreneurs engage. While guardians may draw on already accumulated amateur skills, free or discarded resources, as well as, drawing on the resources of their network, they are constrained by their identity in the type of opportunities they choose to pursue. For instance, guardians who could 'make do' by recombining their already acquired capabilities and or discarded raw materials to downsize to simpler and more economically viable product lines will let such opportunities slip away.

As one carpenter narrates, although his main line of business (beds, doors and door frames) has been declining, he remains committed to his identity as a bed and door producer. He points out that although he has neighbors who have faced the same challenge and switched products he would rather stay true to his identity in society than to switch to products that are cheaper to produce and have a ready market:

It is just like these people who are here [referring to a neighboring workshop]. They used to make doors but, they have realized that the doors are not moving fast. So now, they have completely stopped making doors. So now it is only tables they make. For that one, people come to order. ... The kitchen stools and kitchen tables and those things, they move faster than those of us making the doors, doors frames and beds. So, we suffer ... As I was learning the carpentry,

I didn't have a plan. But as time went on, I made up my mind that these doors and beds is what I want to do ... – (R#12 KA – Carpenter).

Oohh!!! Infact!!!, ... It is like you have been doing one thing for a long time, ..., and now you want to run away from it and go and do something else. Take for instance this bed, every day I make beds, every day I do it, every day I do it, and now it is not going well, and I am getting hungry, but stopping this [beds and doors] to do that [make stools] is quite uncomfortable. It is like I feel sluggish and there is some shyness in doing it. As I myself can see that this what I do every day, is it kitchen stool that I now want to make? Let's say if I have a neighbor who is always making kitchen stools, he might think that I am even envious of him. He might say that because people are buying his products I am also doing some' – (R#12 KA – Carpenter).

When probed he further clarified his point. In so doing, indicating that his reluctance to explore new opportunities was driven by his perception of how his peers would view him rather than for instance the lack of knowledge or finance to capture another opportunity:

As for this part, you have to understand it very well. So, this thing that I am doing, take for example, this neighbor of mine, every day, he is making tables. I am also continuing to make my bed. Let's assume that the money I have now is not able to buy the wood for making beds. But I can see that the money I have can buy Wawa to do kitchen stool and kitchen table. But when I buy that the wood to come and do the kitchen table or kitchen stool, he will also say that is it because I am doing this that you want to do the same thing? So, because of that, let me also do what I am doing so that he will also do what he is doing – (R#12 KA – Carpenter)

Similarly, in the printing cluster, we learned that making pocketsize notebook is more profitable than the bigger notebooks. Yet, an entrepreneur in the printing cluster confirmed that he is not interested in producing pocket size notebooks because he is now dealing in products that signal a higher status among his peers in the printing enclave:

I started with these ones [pocket size note book]. I started with GHC1.50. If my father were to be here, he will testify to you ... today, if you give me this [small pocket-sized notebooks] to do, I won't do it. There are some people, like the place you went to [before coming to him]. You see that, that is the only thing they also do'. ... But this [foolscap] is not like that. One paper is GHC310, when you subtract your money [expenses], when you finish, for every one [paper worth GHC310] you get about GHC50 [profit]. But when you use the GHC310 to buy materials for this [pocket-sized notebook], you will get about GHC150[profit]. – (R#3 SCA – Maker of Note Books)

In spite of demonstrating an appreciable understanding of the *tailor's stool*¹⁵ business, a carpenter indicated that while some products were profitable, they were below his status in society. Consequently, he would not complement his struggling business with product lines that he believed to be inconsistent with his social position, although he had the capabilities to produce such products:

“As for the tailor's stools ... I think when they make them, they get some profit ... As for this job [the stool job], it is below my level. I can't do this type of work again. I can't. [...]. When they are able to make 15 stools and they make profit, at the end, they can make additional 3 stools. Then they get a total of 18. In this way, they will be increasing the outputs small, small”. – (R#8 AJ – Carpenter)

In such situations, guardian entrepreneurs can be described as having self-imposed boundaries based on their beliefs about societal perception, which ultimately prevents them from seeking and exploring new opportunities that are readily available to them. Thus, they are not motivated to introduce new products or adjust to products lines that may be more profitable than their current product lines. In this context, producing some kinds of products – foolscap or container for a shop – is a signal of higher status or improvement in business, while other products – pocket size notebook, rake or kitchen stool – are not considered prestigious.

¹⁵ A type of wooden stool that is used by most artisans in Ghana

While the production of ‘capital-intensive’ products is not exclusive to guardians, they tend to produce more capital-intensive products when compared to their peers in the same cluster. For instance, one respondent - a fabricator of articulator trailers trucks and Bedford trucks using ‘homeused’ equipment and sometimes repurposed inputs - still holds on to continuing in the product line of his deceased master in an effort to save face. Moreover, the demand for these products is reducing, and his business has shrunk from 15 workers to 2 workers in the past 6 years.

Guardians are also very relaxed about their market strategy, showing no market development or market penetration efforts. Rather they rely mostly on only their network of customers for new and continued business, as one respondent indicates below:

“That’s what I said earlier that I make the products and display here. And if people pass here and they see it, then they buy it. ... If the person doesn’t come here, there is nothing you can do”. – (R#12 KA – Carpenter)

Survival entrepreneurs: Our findings indicate that survival entrepreneurs’ behavior are driven by their need to continually stay in business. Unlike guardian entrepreneurs, their behavior is not driven by any allegiance that they may have towards keeping a particular social identity. Therefore, in the face of changes in the environmental conditions, they employ different product-market configurations. Survival entrepreneurs usually have a wide array of products with which they serve the market, and because they are not bound by societal identity constraints, they tend to branch into several product lines that their amateur skills can permit them to produce. They usually branch into product lines that can be seen as ‘low hanging fruits’ that would keep their business afloat. These entrepreneurs draw from their already existing resources - especially skills, capabilities and raw materials – to produce goods that are sought at the lower end of the market. Essentially, these products are cheaper to produce, easier to sell, and more stable in demand.

Although they have a wide array of products with which they serve the market, they tend to focus on a limited number of product varieties at a time – as they are resource constrained. In comparison with the other entrepreneurs, both guardians and survival entrepreneurs tend to view themselves more as craftsmen, than they see themselves as businessmen. Hence, they put emphasis on their product strategy but pay very little attention to their market strategy. However, survival entrepreneurs appear to be more sensitive to the market needs as they carefully choose to focus on a few products (out of their diversified portfolio) that meet market demands from time to time. One respondent puts it this way:

Gate, bugler-proof, containers ... that is what we did. But the reason why I did not mention that work at first, is that the work does not come. Sometimes, 1 month, 2 months, you don’t get any work. You come and open the shop. You won’t get any work. So, you have to try to do a work that you will also eat (put food on the table). So, I turned the business to do this (hoes, rakes and coal pots). This that I am doing, it moves than that one. As for this one, when I do it and send, I will get ‘chop-money’¹⁶. – (R#1 E.F – Electric Welder and Metal Fabricator)

An entrepreneur in the printing cluster shares how he has been able to reinvent his business from a mainstream printing press to the business of *finishing*, as he was unable to generate enough resources to stay competitive in mainstream printing space:

Formerly, this machine was used for printing. When printing started, this was what we were using. [...] Now, the computer sets everything. Because, the machine might be left idle – the machine is also durable – we have changed it to another useful thing. [repurposed the machine] [...]. What we are doing now, at the end of the month, what you get, you will use it to pay rent, light bill, school fees. At the end, you are still where you are standing. So, the difficulty... but when you don’t do it, you won’t eat. - (R#14 WA – Printing Press)

Canvassers: Canvassers are the third type of entrepreneurs observed in our sample. They exhibit a high degree of opportunity seeking behaviour. Canvassers differ from guardians and survival entrepreneurs, as they tend to be rather comfortable in pursuing new opportunities. Although canvassers may have comparable craftsmanship as guardians and survival entrepreneurs, they place more emphasis on their market strategy. Consequently, they seek to sell more of their current product lines to their

¹⁶ money for the daily provision of food for the family

existing market segments. Canvassers also tend to actively push their products into new geographic markets - albeit nothing as comprehensive as seen in the formal economy:

When I started, I was in Accra. ... I have to take the initiative to go somewhere else. I went to Mankessim, Suhum and other places. Swedru, I have roamed there. Asamankese, I have roamed there. [...]. At first, I used to supply his master [...]. He was also selling there. They were selling together. So, when he separated himself, then I went to see him and talked with him and he said he also wants some. So, I supply to him. - (R#4 KA Maker of Note Books)

I used to send some of the products. I go as a marketer. I carry the products on my head - 'apempem store'. I go like I am going for trek. [...]. ... So, you will meet customers. Some have stores, they need some [the products]. [...]. So, we have a special times that we go there. That place is seasonal. It's not all the time. ... Once, you are going, you meet different people. - (R#7 IA – Electric Welder and Metal Fabricator)

Of all the identities, canvassers pursue the most aggressive market strategy. They typically have a hands-on approach to their market strategy by moving from shop to shop in search of new customers. The purest of canvassers would typically find markets for products that he does not have the resources (or craftsmanship) to produce and subcontract it to other craftsmen, while bearing much of the risk.

Growth-oriented entrepreneurs: Growth-oriented entrepreneurs are the fourth type of entrepreneurs observed in our sample. In many ways, growth-oriented entrepreneurs are very different from all the types of entrepreneurs already discussed. In the face of adversity, they challenge themselves the most in acquiring new skills in their area of trade and related trades as well. Constantly developing new self-taught capabilities to improve upon the kinds of products that they can manufacture. Hence, they are better placed to meet the growing customer needs of the markets they serve. They are also able to develop new technologies and products to serve clients that would be traditionally out of their customer portfolio. Their desire for knowledge and growth is outstanding compared to all the other categories.

For instance, a machine fabricator had in his product portfolio, a wide variety of products, spanning very costly as well as cheap products:

"We do different kinds of machines. Some are very big. This is even small. ... The big one is GHC25,000 ...". - (R#2 MS – Machine Fabricator)

Through their persistence and continued acquisition of self-taught skills, they are also able to provide elaborate product solutions for new markets:

"For instance, when I went to the cultural Centre and I saw their loom that was my first time so when I said I can do it the instructor told me I can't that I brag a lot. And that even the grown men in this business couldn't do it then how much more me. That's what even some of my brothers say over here. If work comes and they can't do it whenever I am around I tell them I can do it and obviously I do it. I don't know but I think that's one of my gifts. No matter what you show me I do it". - (R#10 AMK – Carpenter)

Growth-oriented entrepreneurs have the most robust product strategy. They have a more concrete product development strategy. Unlike the survival entrepreneur whose product diversification is focused on low-hanging fruits at the low-end of the market (product lines that are cheaper in terms of skills and raw materials used), growth-oriented entrepreneurs are actively involved in developing entirely new products that may or may not be low hanging fruits. Essentially, they stretch their product lines mainly upwards – to the high-end market, but also downwards – to the low-end of the market.

A machine fabricator recounted how - in his days as an apprentice - he was able to follow through on a soap making machine that his master was unable to build successfully and had given up on. He indicated that his persistence and ability to fix the machine subsequently brought many customers to his master's shop. He narrates that he was later able to exploit this capability to build a sugarcane juice extracting machine and subsequently a palm oil expeller machine:

I mold machines. My job is that any machine that you want, by the grace of God I can do it. Especially in the Agric sector I can do any machine' ... I learnt this type of work but not the

palm oil expeller. It is a God given gift' I was there one time when someone told me he wanted a machine that squeezes the juice from sugar cane. I was there when the idea came to me and I told him that I could do it. [...] People complain that the process of making palm oil uses a lot of man power; cooking the palm nuts, pounding with a lot of strength, ... So, I myself looked for small money to start making this [palm oil expeller machine]. When I made the first one, I made it small and a certain man came to buy it and took it to the Eastern region. So I was there when someone called me that he wants some of the machine [...] - (R#2 MS – Machine Fabricator)

While canvassers have the most aggressive marketing approach, growth-oriented entrepreneurs also have a strong market strategy. They make deliberate efforts to reach out to potential customers. For instance, one entrepreneur used very well branded call cards and stickers to promote his business, which was rather an impressive deviation from the norm in his cluster:

"... I stick it there. In case that wherever the machine will go, if someone sees it [stickers] and wants some, then he can call me". - (R#2 MS – Machine Fabricator)

From a product perspective, growth-oriented entrepreneurs are similar to guardians in the sense that they are the two categories of entrepreneurs who would typically be involved in producing the most capital-intensive products. A carpenter narrates his attempts to develop wood and sandals from sawdust, which is a major by-product in the Sokoban Wood Village:

Right now, I have some work to do but whenever I have less time like a leisure time, instead of thinking of what I know already, I don't spend time on those things because I know them already. I plan on something new. So, do you know what happens whenever I am watching TV or when I am on Facebook? Whenever, I see something I spend time on it and think of what they used in making it.[...]. That's what I do. It is not part of the business, but you shouldn't just sit idle. Do you know that if I had done it and it was successful, like I won't buy wood again. Oh yes, like serious. Then I myself will be able to make the sandals. I will use sawdust. Made in Ghana. You see how we have to use our sense. When they collect the sawdust, they just throw it away. The companies who make plywood, they collect it and use some for plywood. You see me here, although I am here, I think a lot. That's how it is. That's how my life is. – (R#10 AMK – Carpenter)

In contrast to guardians, however, growth-oriented entrepreneurs would typically be involved in some capital-intensive products because they were personally driven to acquire the skills required in manufacturing such products. Moreover, growth-oriented entrepreneurs place more emphasis in developing new products for new markets, as compared to guardians who focus on perpetuating the traditions of the trade of their training, with little or no innovations. Growth oriented entrepreneurs tend to be much more innovative in developing new products as compared to the other types of entrepreneurs.

Strategic response of entrepreneurs

We also found three ways in which entrepreneurs in our sample strategically respond to their predicaments. These three responses (succumb, improvise and push boundaries) can be viewed as a continuum of enacting one's limitation on one end and the refusal to enact one's limitation on the other end.

Succumb: To succumb is to respond to the challenges of severe resource constraints and market uncertainty that result from environmental change by doing nothing. It also reflects the position of entrepreneurs who are overwhelmed by their challenges. Succumbing refers to an enactment of one's limitations, by allowing one's behavior to be governed by an individual's limitation. It describes a strategic response that tends to perpetuate what has worked in the past. In one breadth, it shows a continual engagement of general bricolage behaviors regarding for instance, human resource and physical inputs and in another breadth, the inability or adamant response to reconfigure current product-market configurations in response to challenges of increased market uncertainty and resource scarcity. Our data reveals that some entrepreneurs change nothing about their business strategy in response to current challenges as they lacked the willingness or capacity to change. They often take no initiative to address the challenges they face, as illustrated by the following quotes.

“The contracts don’t come like first. That’s what brings all the problems or sufferings. The way you work, every day, money comes ... I have made money in the past. But today, it is lost. It’s not anything, we keep praying”. – (R#8 AJ – Carpenter)

“But when you come and are seated idle like you find me, you don’t need anyone to tell you that business is not moving. In the past, it used to be good but now it isn’t. Like I said, if it is moving well, you have work to do. If all the time you have work to do ... but in the case where it keeps long before you get work to do, that is not helpful”. – (R#11 AB – Electric Welder & Fabricator)

While some entrepreneurs indicated that switching from their current product lines to those that are at the lower end of the market and therefore cheaper to produce, they also feared that such a move would make people gossip about them. Others felt that some product lines were simply below their status in society. Others indicated that they lacked the skills and capabilities to adjust their current resources to the changing business environment and market needs. For instance, in the quote below an entrepreneur expresses his inability to build new networks that will enable him to respond to the evolutions in the printing business.

“In the past, before you are given a job, unless you have a press. But now, potomanto [a contractor] press is a lot. Everyone finishes school and says he is a printer [...] Now, we too we don’t have classmates. We don’t have classmates. When you enter an office with grey hair, they say he is an old man. He cannot do the job and they give it to their mates. That’s how things are going now. [...]. The person won’t give it to you. He will give it to the potomanto person [...] As for the difficulties, they are many. You won’t get the job”. – (R#14 WA – Printing Press)

Some respondents indicated that although their training would permit them to branch into other products, they felt that every craftsman had his own God-given path to pursue, and that switching meant that one had veered off from his calling. Hence it would be considered as meddling in someone else’s business and such actions were not regarded as healthy in their view. In responding to market uncertainties, succumbing implies that these entrepreneurs wait for customers to place orders and pay for the cost of production upfront before they produce. Alternatively, some produce only as little as their current resources can permit and wait until a customer is able to pay the selling price. In sum, some entrepreneurs choose to do nothing in response to their changing business environment.

Improvise: Our data showed a considerable number of entrepreneurs engaged in an improvisation strategy. Improvisation is an inward looking strategic response where entrepreneurs typically make do with their current resources to meet their current challenges. Improvisation as a response means that entrepreneurs remain open to options and opportunities that come their way, and recombining or reconfiguring their current resources to their challenges:

“I have other machines I make for outsiders to buy and give me money. I have small machines there like ‘nica-nica’ [corn-mill], tomatoes grinding machine and the like. When that happens, I make those small things for them. Then I make those things for them to make some money”. – (R#2 MS – Machine Fabricator)

“Now, the welding work is plenty. We have about 10 things [products] we are making here. If this one is on, this will be off or if this one is off, another one will be on. So, all the time, we come to work. If this [product] is not requested, that [product] will be requested. Every time, there is something you are doing”. – (R#7 IA – Electric Welder and Metal Fabricator)

“When here is busy, [seasonal] I make only notebooks. Note 3, Teachers notebook and foolscap only. Those are what the customers demand. But when here is not busy, that is when we do the singing (pocket-sized) notebooks? For that one, even if you bring money [in the peak season], the singing [pocket size] notebook, I won’t do it for you. (Interviewer asks: Why?) I won’t get the time to do it”. – (R#4 KA Maker of Note Books)

One electric welder and fabricator recounts how he changed his business to a less capital-intensive business when he was faced with adversity. Using his existing skills and resources, he was able to change to a set of cheaper product lines:

“.... Because I can buy these for GhC20 and these for GhC30 [referring to his raw materials from the condemn market], so let's say with GhC50 I can do business right now. When I take it to the market, I will get 'chop-money'. But the gate almost GH¢1500 to GH¢2000 and then the person too is not paying. And you will be going back and forth with the person. So, I won't do it. I won't even come close. That is how the business is”. - (R#1 E.F – Electric Welder and metal fabricator)

Improvisation does not require the development of any new competences in response to the challenges of market uncertainty and resource constraints. Improvisation is generally not initiated by entrepreneurs' proactivity, but emerges as entrepreneurs come across new challenges and opportunities. As such, improvisation leans more towards a reactive strategy, where entrepreneurs cease the moment to exploit an opportunity. It is inward looking because entrepreneurs do not seek to develop new competencies nor are they focused on entering new markets segments. We found three forms of improvisation among entrepreneurs in the informal economy. First, it could merely be a temporal response where the solutions developed may serve the business for a short-term. It could also serve as a permanent strategy where the solutions developed may eventually become the core business of the firm. Thirdly, it could be a blended strategy where the entrepreneur frequently oscillates between his core business and the new solutions that have been discovered serendipitously, carefully choosing between the former and the latter from time to time. When entrepreneurs face market uncertainties, they resort to the production of cheaper (petty) goods that require far less physical inputs than the core (original) product lines that they are identified with. Hence, they focus on products that also have relatively stable demand – essentially going to the low-end of the market. Others resort to looking for new geographic markets where they can sell their (original) products. Another strategy is to expand one's network of customers and learn over a period to build long-term relationships with those who prove to be trustworthy with payments.

On the one hand, improvisation implies a cautious and selective approach to minimize the challenge of low reliability in market transactions, such as customer defaults in payment. On the other hand, improvisation involves the use of tactics such as the cajoling and begging of customers until they fully pay for products bought through part-payment.

Push boundaries: To push boundaries implies a strategic response that challenges conventional or widely accepted knowledge on the limitations of entrepreneurs. It indicates a more proactive and outward looking response to adversity. Consequently, entrepreneurs are deliberate about developing new competencies to enter new markets. Pushing boundaries requires the refusal to enact the limitations of entrepreneurs' current challenges in their search for new opportunities. As shown below, boundary pushing is not a denial of the challenges that entrepreneurs are confronted with, but rather the desire and ability to confront those challenges:

“... we have one problem here, most of our carpenters here always want to live with what they were taught that's why I like challenging myself”. - (R#10 AMK – Carpenter)

“As for the practicals, by God's grace we know. But for me sitting here, I want the theory to add to my life. ... I see that I am okay with practicals but sometimes some of the things beat us (are challenging)”. - (R#2 MS – Machine Fabricator)

Consequently, it involves strategic initiatives that transcends the firms' current operations. A key component of boundary pushing is the practice of constant experimentation albeit with amateur self-taught skills while making the most of available resources.

DISCUSSION AND CONCLUSION

This paper is set out to explore entrepreneurs' identity and their strategic response to the challenges of operating in an informal economy. We find four different types of entrepreneurial

identities and three strategic responses that entrepreneurs resort to when faced with the dynamic market uncertainties and the severe resource constraints that bedevil entrepreneurs in the informal economy. As entrepreneurial identity is central to strategy (Fauchart & Gruber, 2011; Navis & Glynn, 2011; Powell & Baker, 2014), we highlight implications of different identities on the strategic responses of entrepreneurs in the informal economy (see Table 3). We argue that entrepreneurial identity either constraints or enhances the extent to which entrepreneurs ‘make do’ when faced with adversity. Consequently, the paper shows that the need for survival, the need for growth and opportunity seeking behavior also underpins how entrepreneurs respond in times of market uncertainties and resource constraints that underlie the environmental change of the informal economy.

Since guardians place emphasis on non-economic needs such as, their perceived status in society, their strategy will remain unchanged, even under changing environmental conditions. Thus, guardians fail to re-invent themselves and their businesses. They succumb to challenges and improvise when their social identity is not threatened. Survival entrepreneurs focus heavily on using resource at hand primarily for satisfying their sustenance. We argue that they will succumb to the extent that they can continue to make a living. However, survival entrepreneurs would usually improvise by switching or expanding their product portfolio. As canvassers are constantly in search of new and more reliable markets, we argue that they are very unlikely to succumb. Rather, they improvise by turning their attention to developing and serving new markets. Growth-oriented entrepreneurs tend to have the most robust response as they make do by reconfiguring their resources and acquiring new capabilities to overcome challenges. Consequently, they mainly tend to push the boundaries of their limitations.

Table 3: Entrepreneurial identity and strategic responses

	Guardian entrepreneurs	Survival entrepreneurs	Canvassers	Growth-oriented entrepreneurs
Succumb	Will succumb if their current strategy is consistent with the perceived identity they hold in society.	Will succumb if only they can get by when their product or market strategy remain unchanged.	They are very unlikely to succumb, given that they are always in search for new opportunities.	Are not likely to succumb, as they inherently desire to take on challenges and are often on a mission to defy the odds to build their business.
Improvise	Will only improvise if the new product line they would produce are consistent with their perspectives of the status they hold in society.	Will improvise if they risk going out of business -because of the challenges they face. Will improvise if their current skills and capabilities permits them to develop new product lines that require minimal resources to produce.	Will improvise when faced with challenges by seeking new customers or new markets.	Will improvise only as a short-term measure of getting by.
Push Boundaries	Would lack any motivation to push boundaries, as they are typically satisfied with their current product and market strategy.	Not likely to push boundaries because they do innately seek to build new competencies that will enable them to develop new products.	Not likely to push boundaries as they are primarily not interested in developing new capabilities to develop new products.	Will push boundaries because they are very determined to go against all odds to be successful in business.

Scholars have previously shown that entrepreneurial identity enables us to understand the different motives driving the entrepreneurial process (Alsos et al., 2016; Fauchart & Gruber, 2011;

Mmbaga et al., 2020). Essentially, entrepreneurs' social identity can be driven by economic self-interest and non-economic social interests (Fauchart & Gruber, 2011; Zahra et al., 2009). By focusing on the informal economy context where entrepreneurial behavior is governed by beliefs, values and norm, we contribute to this discussion in two ways. First, we find that Guardians run their business with the primary motive of perpetuating their perceived social identity in order to save face in the community in which they are embedded, rather than for (1) economic, (2) socio-economic or (3) political motives as discussed in prior literature (Fauchart & Gruber, 2011; Gruber & MacMillan, 2017; Zahra et al., 2009). Hence, we identify a fourth (non-economic) type of entrepreneurial identity in the informal economy. The Guardian is particularly different from other entrepreneurs discussed in prior literature as well as the other three types of entrepreneurs found in this study, as they tend to ignore/sacrifice profitable business opportunities that are inconsistent with their perceived social identity even when such decisions lead to a consistent decline of their businesses. The Guardian entrepreneur may help us to understand why entrepreneurs succumb under precarious and changing environmental conditions and further enlighten us on why some entrepreneurs are unable to reinvent their business models in times of adversity.

We show that in the informal institutional pressures, be it real or perceived, such as the fear of being looked-down upon by members of the community may prevent entrepreneurs from exploiting some opportunities, even if they are aware of the profitable nature of those opportunities. In this light, scholars have argued that role identity of entrepreneurs prevents them from exploiting some opportunities (Slade Shantz et al., 2018). For instance, Slade Shantz and colleagues (2018) argue that in collectivist societies, informal institutional mechanisms of fatalism may limit entrepreneurs to pursue only predetermined and inherited opportunities. In contrast, we find that Guardians are not only limited to pursue inherited identities, rather some entrepreneurs deliberately ascribe to certain identities in society and consequently choose to limit themselves from pursuing some opportunities. Again, providing further insight into prior literature (Alvarez & Barney, 2014; Slade Shantz et al., 2018), we find that while Guardians imitate their masters, they are unlikely to imitate other entrepreneurs even if they have a good idea of their business models.

Additionally, we shed further insights on entrepreneurial identities that are driven by economic self-interest (Fauchart & Gruber, 2011) of entrepreneurs operating in the informal economy. We argue that survival entrepreneurs, canvassers and growth-oriented entrepreneurs show varied motivations that underlie their strategic responses.

Boundary Conditions and Future Research

The study is set in five industrial clusters where there is high concentration of informality, which enables us to explore our research question in varied industries. One may argue that the study is limited to a single country context and the findings may not be relevant to other settings. Yet, we argue that Ghana is a relevant context where entrepreneurs in the informal economy operate under similar conditions as other Sub-Saharan African countries, and developing economies in general (Odera, 2013; Takyi-Asiedu, 1993; Vermeire & Bruton, 2016). However, we acknowledge that while the study focused on informal entrepreneurs facing resource constraints and market uncertainty because of changes in the environment, our findings may not be relevant to informal entrepreneurs in developed countries as they show stark differences in infrastructural development (Webb et al., 2014). Consequently, entrepreneurs operating informally in developed regions can draw on more advanced environmental conditions (Siqueira et al., 2016; Williams et al., 2017). We are also likely to see different results in individualistic cultures where the normative pressure to conform to the perception of one's role in society may be less pronounced (Hofstede, 2011). In such cultures, we do not expect entrepreneurs to act with the primary motive of saving face.

Furthermore, it could be argued that the Guardian identity might have resulted only because the entrepreneurs sampled operated in industrial clusters where there are many other craftsmen of the same trade. Hence, the need for entrepreneurs to differentiate themselves. Under such conditions, inheriting or creating an identity and staying consistent with such an identity even in the presence of adversity may be a useful approach to brand oneself. However, evidence from our data indicates that the Guardian identity is motivated by a non-economic need to save face. We encourage further studies to consider entrepreneurs who do not operate in industrial clusters.

In conclusion, this paper provided fresh insights into the different types of entrepreneurial identities in the informal economy. We highlight a novel type of entrepreneur (Guardian) and show how the Guardian identity constraints entrepreneurs' strategies in the informal economy.

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Appendix 1: Interview Protocol/Guide

INTERVIEW PROTOCOL/GUIDE

Introduce myself

Ask for permission to record

1. Background of the interviewee and their business.
2. How is a typical day (week) of business to you? Probe .. what products or services is the business offering?
3. Did you think about registering your business when you were starting? Can you think of a time that you felt that registering your business would have been a good thing? Why did you feel that way?
4. Can you tell me about the resources you use in your business? Probes .. Where did you get the resources from when you were starting? How do you get
5. Would you say that you are okay with the resources you have at your disposal for doing business?
 - a. Probes .. can you give me some examples or scenarios? (Look out for constraints and how and how they maneuver And probe more)
6. What are the most important or valuable resources that you need to run your business? Probe... Do you have these resources?
7. Probe why and how each resource mentioned is important to them.
8. Well, you have been running this type of business for the past years, is this what you had in mind when you wanted to start doing business (here)?
 - a. Probes... so what exactly did you have in mind when you were starting this business? Has that changed much? Why or why not? How has it (not) changed?
9. Can you think about a time in your business when so much changed?
 - a. Probes .. When was that? How did you manage the situation?
10. How do you typically deal with your stakeholders?
 - a. Probes .. specific stakeholders like customers, suppliers, associations (in the cluster), local authorities, central government authorities, financiers, etc.

Last question ...

It is okay with you if we get back to you for some clarification or additional questions later?

Thank you very much for your help!!!

THE EFFECTS OF FOREIGN DIRECT INVESTMENT AND REMITTANCES INFLOWS ON ECONOMIC PERFORMANCE: EVIDENCE FROM GHANA AND NIGERIA.

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ABSTRACT

This study examined the contending role of foreign direct investment (FDI) and remittances in driving the performance of the Ghanaian and Nigerian economies. The choice of these two countries is because both of them constitute approximately 80 percent of West Africa's economy and they have been the top two recipients of foreign direct investment (FDI) and remittances inflows into the region in the last three decades. The study employed the PMG (Pooled Mean Group) estimator of the dynamic heterogeneous panel (panel ARDL) to test the relationship among the variables. The study revealed that FDI and remittances inflows have positive effects on both countries' economic performance. These results align with the postulation of the Harrod-Domar two-gap theory, which emphasizes the importance of foreign capital inflows on the growth process of nations. However, the impact of foreign capital inflows on the economic performance of both nations is negligible.

Keywords: Foreign Direct Investment, Remittances, Economic performance, Ghana, Nigeria, and Panel Autoregressive Distributed Lag (Panel ARDL).

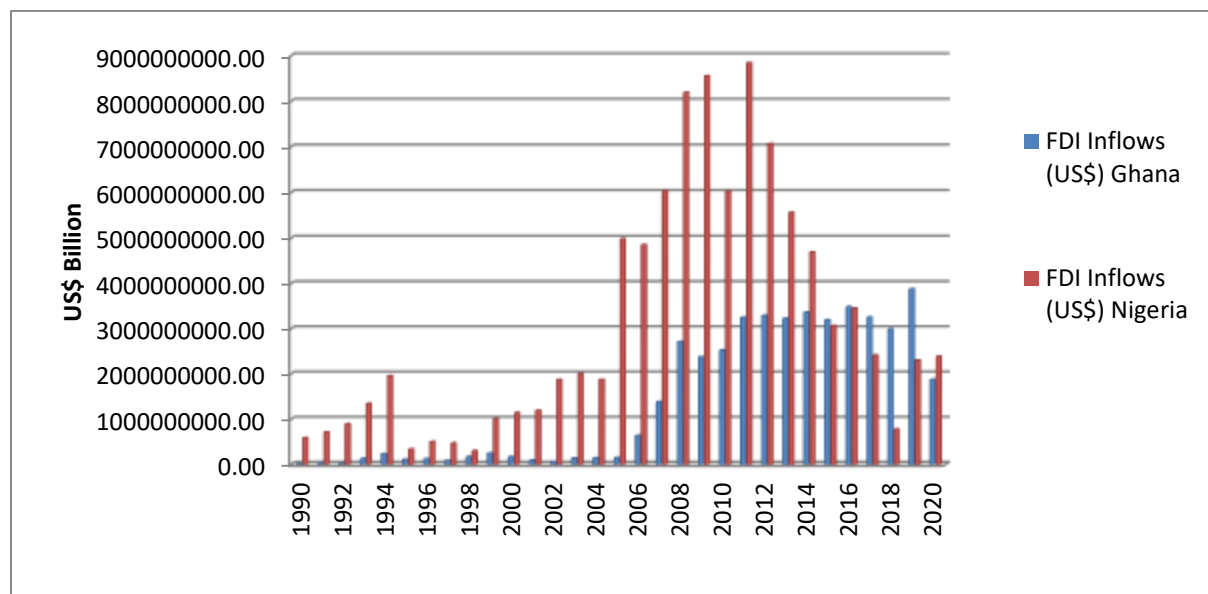
INTRODUCTION

Emerging and frontier economies from different regions of the world lack the requisite capital flows to engineer sustainable economic growth and development (Tahir *et al.*, 2020). Therefore, these categories of nations constantly seek means of attracting foreign capital inflows from the developed nations to accelerate economic growth and improve the social welfare of citizenry. Foreign capital inflows have been identified as useful instruments for attaining desirable growth, as domestic savings are insufficient to stimulate investment and therefore, must be complemented by foreign capital (Ehigiamusoe and Lean 2019). In Asia, Tahir *et al.* (2019) reported that foreign capital inflows are critical drivers of economic growth and indicated that the South Asian Association for Regional Cooperation (SAARC) region attracts sufficient foreign capital from the advanced world to engineer long-term growth. Stemming from Africa, Onyeiwu (2015) revealed that public and private sector

investments have been hindered by the paucity of capital for investment. Similarly, Kestinsoy (2017) posited that foreign direct investment, which is a fundamental form of foreign capital inflows to West African Sub-region, has declined by 18 percent in recent years, which amount to US\$9.9Billion. This is largely attributed to the fact that Nigeria and Ghana, which have been the two most critical Anglophone power houses in the region suffered from political and economic uncertainties in recent years.

Figure 1: FDI Inflows into the Ghanaian and Nigeria Economies (1990-2020)

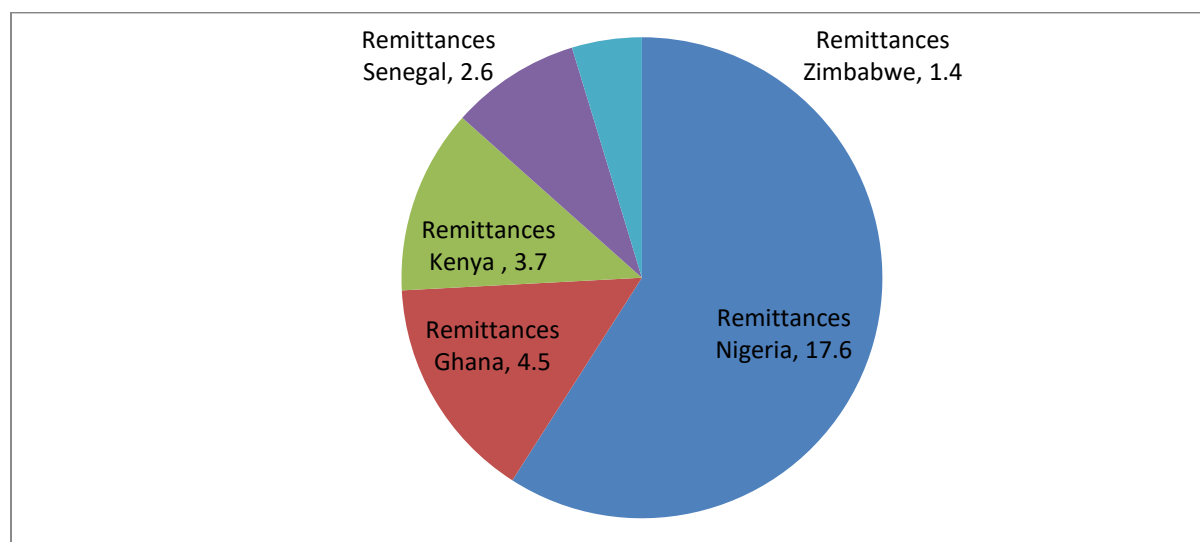
Source: UNCTAD (2020)



Specifically, Nigeria, which possessed the largest economy in the continent in 2014 lost several investments to the Eastern and Southern African regions because of endemic corruption, political instability and infrastructural decay.

Figure II: Sub-Sahara Africa top five recipient countries for remittances inflows in current USD

Source: UNCTAD (2020)



In terms of remittances inflows (See figure II) both nations dominated the entire African continent in 2021 given the huge size of migrant workers base (about 800,000 and 110,000 persons for Nigeria and Ghana respectively) concentrated in two key host countries, the United States of America and United Kingdom. In 2021, the top 5 recipient nations in Sub-Saharan Africa are Nigeria US\$17.6Billion, Ghana US\$4.5Billion and Kenya US\$3.7Billion while Senegal and Zimbabwe complete the top 5 nations at US\$2.6Billion and US\$1.4Billion respectively.

From the foregoing, there are several reasons to justify the conduct of this study. For instance, some scholars (Djokoto, 2012; Nwaogu and Ryan, 2015; Alfaro, 2017; Evans and Kelikume, 2018; Musibau *et al.*, 2018; Agyemang *et al.*, 2019; Iheanachor and Ozegbe, 2021; Shittu *et al.*, 2020) have interrogated the nexus between foreign capital inflows and economic growth through different channels and posited that the association between foreign capital inflows and economic growth is still inconclusive, meaning that further studies are required to better comprehend the relationship. More importantly, to the best of our knowledge, none of these studies have beamed their torch light on the interactive effects of FDI and remittances on the growth of the Nigerian and Ghanaian economies who are the top two recipients of FDI and remittances inflows into the West African sub-region. FDI and remittances inflows into both countries represent approximately 81 percent of the total foreign capital inflows to the region. In terms of Gross domestic product (GDP), both nations' economies also constitute over 80 percent of West Africa's economy. To bridge these gaps in the literature and improve on the limitations of the previous empirical and theoretical studies, this study built its theoretical foundation on the Harrod (1948) and Domar (1957) two-gap theory which states that foreign capital inflows can accelerate an economy's growth rate by raising the availability of capital for production, where the capital-output ratio is held constant.

To demonstrate how the effects of FDI and remittances inflows affects both nations economic performance, this study considered a time frame spanning 1986 to 2020 which marked the adoption of the infamous structural adjustment programme in which the government of both nations took major policy initiatives for liberalizing and opening up their economies to foreign investors. Given the outcome of the previous studies in this research space, this present study differs substantially from the earlier ones on three novel grounds. First, the study produced a robust estimation by considering the effects of FDI and remittance on the economic performance of Ghana and Nigeria and also incorporating other variables to avoid misleading results owing to omitted variables. Second, the study improved on previous studies by utilizing the PMG (Pooled Mean Group) estimator of the dynamic heterogeneous panel (panel Autoregressive Distributed Lag (ARDL)) to test the relationship among the variables. This estimator produces consistent estimates of the average parameters. It also allows the estimation of long-run co-efficient without making a less plausible assumption of identical dynamics in each country and it is valid for policy suggestions. Third, the study validated the existence of the Harrod-Domar (1948, 1957) two-gap model in the Ghanaian and Nigerian context. The rest of the paper

is organised as follows. Section 2 reviews the related literature. Section 3 introduces the methodology and data. Section 4 presents the empirical results and analysis. Finally, the conclusion and policy recommendations are presented in Section 5.

LITERATURE REVIEW

Theoretical Foundation

The pioneering Harrod-Domar model (1948, 1957) remains a critical reference in the economics of investment. It explains the importance of ascertaining the rate of investment required to attain a rate of economic growth (Evans and Kelikume, 2018; Sakyi and Egyir, 2017). Similarly, the role of foreign investment (in the form of FDI and remittances) in economic performance has been recognised as key in the literature (See Agyemang *et al.*, 2019; Alfaro, 2017; Flora and Agrawal, 2017; Melane-Lavado *et al.*, 2018; Koojaroenprasit, 2012). However, this role of FDI in economic growth is highly controversial. The proponents of FDI argued that FDI augments capital formation in the host country and promotes economic growth (e.g., Acquah and Ibrahim, 2020; Bermejo and Werner, 2018; Pandya and Sisombat, 2017; Zekarias, 2016). Opponents of FDI argued that FDI damages growth (e.g., Dinh *et al.*, 2019; Masipa, 2018; Siddique *et al.*, 2017).

The Two Gaps Model (Harrod-Domar Theory)

Harrod (1948) and Domar (1957) attributed economic growth to total national savings, capital efficiency (MEC), and depreciation in capital stock. In their earlier analysis, the growth model was limited to the closed economy. Thus:

$$Yg = f(s, k, \delta).$$

$$Yg = \beta (s) - \delta.$$

In the review of this theory, the early model of Harrod and Domar (H-D model) was built on the assumption of variables under consideration. Furthermore, technical progress was neglected as a critical determinant of growth, and finally, the assumption of fixed factor intensity, which does not allow factor substitution, is unrealistic. In a revised work by the authors, the model was extended to the external sector, which indicated that foreign capital inflows play an amplifying role in achieving economic growth. This version of the H-D model proved relevant to less developed countries, (LDCs) like Nigeria and Ghana, lacking the required savings capacity to command the minimum necessary investment for growth. Nevertheless, the extension of the external sector's scope opens up opportunities for LDCs to obtain funds from the international market for domestic investments to attain the desired growth rate. The model of H-D with international sector consideration is:

$$Yg = \beta (s + f) - \delta.$$

Where β ... MEC

s ... savings

f foreign capital inflow ((f/y))

δ depreciation

Foreign Direct Investment- Economic Growth Nexus

A plethora of empirical and theoretical studies have been conducted to ascertain the nexus between FDI and economic growth in the social and economic literature. However, the empirical results have been mixed. On one side, some studies found FDI could stimulate economic growth through spillover effects such as new technologies, capital accumulation, increased export, and human capital development (Hussain and Haque 2016; Choi and Baek 2017; Ridzuan *et al.*, 2017; Hayat, 2018; Sirag *et al.*, 2018; Tahir *et al.*, 2019; Iheanachor and Ozegbe 2021). However, on the other side, some authors found that FDI has a negative effect on economic growth in some countries (Bayar, 2014; Belloumi,

2014; Temiz and Gokmen 2014; Jawaid and Saleem 2017; Belloumi and Alshehry, 2018; Bermejo *et al.*, 2018).

For instance, Sirag *et al.* (2018) explored the effects of FDI on Sudan's economic growth through financial sector development. The study used the fully modified ordinary least square technique to estimate the annual time series data spanning 1970 to 2014. The study revealed the existence of long-run relationship among the variables even after accounting for structural breaks. It indicated that financial development and FDI are positive and significant in explaining Sudan's economic growth. This implies that FDI leads to a better economic performance through financial development. Similarly, Tahir *et al.* (2019) reported a positive relationship between FDI and economic growth. It confirmed that inwards FDI are the critical driving force behind economic performance as they aid the transfer of technology, and knowledge and improve skills among the working the population. Hayat (2018) examined the connection between FDI inflows, natural resources abundance, and economic growth. The study used a fixed effects model to analyse the panel data for the sample period from 1993 to 2012. The study confirmed that FDI inflows accelerate the host country's economic performance. Hussain and Haque (2016) investigated the nexus between inwards FDI, trade openness and economic performance in Bangladesh from 1973 to 2014 by employing the multivariate cointegration method. The study revealed that inwards FDI and trade openness have a direct significant effect on the Bangladeshi economy. Choi and Baek (2017) affirmed that FDI inflows lead to enhanced total factor productivity growth (TFP) in India through positive spillover effects. Ridzuan *et al.* (2017) deployed the autoregressive distributed lag (ARDL) approach to examine the linkages between FDI and economic growth in Singapore from 1970 to 2013. The study reported that FDI inflows play a critical role in accelerating the Singaporean economic growth. Iheanachor and Ozegbe (2021) investigated the contribution of FDI inflows to the growth of the Nigerian and Ghanaian economies between 2000 and 2018. The study employed the ordinary least square (OLS) econometric technique to test the linkages among the variable of interest. It revealed that FDI inflows to both economies enhanced economic growth positively. However, the positive impact is statistically insignificant.

On the flip, some other studies revealed that FDI inflows have an adverse effect on economic growth. For example, Belloumi and Alshehry (2018) investigated the causal relationship between domestic capital investment, FDI, and economic development in Saudi Arabia between 1970 and 2015. Using the autoregressive distributed lag (ARDL) estimation technique; the study revealed that there is negative bidirectional causality between non-oil economic growth and FDI in the long-run. Similarly, the study reported that FDI has a negative effect on domestic capital investment in the short-run. Moreover, domestic capital investment affects FDI negatively in the long-run. Another study conducted by Jawaid and Saleem (2017) documented a significant negative impact of FDI on economic growth in Pakistan. Similarly, Bermejo *et al.* (2018) used data for the Spanish economy to identify the impacts of FDI on economic and reported no evidence of positive FDI-growth relationship. Belloumi (2014) examined the relationship between FDI, trade openness, and economic growth for Tunisia over the period 1970–2008 by using the ARDL bounds testing to cointegration. He found the variables are cointegrated when FDI is the dependent variable. However, his findings show that FDI does not Granger cause economic growth in Tunisia. Temiz and Gokmen (2014) studied the relation between FDI inflows and economic growth in Turkey using quarterly data from 1992:1 to 2007:3 and employing the Johansen multivariate cointegration approach. Their findings indicated no causal relationship between the FDI inflows and economic growth both in the short and long run. For the same country, Bayar (2014) studied the causal relationship between DI, FDI, and economic growth over the period 1980–2012 by using the bounds testing to the co-integration approach. He found that the three variables are cointegrated, but the foreign direct investment inflows had a negative effect on economic growth in both short and long run.

Remittances and Economic Growth Nexus

The relationship between remittances and their potential effects on economic growth has been examined in the literature recently by various researchers. To offer evidence from SAARC countries, Jawaid and Raza (2016) reported a negative connection between inward remittance flows and growth in Pakistan while demonstrating a positive linkage between the two factors across the remaining four

economies within the region. Similarly, Jawaid and Saleem (2017) indicated that inward remittances could positively contribute to the economic development of Pakistan. Furthermore, Meyer and Shera (2017) identified the role of remittances in the process of economic growth and development and suggested that sometimes they exceed that of FDI inflows. Rising level of remittances are germane to the economic advancement of emerging economies. Rising remittances inflows increases foreign reserves, improve the wellbeing of the poor segment of the society. Therefore, developing countries depend heavily on remittance inflows from advance economies. Also, some scholars argued remittances are the main instrument for enhancing the growth of an economy, as they indicated a positive relationship between economic growth and remittances (Paul and Das, 2011; Bayar, 2015; Karamelikli and Bayar, 2015). Peprah *et al.* (2019) suggested that remittances could be used as an alternative for inefficient credit market and hence may help domestic entrepreneurs to avoid high lending costs. However, it is also possible that remittances may have adverse consequences for the economic growth of the host countries sometimes. Datta and Sarkar (2014) have documented those consequences of remittances may be detrimental for the host countries if they are used unproductively or for conspicuous consumption. They further commented that remittances make people in the domestic economy dependent on easy money and hence the labour market adversely affected due to which economy growth deteriorates significantly. Moreover, the recent study of Anetor (2019) empirically showed that remittances impact economic growth negatively both in the short and in the long run. It implies that remittances should be used for productive use and hence may be channeled to investment in the domestic economy to improve economic growth in the long run.

MODEL AND METHODOLOGY

Data and Sources

As stated earlier, the study aims to examine the effects of FDI and remittances on economic performance in Ghana and Nigeria. The dataset employed for this analysis comprises annual panel data spanning 1986 to 2020, which marked the adoption of the infamous structural adjustment programme in which the government of both nations took major policy initiatives for liberalizing and opening up their economies to foreign investors. The choice of time frame and countries were also informed by the availability of data. The dependent variable—economic growth was proxied by annual GDP growth rate while the independent variables were FDI inflows (as a percentage of GDP) and remittances (as a percentage of GDP). To moderate the relationship between economic growth and FDI and remittances, financial development (proxied by the ratio of broad money supply to GDP) and trade openness (measured by the sum of exports and imports to GDP) were introduced as control variables. Table I presents the variables under consideration, sources, and measurement.

Table 1: Sources and Measurement of Variables

Variables	Sign	Measurement of Variables	Sources
GDP	GDP	GDP growth (annual %)	World Bank (WDI)
Foreign Direct Investment	FDI	Foreign direct investment, net inflows (% of GDP)	World Bank (WDI)
Remittances	REMIT	Personal remittances, received (% of GDP)	World Bank (WDI)
Trade Openness	TOP	The sum of exports and imports of goods and services (% of GDP)	World Bank (WDI)

Financial development	M2	Broad money (% of GDP)	World Bank (WDI)

Model Specification

Following the two gaps model espoused by Harrod (1948) and Domar (1957) which is the theoretical foundation of this study and the frameworks designed in the empirical studies (Sirag *et al.*, 2018; Belloumi and Alshehry, 2018; Tahir *et al.*, 2020). This study's model specification adapted and modified an earlier study conducted by Njangang *et al.* (2018), which examined the short-run and long-run effects of FDI, and remittances on the economies of some selected African countries. Therefore, to examine the interactive effects of FDI and remittance on economic performance and the linkages between FDI, remittance, and economic performance, the empirical model is specified as follows:

$$GDP_{it} = f(FDI_{it}, REMIT_{it}, FD_{it}, TOP_{it}) \dots\dots\dots 1$$

Where: GDP = GDP growth rate; FDI= FDI inflows ratio; REMIT= remittance ratio to GDP; FD= financial development; TOP= trade openness.

This study examined the effects of two different foreign capital inflows foreign direct investment (FDI) (Tahir, 2020), remittances (Anetor, 2019) to increase the robustness of the results. Economic performance was measured by GDP growth (Annual %) (Iheanachor and Ozegbe, 2021). Following the previous studies, financial development measured broad money as a percentage of GDP (Njangang *et al.*, 2018) and trade openness measured as the sum of exports and imports of goods and services as a percentage of GDP Jawaid and Saleem (2017). The panel ARDL (p, q_2, q_2, q_3, q_4) model is specified as follows:

$$\begin{aligned} \Delta GDP_{it} = & \gamma + \sum_{j=1}^p \alpha_j \Delta GDP_{it-j} + \sum_{j=0}^{q_1} \beta_{4j} \Delta FDI_{it-j} + \sum_{j=0}^{q_2} \beta_{4j} \Delta REMIT_{it-j} + \sum_{j=0}^{q_3} \beta_{3j} \Delta FD_{it-j} \\ & + \sum_{j=0}^{q_4} \beta_{4j} \Delta TOP_{it-j} + \lambda GDP_{it-1} + \delta_1 FDI_{it-1} + \delta_2 REMIT_{it-1} + \delta_3 FD_{it-1} \\ & + \delta_4 TOP_{it-1} + \mu_i + \varepsilon_{it} \quad (2) \end{aligned}$$

Where p, q_1, q_2, q_3 and q_4 are the respective maximum lags of the dependent variable (GDP) and the explanatory variables (FDI, REMIT, FD and TOP) while $\alpha_j, \beta_{1j}, \beta_{3j}, \beta_{1j}$, and β_{4j} are the coefficients associated with the dependent variable and the explanatory variables at the various lags. Furthermore, μ_i is the country-specific effect and ε_{it} is the error term

Following equation (2), the panel ARDL Error Correction Model (ECM) specification is given as follows:

$$\begin{aligned} \Delta GDP_{it} = & \gamma + \sum_{j=1}^p \alpha_j \Delta GDP_{it-j} + \sum_{j=1}^{q_1} \beta_{1j} \Delta FDI_{it-j} + \sum_{j=1}^{q_2} \beta_{2j} \Delta REMIT_{it-j} + \sum_{j=1}^{q_3} \beta_{3j} \Delta FD_{it-j} \\ & + \sum_{j=1}^{q_4} \beta_{4j} \Delta TOP_{it-j} + \theta ECT_{it-j} + \mu_i + \varepsilon_{it} \quad (3) \end{aligned}$$

Equation (3) states the ECM form of the panel ARDL model, which closes the gap between the disequilibrium and equilibrium in the short-run and long-run, respectively. The coefficient (θ) of the error correction term (ECT) term called the speed of adjustment is expected to be negative to restore the model to equilibrium, i.e., $\theta < 0$.

Following equation (2), the long run form model is expressed as follows:

$$GDP_t = \varphi_0 + \varphi_1 FDI_{it} + \varphi_2 REMIT_{it} + \varphi_3 GDP_{it} + \varphi_4 TOP_{it} \quad (4)$$

Thus, the long-run coefficients in relation to equation (2) are defined as follows:

$$\varphi_1 = \frac{-\delta_1}{\lambda}, \varphi_2 = \frac{-\delta_2}{\lambda}, \varphi_3 = \frac{-\delta_3}{\lambda}, \varphi_4 = \frac{-\delta_4}{\lambda}, \quad (5)$$

From equations (5), the parameters $\phi_1, \phi_2, \phi_3, \phi_4$ and ϕ_5 are the long-run impacts of *FDI*, *REMIT*, *FD*, and *TOP* respectively on *GDP*.

Data Analysis Techniques

The analytical technique is based on panel data analysis. The analysis is in two stages namely exploratory analysis and the inferential analysis. The exploratory analysis captures summary or descriptive statistics and panel correlation matrix.

The pre-estimation tests involve panel unit root and panel cointegration tests. The panel unit root test is conducted to determine the time series properties of the dataset using Levin *et al.* (2002) tests while the panel cointegration test was employed to confirm the presence of long-run relationship among the variables using Panel PP-statistic. Based on the outcome of the pre-estimation tests, the study employed the Pooled Mean Group estimator of the dynamic heterogeneous panel (panel ARDL) for the inferential analysis. The PMG estimator is based on the axiom of homogeneity among the long-run coefficients while assuming heterogeneity for the short-run coefficients.

Empirical Results and Discussion

The study presents the results of the exploratory and inferential analyzes, starting with the summary of statistics, as shown below.

Table II: Panel Summary Statistics

	<i>GDP</i>	<i>FDI</i>	<i>REMIT</i>	<i>FD</i>	<i>TOP</i>
Mean	4.746651	2.572552	2.440761	20.72949	53.06835
Median	4.747645	1.686556	0.970260	22.42294	45.19025
Maximum	15.32916	9.466664	10.08457	34.10823	116.0484
Minimum	-2.035119	0.075075	0.004883	9.063329	9.135846
Std. Dev.	3.294171	2.388055	2.590536	6.958312	24.31356
Skewness	0.440098	1.273191	0.838324	-0.020736	0.640356
Kurtosis	4.293453	3.714691	2.552311	1.798501	2.672344
Jarque-Bera	7.139319	20.40163	8.783757	4.215514	5.097106
Probability	0.028165	0.000037	0.012377	0.121510	0.078195
Sum	332.2656	180.0787	170.8533	1451.065	3714.784
Sum Sq. Dev.	748.7580	393.4936	463.0505	3340.849	40789.29
Observations	70	70	70	70	70

Source: Authors' computation using E-VIEWS

Table II presents the summary statistics of the panel dataset. GDP growth rate of both countries averaged around 4.7 percent within the years considered. FDI and remittances averaged about 2.6 percent and 2.4 percent of GDP. On the other hand, the financial development indicator and trade openness stood at 20.7 percent, and 53.1 percent, respectively. The panel standard deviation showed a positive and healthy trend. All the variables except financial development are positively skewed, indicating the tail is longer in the positive direction of the number line. While the Kurtosis of GDP and FDI have leptokurtic distribution (thin bell and fatter and heavy tails), the other variables have platykurtic distribution — lighter and thinner tails. The Jarque-Bera statistic of the variables (except

financial development and trade openness) indicated a strong sign of normality given that their probability values are below the five percent significance level.

Table III: Panel Correlation Matrix

	<i>GDP</i>	<i>FDI</i>	<i>REMIT</i>	<i>FD</i>	<i>TOP</i>
<i>GDP</i>	1.000000				
<i>FDI</i>	0.237543	1.000000			
<i>REMIT</i>	0.025175	0.226032	1.000000		
<i>FD</i>	0.087700	0.406115	0.295193	1.000000	0.683354
<i>TOP</i>	0.247692	0.427977	-0.068777	0.683354	1.000000

Source: Authors' computation using E-VIEWS

Correlation analysis depicted in table III above was conducted to determine the nature of linear interrelationship among the variables. The result showed that GDP growth is positively correlated with the independent variables (FDI and REMIT) and control variables (FD and TOP). Given the absence of perfect or near perfect correlation among the explanatory variables, it can be concluded that multicollinearity does not pose a challenge to the model.

Unit Root Test

Time-series macroeconomic variables tend to exhibit unit-root problem, hence the need to test the variables for stationarity. The test for stationarity requires that the variables in the series model must be stationary at a given level and the probability level must be significant at that level. Stationarity is attained where the t-statistic is most negative and greater than the critical value of the chosen significance level.

Table IV: Panel Unit Root Test

<i>Series</i>	Level			First Difference		<i>Order of integration</i>
	<i>Levin, Lin & Chu</i>	<i>Statistic</i>	<i>P-value</i>	<i>Levin, Lin & Chu</i>	<i>P-value</i>	
<i>GDP</i>	-0.8671		0.1929	-1.7348	0.0414	I (1)
<i>FDI</i>	-1.1552		0.1240	-5.2004	0.0000	I (1)
<i>REMIT</i>	-1.0019		0.1582	-6.3585	0.0000	I (1)
<i>FD</i>	-0.8556		0.1961	-1.6486	0.0496	I (1)
<i>TOP</i>	-1.0762		0.1409	-6.1276	0.0000	I (1)

Source: Authors' computation using E-VIEWS

The Levin, Lin and Chu (LLC) statistic was used to test for unit root, as presented in Table IV. All the panel variables were stationary at first difference. At the first difference level, the probability values of the variables were less than five percent significance level. Thus, the null hypothesis of the presence of unit root is rejected and the alternative that there is no unit root is accepted.

Panel Cointegration Test

Since the series are integrated in the same order, it is imperative to determine the presence of long-run relationship among the variables. The Panel PP statistic was used for the cointegration analysis.

Table V: Panel Cointegration Test

	<i>Statistic</i>	<i>Probability</i>
Panel PP-statistic	-1.912	0.028

Source: Authors' computation using E-VIEWS

Table V shows the panel cointegration result using the PP statistic. As shown in the table, panel PP-statistic stood at -1.912 with a probability value of 0.028, which is less than five percent significance level (0.05). This connotes the presence of a long-run relationship between GDP growth and foreign inflow sources—FDI and remittances.

Model Estimation

The panel ARDL technique presented the short-run and long-run estimations of parameter estimates as shown in Table VI and VII below.

Table VI: Estimated Panel ARDL short run Result

Panel Data Dimensions: 1986 – 2020

Dependent Variable: GDP

Variable	Coefficient	Std. Error	t-stat.	<i>p-value</i>
ECT_{t-1}	-0.5492	0.1222	-4.4933	0.0001
ΔFDI	-0.4331	1.3606	-0.3183	0.7524
$\Delta REMIT$	0.3657	0.2880	0.1270	0.2138
ΔFD	-0.0237	0.0216	-1.0972	0.2813
ΔTOP	-0.1435	0.0067	-2.1506	0.0397
C	1.9442	0.9001	2.1598	0.0389

Source: Authors' computation using E-VIEWS

Table VI presents the short-run estimation outcomes of the model. The error correction term has a coefficient of -0.5492 with a probability value of 0.0001, which is statistically significant. This implies that the GDP adjusts to FDI, REMIT, TOP, and FD at a speed of approximately 55 percent from short-run disequilibrium to the equilibrium in the long-run. Invariably, approximately 55 percent of deviations in the previous periods are corrected to the equilibrium position in the current period.

The coefficient of FDI stood at -0.4331 with a probability value of 0.7524. This implies that a percent increase in FDI ratio is tantamount to a 0.43 percent decline in GDP growth rate in the short run on average ceteris paribus assumption. However, the scale of impact of FDI on GDP growth is not statistically significant at five percent. This could be attributed to the fact that FDI inflows to most African economies are concentrated within a few sectors with limited growth impact on the economy. Moreover, because FDI inflows are more of patient capital, its impact on the economy is not usually automatic or immediate as it takes a while for the effect of FDI inflows to materialize in terms of growth and employment. The result showed that remittances had a coefficient of 0.3657, with a probability value of 0.2138. Thus, a percent increase in remittances would translate to a 0.37 percent increase in GDP growth in the short run on average ceteris paribus assumption. However, the magnitude of impact of remittances on GDP growth is negligible, which could be linked to the fact that bulk of remittances

inflows into sub-Saharan Africa economies are channeled to personal consumption expenditure (Anetor, 2019). Financial development and trade openness coefficients stood at -0.0237 and -0.1435 with probability values of 0.2813 and 0.0397. This implies that a percent increase in financial development indicator and trade openness would yield a 0.02 percent decline and 0.14 percent decline on GDP growth on average ceteris paribus assumption. However, the magnitude of impact of both variables on GDP growth is not statistically significant.

Table VII: Long-run Estimation Results

Panel Data Dimensions: 1986 – 2020

Dependent Variable: GDP

Variable	Coefficient	Std. Error	t-stat.	p-value
<i>FDI</i>	0.3159	0.2989	1.0569	0.2990
<i>REMIT</i>	0.3876	0.3762	1.0301	0.3112
<i>FD</i>	-0.3514	0.1955	-1.7970	0.0824
<i>TOP</i>	0.0934	0.0499	1.872	0.0709

Source: Authors' computation using E-VIEWS

Table VIII: Wald Test

Test Statistic	Value	p-value
F-stat.	1.117	0.2905

Source: Authors' computation using E-VIEWS

Table VII presents the outcome of the long-run estimates of the panel ARDL using the PMG estimator. The results showed that FDI has a coefficient of 0.3159, with a probability value of 0.3112. This implies that FDI has a positive but negligible impact on GDP growth of both countries in the long run. A percent increase in FDI is associated with a 0.32 percent rise in GDP growth on average ceteris paribus assumption. The negligible impact of FDI inflows on GDP growth could be attributed to the fact that bulk of foreign inflows to both economies are portfolio investments (in financial securities such as bonds and equities). The findings of this current study follow the postulation of the Harrod-Domar (1948, 1957) two-gap theory, which emphasizes the critical importance of foreign capital inflows in the growth process of frontier and emerging economies. Therefore, this study's findings align with the empirical results of some previous studies which revealed that FDI inflows could drive economic performance through spillover effects such as new technologies, capital accumulation, export expansion and human resources development (Hussain and Haque 2016; Choi and Baek, 2017; Hayat, 2018; Sirag *et al.*, 2018; Tahir *et al.*, 2019; Iheanachor and Ozegbe 2021). In the same vein, the findings of this study align with Ridzuan *et al.* (2017) which deployed the autoregressive distributed lag (ARDL) approach to examine the linkages between FDI and economic growth in Singapore from 1970 to 2013.

The study reported that FDI inflows play a critical role in accelerating the Singaporean economic growth. Also, Iheanachor and Ozegbe (2021) investigated the contribution of FDI inflows to the growth of the Nigerian and Ghanaian economies between 2000 and 2018. The study employed the ordinary least square (OLS) econometric technique to test the linkages among the variable of interest. The study revealed that FDI inflows to both economies positively enhanced economic growth. However, the positive impact is statistically insignificant. Moreover, some extant studies revealed that FDI inflows exerts a negative impact on economic performance for instance, a study conducted by Jawaid and Saleem (2017) reported a significant negative impact of FDI on economic growth in Pakistan, which is contrary to the findings of this present study.

Similarly, the result indicated that remittance inflow has a positive but negligible impact on GDP growth in the long run. Such that a percent increase in remittance inflows would cascade into a 0.39 percent increase in GDP growth on average ceteris paribus assumption. This can be linked to the fact that a sizeable proportion of remittance inflows to both economies are channeled to household consumption with a limited multiplier effect on the economy. Also, the insignificance impact of remittances on long-term economic performance indicates that remittances are often transferred through informal channels, such as friends and family members traveling abroad (Lim and Simmons, 2015; Olayungbo and Quadri, 2019; Ukhtiyani and Indartono, 2020 Zardoub and El Abed, 2019). By implication, remittances to emerging economies like that of Ghana and Nigeria occur through informal channels. This poses a major challenge for both countries in the development process of their financial systems. The findings of this present study are consistent with the empirical results some previous studies which argued that remittances are the main instrument for enhancing the growth of an economy as their studies showed a positive relationship between economic growth and remittances (Paul and Das, 2011; Bayar, 2015; Karamelikli and Bayar, 2015; Jawaid and Saleem, 2017; Meyer and Shera, 2017). Since the individual effect of FDI and remittances on growth is insignificant at five percent, it can be asserted that the interactive effect of both variables on GDP growth is statistically insignificant. In the same vein, financial development and trade openness equally have an immaterial impact on GDP growth in the long run.

Global Test of Significance (Wald Test)

Overall test of significance was conducted to examine whether the explanatory variables (*FDI*, *REMIT*, *FD AND TOP*) are jointly significant in influencing the response variable (*GDP*) using the Wald test.

$$H_0: \phi_1 = \phi_2 = \phi_3 = 0$$

$$H_1: \text{Not all } \alpha's \text{ are simultaneously equal to zero}$$

.....
Insert Table VIII Here

Table VIII presents the outcome of the Wald Test. The F-statistic stood at 1.117 with a probability value of 0.2905. Since the probability value is greater than the five percent significance level, it therefore implies that the joint influence of FDI, remittances, financial development and trade openness is not significant on GDP growth. The null hypothesis that the coefficient of parameter estimates is not significantly different from zero.

CONCLUSION AND POLICY RECOMMENDATIONS

This study examined the effects of two critical foreign capital inflows on the economic performance of the Ghanaian and Nigerian economies. The Pooled Mean Group (PMG) and the Panel Autoregressive Distributed Lag (Panel ARDL) estimators was employed to analyzes the short-run and the long-run effects of each of the foreign capital inflows on both nations' economic performance from 1986 to 2020. In the short-run, the coefficient of FDI stood at -0.4331 with a probability value of 0.7524.

This implies that a percent increase in FDI ratio is tantamount to a 0.43 percent decline in GDP growth rate in the short run on average ceteris paribus assumption. Although the scale of impact of FDI on GDP growth is not statistically significant at 5 percent. The result showed that remittances had a coefficient of 0.3657, with a probability value of 0.2138. Thus, a percent increase in remittances would translate to a 0.37 percent increase in GDP growth in the short run on average ceteris paribus assumption. However, the magnitude of impact of remittances on GDP growth is negligible, which could be linked to the fact that bulk of remittances inflows into sub-Saharan African economies are channeled to personal consumption expenditure.

However, the long-run results showed that FDI has a coefficient of 0.3159, with a probability value of 0.3112. This implies that FDI has a positive but negligible impact on GDP growth of both nations' economies. A percent increase in FDI is associated with a 0.32 percent rise in GDP growth on average ceteris paribus assumption. The negligible impact of FDI inflows on GDP growth could be attributed to the fact that bulk of foreign inflows to both economies are portfolio investments (in financial securities such as bonds and equities). Similarly, the result showed that remittance inflow has a positive but negligible impact on GDP growth in the long run. Such that a percent increase in remittance inflows would cascade into a 0.39 percent increase in GDP growth on average ceteris paribus assumption. This can be linked to the fact that a sizeable proportion of remittance inflows to both economies are channeled to household consumption with a limited multiplier effect on the economy.

Policy makers in both countries should ensure that inwards foreign investment policies are liberalized for Greenfield projects that are targeted at the critical sectors of their respective economies to drive significant growth. Similarly, FDI should focus on horizontal integration to inject positive spill-over effects on the business sector of both domestic economies. The ease of doing business status should be further improved to rebuild the confidence of foreign investors while investing in both countries' economies. Finally, transfers should be redirected from informal to formal channels to raise the level of remittances inflows to both economies. It is also essential to establish official money- transfer agencies at different sections of both countries and reduce the charges on foreign currency deposits.

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Part 5: Social issues in Management in the Context of Africa

SOCIAL DESIRABILITY WITHIN THE TSWANA CULTURE: EXPLORATION FROM AN EMIC PERSPECTIVE

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ABSTRACT

The purpose of this research is to explore social desirability amongst people in the Tswana culture. Post 1994, South African organisations have become more diverse with people from different cultural backgrounds working for them. The research study was conducted from a constructivist perspective using semi-structured interview and included a sample of 30 participants from a Tswana cultural background. A thematic analysis approach was then used to analyze the data. Using the categories of *belief system, culture, family obligations, fashion, language usage, education, social conduct, education and food and dietary requirements*. Awareness of socially desirable behavior in an organisation will enable management to better understand their workforce and be able to better promote diversity in the workplace to ensure inclusivity and high productivity through employee collaboration.

Keywords: social desirability, Tswana, cultural beliefs, family obligations, social conduct, diversity.

INTRODUCTION

South Africa is often referred to as the rainbow nation, due to the wide range of cultures and languages found within its borders. There are 11 official languages, each of which denote a unique cultural background (Statistics South Africa, 2016). Organizations consequently find themselves hosting employees from different cultural backgrounds which each have their own unique norms, values, and beliefs (Nel et al., 2014). Culturally diverse workgroups within organizations tend to present relational challenges (Hunter, 2012) and conflict (Reisinger, 2003) which can lead to poor communication (Mtshelwane, 2015) as well as resentment and conflict amongst employees (Pretorius, 2003).

In an organisational context, managing this range of diversity can be challenging as management is required to develop systems and practices which sustain effective human relationships, and support employees in their endeavours to accept and value each other's differences (Cilliers & May, 2012). This underscores the importance of understanding culturally related displays from employees and what motivates these. Ayoko and Hartel (2006) assert that the effective management of diversity can bring about greater affiliation and inclusiveness amongst work groups; as managers acknowledge the differences in people's personalities, behaviours, thinking patterns, and expectations (Qin, Muenjohn & Chhetri, 2014). It is believed that such an approach will enable employees to add value to the strategic and competitive advantage of an organization, regardless of their differences (Mtshelwane, 2015). Elements to be considered include employees social and cultural backgrounds, ethnic or religious roots, perceptions held regarding politeness, generosity, cultural taboos, language, as well as social desirability (Cilliers & May, 2012).

Social desirability refers to a person's tendency to give an overly good presentation of themselves to impress others (Paulhus, 1984). While this presentation may at times be factually inaccurate, it is nonetheless done by an individual to obtain favour or desirable outcomes from others (Li et al., 2013). The presentation of socially desirable behaviours results from a perception that certain types of behaviour are seen as acceptable or unacceptable based on cultural expectation (Dalton & Ortegren, 2011). For example, in Malaysia, it is considered a taboo to demonstrate affection to your significant other in public, with gestures such as kissing, or hugging considered socially undesirable. In America, on the other hand, people show affectionate gestures to one another in public, and these are in fact encouraged as they are deemed as a demonstration of love, a so-called universal language common to all cultures and races (Adamczyk, 2017).

Each person's internalized patterns of thinking and feeling are established from early childhood and become part of one's personality, which later influences their behaviour in either a formal or informal setting (Hofstede, 2010). These culturally specific behaviours, learnt and normalised within a person's culture, are then used as criteria to measure socially desirable and undesirable behaviour in an organisational context leading to potential misunderstanding and conflict. Awareness of these differences as well as details regarding their manifestation, will enable greater understanding of cross-cultural differences between employees and provide leaders with greater insight and understanding of their employees' differences, leading to greater synergy in a diverse workforce.

Located in the context of a broader study to explore social desirability in all South Africa's cultures, the objective of this paper was to explore socially desirable and socially undesirable behaviours in the Tswana culture. Research on this topic has already been conducted in respect of the Zulu and Afrikaner culture, and the aim is to cover all 14 cultural groups.

The Tswana language forms part of the 11 official languages of South Africa and is spoken by approximately 4 million people, mainly around the North West province and the Northern Cape (Wissing et al., 2010). According to Census 2011, around 8% of the South

African population speak Tswana, of which the majority comes from the North West (63%) and the Northern Cape (33%) as mentioned above.

RESEARCH DESIGN

In line with most social desirability studies, this study was conducted from a social constructivist perspective, with the purpose of understanding the Tswana culture's constructed reality and culturally specific behaviours regarded as socially desirable or undesirable (Mtshelwane, 2015). Moreover, it drew on an emic perspective as this emphasises the importance of an insider perspective in a detailed analysis of a culture's beliefs, attitudes and thoughts (Xia, 2010). Given the emphasis on the lived experiences of participants, the study aligned with a phenomenological approach (Creswell, 2007), with its emphasis on a person's conscious experience of everyday life and social action (Schwandt, 2007).

Sampling

Both purposive and quota non-probability sampling were used during the data collection process. Purposive sampling ensured that the sample comprised of participants that were characteristic and representative of typical attributes of the population under study (Grinnell & Unrau, 2008). Participants needed to meet the following criteria for research that was conducted: 1) they had to be ethnically Tswana, 2) permanently employed in an organization that hires more than 50 individuals, 3) reside in the North West province, 4) differ according to gender and age group, 5) willing to participate in the research project, and 6) be recorded during the interview.

Quota sampling guaranteed a close replica of the Tswana cultural group (Royse, 2004) and led to a sound mix of participants who differed in age, gender, geographic location and socio-economic status. A total of $N=30$ people were interviewed, ranging between the ages of 18 and 65. Data saturation was reached at $N=20$ but data gathering continued until $N=30$ interviews. Interviews were conducted in both Tswana, as the primary language, and English, used for clarification purposes. Table 1 provides an overview of the participants.

Table 1: *Characteristics of participants (N=30)*

Item	Category	Frequency (f)	Percentage (%)
Province	North West	30	100%
Race	Black	30	100%
Age	18-30	5	17%
	31-40	10	33%
	41-50	7	23%
	51-65	8	27%
Gender	Female	21	70%
	Male	9	30%
Language	Tswana	30	100%
Qualification	HET	9	30%
	FET	10	33%
	GET	11	37%

As indicated in the table, 30 participants or 100% of the sample came from various organizations within the North West, a province in South Africa. All participants (100%) were Tswana speaking. The sample consisted of 70% females and 30% males. The majority of participants were between the ages 31-40 years (33%), while 27% of participants were between the ages of 51-65 years, 23% being those aged between 41-50 years, and 17% between the ages

of 18-30 years. The majority of the participants (37%) had training in general education, 33% had training in further education, and 30% had training in higher education.

Data collection methods

The data was gathered by the first author using semi-structured interviews, that enabled the researcher to gain an understanding of the different cultural meanings that exist in the Tswana culture (Qu & Dumay, 2011). He worked in conjunction with an independent researcher who is an ethnic Tswana speaker, who also acted as translator and editor of transcribed data, as well as co-coder of data.

The interviews were conducted at various organisations within the North West province in South Africa and included public enterprises, the mining sector, the police force, and educational institutions. Interviews with participants were conducted at their places of work in a private setting, conducive to the gathering of quality data.

A pilot study was conducted to ensure the interview design would work effectively and to ensure participants understood the questions. Consequently, the questions were restructured to minimize any future misunderstandings. Each of the interviews were captured on a tape recorder with the consent of each participant. Data was gathered in line with an interview schedule which included the following interview questions: What is your understanding of *social desirability*? What features do you deem socially desirable in the Tswana culture? What features do you deem socially undesirable in the Tswana culture? Each participant completed a biographical questionnaire and consent form at the beginning of the process. All interviews were transcribed before data analysis.

Data analysis

Thematic analysis was used as the primary form of data analysis, as it organizes and describes data in rich detail. The six steps suggested by Braun and Clarke (2006) were used to guide the analysis with adaptations made to suit to the nature of the research study.

Firstly, the first author read and re-read the transcripts to familiarise himself with the data. Thereafter, initial themes were generated based on the key features of the interview questions namely Theme 1: Socially desirable features and Theme 2: Socially undesirable features. This allowed the data to be organised into meaningful groups (Tuckett, 2005), and within each of these broad categories, sub-themes were developed (for example sub-themes relating to socially desirable behaviors, emotions, or attitudes). Thirdly, all relevant data was gathered within each sub-theme. This process was conducted with the assistance of two co-coders and an independent Tswana researcher to ensure consistency in the allocation of data to a sub-theme. In the fourth step, each sub-theme was checked in relation to the coded extracts and the entire data set. These were then refined and discussed with the second author and language experts. This led to some of the themes being merged whilst others were separated during the process. This ensured no duplication of sub-themes, and that these corresponded with the initially developed codes. In the fifth phase, the specifics of each theme were refined, generating clear definitions and names for each, ensuring the true content of the data was reflected. Finally, themes and sub-themes were written up with a description of the characteristics and an illustrative quote.

Strategies employed to ensure quality data

Using the quality criteria outlined by Lincoln and Guba (1999), the following were used to ensure a rigorous approach to the research process. Credibility is grounded in the use of an appropriate qualitative methodology, which in this case, was a phenomenological approach. This was combined with quota and purposive sampling procedures to ensure credibility in the

findings. We attempted to achieve dependability by using co-coders in the process of data analysis (Lincoln & Guba, 1999). Confirmability was ensured by asking co-coders to review the data analysis to make sure the quality process of evaluating the data was adhered to. In respect to transferability, the data will only be transferable to full-time employed individuals who are native Tswana speakers and have been raised and socialised within this cultural context (Lincoln & Guba, 1999).

FINDINGS

The aim of the study was to explore socially desirable and undesirable behaviours and attitudes that inform thinking, behaviour, and communication patterns, within the Tswana culture in South Africa. This section presents the findings in response to the research objective as follows. The socially desirable and undesirable themes will be presented, and then the final section will extrapolate the thinking, behaviour and communication patterns informing socially desirable behaviour as presented in the Tswana culture.

Socially desirable and undesirable themes

Socially desirable and undesirable themes were found in respect of beliefs, culture, family obligations, fashion, language, education, and social conduct. Each of these is presented in table form whereafter key aspects are discussed.

Theme: Belief system

Table 2 below summarizes the sub-themes identified on belief system.

Table 2: *Sub-themes in respect of belief system*

Subtheme	Sample quotes
Pregnancy beliefs (socially desirable)	“I will talk about a pregnant girl; we’ve been previously educated that a girl is not supposed to eat eggs. Reason being there is a belief that she will probably encounter problems when giving birth or encounter problems during labour pains”
Cleansing (socially desirable)	“When your wife or husband passes on you are required to drink “dipitsana” in order to remove the dark cloud over you”
Ancestors communication (socially desirable)	“According to the beliefs of their culture, they believe that direct communication to their God it is through their ancestors”
Taboo behaviour (socially desirable and undesirable)	“It is when you abstain from things which are not allowed, but when you involve yourself in the things that are not allowed, we call it taboo, and it is like a sin”
No Food Restrictions to Males (socially desirable)	“With the boys it is totally different; there are no restrictions to food. Yes, he eats anything he wants”
No rule-conscious of culture (socially undesirable)	“If you do not adhere to the rules of Setswana culture you will experience ill luck and ill fortune, that means your ways will be totally blocked. According to their beliefs, if you avoid being involved in celebrations, ancestral feasts, cleansing ceremonies etc. you will never be prosperous in life”
Promiscuity (socially undesirable)	“Participating in sexual activities with a boy, she might fall pregnant and she will bring shame and humiliation to the family”
Lack of manners and respect (socially undesirable)	“The children must respect their parents. They should respect their siblings”

Young women and girls not falling pregnant at an early age was highly encouraged and desirable. Certain foods such as eggs and dairy products had to be avoided by young females

due to the belief that they caused fertility at a young age. These foods are further believed to cause complications during labour which could even extend to inducing labour pains during birth.

Cleansing was another focal point and women and men are required to drink a traditional beverage called “*dipitsana*” when they encounter the loss of a spouse through death. The death of a deceased spouse is believed to invite a dark cloud over their counterpart, and as a means of alleviating the dark cloud, the remaining spouse needs to partake of that beverage or face consequences of bad luck frequently occurring in their life until that cloud has been removed.

Ancestry communication is encouraged as the mediating factor between them and God. There is a strong belief that ancestors influence success and luck and they carry the conviction that God will grant them divine favour if the request is made through their ancestors. Ancestral rituals also play a huge role in the culture, as they believe it is a way of appeasing the gods, who will in turn give them favour with God Almighty. Participants indicated that deviation from cultural customs and requirements are seen as a taboo by most, which can be regarded as sin at some point by others. One’s involvement in other practices outside of those in the Tswana culture is deemed taboo behaviour because it goes against everything the culture stands for and represents.

Several restrictions on eating certain kinds of foods were placed more on females than males. Males can indulge in whatever they may desire whilst females had to abstain from some foods that would be eaten by males. Participants indicated that non-adherence to rules set in the Tswana culture often results in ill luck or misfortune in a person’s life. Emphasis was placed on the fact that failure to attend or get involved in celebrations, ancestral feasts, cleansing ceremonies etc would bring non prosperous consequences to an individual’s life.

Lastly, any sexual activity outside of marriage was frowned upon in the Tswana culture, more when it was done by a boy and a girl who were not of age yet because those increased chances of teenage pregnancy and humiliating both their families. Children are required to always show respect not just to their own parents but also those who are older than them. Sibling respect is also urged.

Theme: Culture

Table 3 below summarizes the sub-themes identified on culture.

Table 3

Sub-themes in respect of culture.

Subtheme	Sample quotes
Pride in culture (socially desirable)	“You have to be proud of your culture; you must not be attracted to other various cultures”
Respect (socially desirable)	“Batswana prefer to respect people and to be respected as well; they adhere to the rules of Setswana culture”
Follow traditions (socially desirable)	“specifically, the rule of ancestral feasts. I am referring to the traditional rules of cleansing ceremony”
Rule-conscious (socially desirable)	“If you avoid being involved in celebrations, ancestral feasts, cleansing ceremonies etc. you will never be prosperous in life”
Funeral conduct (socially desirable)	“In Setswana culture we respect funerals”
Norms and customs (socially desirable)	“We are obliged to adhere to the norms and the customs of our culture especially Setswana language”
Ancestral ceremonies (socially desirable)	“They must adhere to the rules of Setswana culture, like conducting ancestral ceremonies which we are well aware of their existence”
Ancestral celebrations (socially desirable)	“Ancestral celebrations are conducted when. For example, someone who has died appears in your dream and ask to be celebrated”

Bodily exposure (socially desirable and undesirable)	“The knee can only be exposed to her husband. When a woman exposes her knee, it means she is advertising herself”
Eating meat (socially desirable)	“In most cases there is a meat cooked specifically for men. You are not allowed to join men and eat with them; you have to differentiate the meat that is prepared for men and the meat that is prepared for women”
Graveyard attendance (socially desirable)	“Young children are prohibited from going to the graveyard. There is a believe that there are evil spirits, and the child will step on those evil spirits”
Understanding your tribe (socially desirable)	“You have to know who you are, which tribe you belong to as I have explained that I am a “Morolong””
Tribe behaviours (socially desirable)	“Each tribe has its own way of doing things”
Attire indicates maturity (socially desirable)	“When you reach a certain age you start dressing differently, showing you are maturing”
Lobola (socially desirable)	“Parents are compelled to gather together for “lobola” before you can move out of the house and stay with your husband”
Language (socially desirable)	“First and foremost, what is required is the language, because Setswana language explains how respectful a Motswana is from the other existing tribes”
Type of food (socially desirable)	“Food plays a pivotal role in Setswana culture, there is food like “kgobe” which that a Motswana will always want”
Cooking (socially desirable)	“The way and the manner in which we cook, shows that we are Batswana”
Animals (socially desirable)	“When a woman comes across the goats, she is not allowed to walk through them”
Family customs (socially desirable)	“Boys and girls need to learn family customs when they grow up”
Not following culture (socially undesirable)	“They do not want to follow Setswana culture, they adopted...They rap, they do all those funny things”
Borrowing salt in the evening (socially undesirable)	“You are not supposed to borrow salt in the evening, according to Setswana culture, even at the shop when you ask for salt, it is against the rules of Setswana tradition”
Animal skin attire (socially desirable)	“Wearing animal skin attire as Motswana looks so beautiful”
Cultural roots (socially desirable)	“They must always remember where they come from. Although they are educated, they must know their culture”
Rituals (children) (socially desirable)	“Slaughtering a sheep, they take fat from the sheep; they put it around the neck of the child. So, it is a sign that a child is welcomed within Setswana culture”
Traditional dance (socially desirable)	“Also, Batswana traditional dance”
Social cohesion (socially desirable)	“The message that enforces is to build culture that shows us. That we must meet, love one another and build each other”
Assisting others (socially desirable)	“To assist people who are experiencing poverty, you assist those who lack, you assist the needy family”
Head covering for women (socially undesirable)	“If you attend a funeral as a woman you have to wear a hat or head wrap. Women are compelled to put on something on their heads and wear something to cover their shoulders”
Not following rituals (socially undesirable)	“It is believed by some, that if you do not fully follow these rituals, some of your endeavours will not succeed”
Undermining men from initiation school (socially undesirable)	“Let’s say a man comes from the mountain (initiation school) and you address him as a boy, you have spoilt everything, you disrespected him, you are disrespectful. You disrespected him...yes. When you come from the mountain (initiation school) within Setswana culture, Basotho...You are a real man when you come from there”
Co-habitation (socially undesirable)	“That is what I work with; like co-habitation and your decisions being made by certain people”
Questioning husbands (socially undesirable)	“A woman is not allowed to cross question her husband about his whereabouts, and where he slept a night before”

Extra marital affairs (socially undesirable)

Initiation school (socially undesirable)

Non-guidance of children (socially undesirable)

“He will tell his wife where he slept at Mmamothiba’s house, to make you aware that he has an extra marital affair”

“A person has to volunteer not to be forced to go there according to Setswana culture”

“Not teaching the child appropriate rules of Setswana culture”

Participants emphasized that pride in the Tswana culture is what will sustain it. Most individuals in the culture are continuously urged to uphold the standards of the culture and keep the traditions alive for the Tswana culture to be attractive to people. Respecting others and being respected back was one of the core values in the Tswana culture. Tswana cultured individuals pride themselves on being a peaceful group that prefers to have non-conflict relationships and live in harmony with other people. They are, by nature, warm individuals who value relationships with others, regardless of the cultural group you form part of. They carry with them the belief that good relationships with others are a great tool that can be used in building one another and showing love in a community. Giving and assisting those in need is a norm in the Tswana culture. They are of the belief that helping those in poverty is always something that needs to be done, and that families who live near them should not suffer from hunger when they have the capacity to assist.

Celebrating traditional feasts and adhering to cleansing ceremonies are important, and these rules should be followed. Such gatherings are further deemed as the vehicle to a prosperous life, and if practiced, will enhance one’s quality of life. Ancestral ceremonies were also a way of acknowledging the existence of higher sources of power apart from God. During ceremonies there are specific types of meat that females are not allowed to partake of, although this does not apply to men. In such cases meat is prepared separately for men and women with each gender knowing which is for them and which is not. They believe that some dishes in their culture display their uniqueness to other cultures and all those in their culture should be able to cook certain traditional food and recipes. Borrowing salt in the evening is not allowed in the Tswana culture because it is deemed to go against the rules of the culture and is believed to be associated with bad luck.

A feast is always held in the culture as a way of welcoming newborns to the family. Slaughtering a sheep and taking the fat from it to rap around a child’s neck is deemed a way of welcoming a child. Batswana dance is used during feasts as a way of entertainment and lightening up the mood of guests. This is embedded in the belief that guests must always enjoy the company of Tswana people when visiting them.

Most participants spoke highly of showing respect during funeral ceremonies by adhering to specified conduct, and such behaviour shows honour to the family and the deceased. When attending events such as funerals, women are required to cover their heads and wear something that covers their shoulders as a way of showing respect.

Children are not allowed to go to graveyards during funerals nor around other occasions, due to the strong belief that they’ll find themselves picking up evil spirits that may bring harm, in such places.

When talking about norms and customs, most participants indicated that the Tswana language was the most important one of all, setting them apart from other cultures. The use of language in the Tswana culture is an indication of how respectful a person is. Various tribes exist and knowing which tribe you fell under as a Tswana person was important, because each tribe has specific rules and customs they follow, which you would need to follow as well if you formed part of that tribe. Children are to be taught about the Tswana culture and learning family

customs to carry them out in future when they have grown up. Not teaching children the customs and practices of the Tswana culture was viewed as a bad thing. Education is no excuse for one to forget about the customs in the Tswana culture. Practices from other cultures, outside of the Tswana culture, were also seen as a bad thing, particularly acts of American culture, such as hip hop; these are deemed “funny” acts and are taboo to a staunch Tswana culture follower.

The way one dressed is an indication of their maturity levels. There is a specific way older people within the culture are expected to dress; the same applying to younger people. It is believed that as one grows older their dress code should show they are growing older and should thus change. For example, participants suggested that saggy pants should not be worn by men, and women wearing should not wear short skirts. Wearing animal skins as a Tswana person implied dedication to one’s culture and was thus considered socially desirable.

Too much bodily exposure through inappropriate dressing is highly discouraged in the Tswana culture. Ladies needed to cover certain parts of their bodies, only to be seen by their spouses. Body parts such as knees must be hidden and showing certain body parts by women is deemed to be advertising oneself, is not advised, and is actively shunned.

It is not advised that a person be taken to initiation school without their consent. All those who are taken to initiation school, need to have indicated their desire to do so, before being taken there. When males return from initiation school, they are deemed to be real men, having proven their manhood, by enduring this rite of passage. Participants indicated that addressing such men as boys indicated a high level of disrespect towards them and is not tolerated amongst Tswana people.

Because Tswana people believe in following traditional customs and rules, especially when two people enter a union, co-habitation without following the proper procedure, such as the payment of lobola or marriage, is not viewed in a favourable light. Men are not to be questioned about their whereabouts, even when they have not been at home for hours or days. Asking a man about his whereabouts is seen as a demeaning act in the Tswana culture. A man will often disclose that he has an extra marital affair, by divulging at whose house he slept, when he has not been sleeping at home. Women on the other hand are not encouraged to have any extra marital affairs, as they believe this will dent their reputation in society, but with men it differs, as their reputation often remains intact, even after acts of adultery.

Theme: Family obligations

Table 4 below summarizes the sub-themes identified on family obligations.

Table 4: *Sub-themes in respect of family obligations*

Subtheme	Sample quotes
Practice hospitality well (girls) (socially desirable)	“As a girl, before you serve people with food, provide them with water to wash their hands”
Respect towards husbands (socially desirable and undesirable)	“I cannot just talk the way I want with my husband at home”
Household chores (socially desirable and undesirable)	“A woman is supposed to do the laundry for her husband and for the children as well, she has to cook for her husband”.
Dirty dishes (socially undesirable)	“If a woman has to stay at home unemployed, she has to take care of the children, and she has to take care of the husband taking into consideration that her husband must not be hungry; he must not wait impatiently for the preparation of food. Upon arrival from his workplace, she must prepare water for him to bath, and tea to drink, because he is from work, he is the bread winner” “You cannot leave dirty dishes”.

Ridiculing children (socially undesirable)	“To ridicule the children at home there are lot of things which are totally unacceptable within Setswana culture”
Uncleaness (socially undesirable)	“Leaving domestic rubbish behind the door is also a taboo, as we were growing up, we found this kind of an exercise being practiced by the elders”
Spoiling children (socially undesirable)	“What is socially undesirable is when we spoil our children, and give them each and everything that they want, when he does not actually need it”
Keeping male company (married women) (socially undesirable)	“A married woman is not allowed to be in the company of other men, I mean having extra marital affair”
Drunkenness (women) (socially undesirable)	“First and foremost a woman should not be a drunkard; she must have a responsibility in the family”
Not teaching children about God (women) (socially undesirable)	“A woman raised up her children properly, she has to teach a child about God”

Participants indicated that the best way to show hospitality as a woman or girl, was providing visitors with water to wash their hands with, before you offered them food to eat. Males particularly, are held in high regard. Most female participants indicated that respect must be shown, especially to husbands, and that women are always urged not to talk to their husbands in any manner other than with respect. Disrespect towards men is highly discouraged. A woman who cannot choose her words wisely when communicating with her husband is considered disrespectful. Women always need to address their husbands politely. Married women and women in general are not allowed to be seen in the company of many men, as this denotes a loose character within the culture.

Women have the responsibility of taking care of the household, which includes and is not limited to cleaning, cooking, and doing laundry for her husband and children. If a woman is unemployed and stays at home, she is expected to do most of the household chores and take care of her husband. Women who do not do such, are considered lazy in the Tswana culture. Leaving dishes dirty after eating is considered an act of untidiness and is not approved. A dirty house is seen as a taboo, and cleanliness had to always be practiced because even older generations followed this custom of always having a clean household. Because women are seen as pillars of households, and the ones that ensure the smooth running of its daily activities, they are urged not to be drunk. They are deemed as the ones who uphold the dignity of a household. Women that are drunkards, are therefore perceived as irresponsible in the Tswana culture, and likely to fail when it comes to running their households efficiently.

Parents and elderly people who ridicule and speak to children in whatever manner they wish are often perceived as bad people in the Tswana culture, because of the value that is placed on showing respect to everyone, regardless of age and gender. Always granting children whatever they wish to have, is also seen as undesirable behaviour within the Tswana culture, because many deem this as something that will contribute to children losing their way in future. In the culture, women who do not teach their children about God or the proper ways of living are not seen as a nurturer.

Theme: Fashion

Table 5 below summarizes the sub-themes identified on fashion.

Table 5 : Sub-themes in respect of fashion

Subtheme	Sample quotes
Dressing for age (women) (socially desirable)	“A thirty-five-year-old woman must not wear clothes like a sixteen year old girl. She must wear clothes that fit her age”

Covering thighs (women) (socially desirable)	“Dress properly and cover your thighs for the men not to see them at the back when you kneel down”
Clothing that displays dignity (women) (socially desirable) and revealing clothing- women (socially undesirable)	“The dignity of a woman is a lot more in the way she is dressed, than it is with men, here in the community and amongst people”.
Wearing dresses (women) (socially desirable) but short dresses inspire abuse from men (girls) (socially undesirable) and elderly women showing knees (socially undesirable)	“Motswana woman is not impressive when she dresses in clothes which reveal her body”.
Traditional wear (socially desirable) and not wearing traditional attire (socially undesirable)	“You will be most pleased with the one wearing a dress, she has dignity, a lot more dignity in the way a woman is dressed”
	“They wear very short dresses which tempt men, and it will end up causing sexual abuse”.
	“In Setswana culture, we are not supposed to see the knees of the elderly woman”.
	“As Batswana we are obliged to wear Setswana traditional attire. It was designed differently as they used to cover parts of their bodies with the skin of the cow (leather)”.
	“Maxhosa wear their own attire, Bapedi also wear their own but Batswana do not have them anymore”
Head covering (socially desirable)	“Regarding the women it has drastically changed as they currently wear traditional dresses and skirts, and they have to cover their heads with head wraps”
Inappropriate dressing (socially undesirable)	“Like wearing nowadays fashion attires which are not appropriate, you find a woman wearing a dress which is showing”
Saggy pants (men) (socially undesirable)	“You are not allowed walking around with saggy pans. There must be a difference between a man and a boy”.
Funeral attire (socially undesirable)	“It is the same as when we attend a funeral, we have to respect ourselves, and make sure that we wear appropriate clothes. You are not allowed to attend a funeral wearing saggy pants”.

Participants indicated that women of a certain age needed to dress in a particular manner to show they are more mature. Women are advised to always keep their thighs covered so that they are not seen by males thus displaying dignity. Tswana women who do not wear clothes that cover their bodies are classified as non-impressive individuals. Women who often wear dresses are more appealing to the men, than those who prefer to wear pants most of the time. On the other spectrum, women and young girls are urged not to wear any form of short attire nor revealing attire, because it is believed that it may tempt male counterparts and lead to them being sexually abused or raped. Participants indicated that an elderly woman is discouraged from wearing clothing that reveals her knees, which should only be exposed to her husband in private. Women wear head wraps as a token of respect. This is mainly a requirement during traditional ceremonies or funerals. Not being properly covered as a woman or man in the Tswana culture is deemed as being inappropriate. Dressing also denotes moral integrity, and not dressing accordingly can lead to this being questioned by those around you in the culture.

Participants indicated that attending funerals within the culture required one to dress appropriately and failing to do such is a sign of disrespect towards the family of the deceased. When coming to funerals, appropriate attire applies to both male and female genders equally. A person who does not take pride in nor dawn the traditional attire of the Tswana culture is deemed to be ashamed of the culture, and their love for the Tswana culture may be, at times, questioned by others.

Theme: Language

Table 6 below summarizes the sub-themes identified on language.

Table 6 : *Sub-themes in respect of language*

Subtheme	Sample quotes

Speaking Tswana (socially desirable)	“We are obliged to adhere to the norms and the customs of our culture especially Setswana language”
Speaking properly (socially desirable)	“By speaking the wrong Setswana language, it will disgrace the others”
Speaking appropriately (socially desirable)	“I should be careful of the language that I will be using, I must not utter wrong words, I must not use vulgar words”
Nonmaternal language usage (socially undesirable)	“People should be encouraged to speak Setswana as their maternal language”
Vulgarism (socially undesirable)	“You should not swear at other people, even the elderly. It is not something the Batswana people approve of”
Improper language use (socially undesirable)	“By speaking the wrong Setswana language, it will disgrace the others”
Impoliteness (socially undesirable)	“You should communicate appropriately with the other people”

Participants mentioned that speaking the Tswana language properly was one of the norms that needed to be adhered to by all. Failure to speak the language properly, and using vulgar speech, is associated with disgrace and failure to uphold the culture’s dignity. Parents must ensure that children are taught the language and speak properly, as not doing so, will bring about disgrace and shame to a person.

Theme: Education

Table 7 below summarizes the sub-themes identified on education.

Table 7: *Sub-themes in respect of education*

Subtheme	Sample quotes
Schooling (socially desirable)	“In the Setswana community, if you do not have education you have nowhere to go”
Completing your studies (socially desirable and undesirable)	“First and foremost, you have to complete your studies at school”.
Encouraging education (socially desirable)	“If you don’t complete your studies at school in our church”
Career advancement (socially desirable).	“You have to motivate your children to go to school. The children must be educated”
Educating children (socially desirable).	“We have to educate our children so that they can be supervisors”
Cultural teachings (socially desirable)	“I will be impressed if I can see our children being educated because Education is the key to success”
Education provides direction (socially undesirable)	“To make the child aware of his originality, where he comes from, the family tree, to know who he is”
Education provides opportunities (socially undesirable)	“In the Setswana community, if you do not have education you have nowhere to go”
	“The children must be educated and be supervisors in future”

Participants shared the belief that an uneducated person would not be successful; while those who have attained a formal qualification are highly esteemed by the community, as they are likely to succeed, and gain respect. Studies must be prioritized and completed. Parents should motivate their children to study and get educated. In the Tswana culture it is seen as being unwise to not complete something that you have started, which is why completing your studies is important, because it shows tenacity and persistence from you as an individual. Education includes the cultural teachings that must be embedded in children.

Theme: Social conduct

Table 8 below summarizes the sub-themes identified on social conduct.

Table 8 : *Sub-themes in respect of social conduct*

Subtheme	Sample quotes
Conduct (women) (socially desirable)	“Women must make sure that men do not see their thighs”
Keeping female company (socially desirable)	“A woman is not supposed to hang around with men only”
Respecting others (socially desirable) or disrespect (socially undesirable)	“Batswana people appreciate a person who is respectful. You have to respect your neighbours and your colleagues, things like that, people must not be disrespectful” “People must not be disrespectful. Respect people, irrespective of having a lot of money or being rich, you need help of that person who does not have anything”
Sitting properly (girls) (socially desirable)	“The girl has to sit properly when she sits down”
Noble, hardworking (women) (socially desirable)	“first and foremost, we talk about the mother; there is an idiomatic expression in Setswana which states that (“Mmagwe ngwana o tshwara thipa ka fa bogaleng”)
Household chores (socially desirable)	“She gives direction to the children, she takes a responsibility of ensuring that there is everything in the house, ensures that there is food in the house not necessarily to purchase them, but to make sure that when people wake up early in the morning there is breakfast. She wakes up in the morning before everyone and prepares food”
Leading your family (socially desirable)	“What is highly expected of a man is to give tremendous support to his family; in that case people in the community will respect him”
Sexual abstinence (socially desirable)	“Yes... to have sexual intercourse with your husband, you must respect yourself, you have to abstain from sexual intercourse. Yes, to abstain you must abstain. You have to behave well”
Good manners (socially desirable)	“In other words, good manners”
Humility (socially desirable)	“It is to remain humble, remain humble in other words it is also an appropriate language. So that, even if a person fights with you; you do not fight back. You remain humble and quiet”
Helping others (socially desirable)	“It is to do good things for others, that people will be able to see that this person has helped another”
Neighbour relationships (socially desirable)	“It is vital to have a good relationship with your neighbours”
Loitering around at night (girls) (socially undesirable)	“When we grew up it was always said that girls are not supposed to hang around anywhere during the night”
Fighting (socially undesirable)	“Nowadays the youth like fighting, they like doing things which are senseless”
Immature drinking (socially undesirable)	“At this era a young child drinking alcohol doesn't uphold our cultural pride because alcohol is for grownups”.
Smoking (socially undesirable)	“Including cigarettes which were considered to be for the adults, not for the young ones”. “It is inappropriate for Motswana woman to smoke cigarettes”
Disrespecting church (socially undesirable)	“When you enter the church premises, you are obliged to be respectful. I cannot go to the church under the influence of alcohol”
Disrespect at funerals (socially undesirable).	“You are not allowed to attend a funeral wearing saggy pants, smoking cigarettes, holding beer in your hand and being confused. That shows how disrespectful you are, you have to respect the funeral”
Co-habitation (socially undesirable)	“A boy has to behave well and stop holding hands with the girls in the evening and meeting a girl in the evening and making a girl to spend a night at his home, such conduct is totally unacceptable”

Public drinking (socially undesirable)	“Women just wake up early in the morning in their pyjamas, wearing just a gown passing through, holding a bottle of beer and drinking in public. It is also applicable to men”
Attending taverns at night (women) (socially undesirable)	“Going to the tavern during the night, is it not good thing for women to go to the taverns, they have to respect themselves”
Disrespect toward elders (socially undesirable)	“When you are disrespectful to your elders”
Assaulting women (socially undesirable)	“Things like assaulting a woman”
Promiscuous behavior (women) (socially undesirable)	“Females are not supposed to be hanging around at night. It is perceived that they are possibly involved with married men or they are being promiscuous (sleeping around with married men)”
Extra marital affairs (socially undesirable)	“Yes, in Setswana we call it “nyatsi” which means a concubine in English”
Unruly children (socially undesirable)	“When a child is doing as they like”.

Women who kept the company of men only, were viewed in an unfavorable light. A woman must not be seen in the company of men by herself without other women in their midst, because this gives a bad impression about her. Young ladies and women need to sit properly when they sit down; ensuring that they do not expose certain parts of their bodies that could be on display if they did not sit properly. Participants indicated that women are mostly urged to not sleep around with other men who are not their husbands when they are married. If a woman indulges in such acts, she risks being disrespected by many around her. Women or girls were not allowed to loiter around in the streets at night because they would attract unpleasant circumstances or get victimized. A promiscuous lifestyle by women in the Tswana culture is not appreciated. Women are urged not to engage in any promiscuous activity at all. Some even go to the extent of being warned not to have any engagements with married men. Any intimate engagements are encouraged for married couples only, and extra marital affairs are highly discouraged amongst Tswana people. They believe that a person should stay with one spouse, however, the rule applies more for females than males. Men are often understood when they have extra marital affairs, but women are highly discouraged from doing so because it would place her marriage in jeopardy and could wreck her home.

Hard work is seen by many as a virtuous trait to have as a woman in the culture. Women are expected to do most of the house chores and take care of the daily running of the household. This also entails taking care of her husband and children. A man's role is to ensure he supports his family, for which he will gain a lot of respect from the community.

Tswana people are required to show respect to everyone around them because this is their way of living. Being rich or prominent was not an excuse to disrespect other people, and one who used such as an excuse, would not be appreciated in the Tswana culture. Most participants indicated that good manners are part of valued etiquette in the culture. Humility is a virtue, and not retaliating when in an altercation with people, is viewed as a good trait. Participants indicated that a child who is unruly is viewed as a reflection of the parents and letting a child do as they please is wrong because the child will grow up to not obey authority and, the chances of them being a criminal are high.

Fighting is considered a senseless act, because peace and not doing harm to others is one of the core pillars within the culture. Fighting is highly discouraged, because the people believe that conflict can be resolved in a peaceful manner almost all the time, with no need for

physicality. Men that abuse women in the culture are not seen in a positive light. Tswana people believe in always protecting the female gender from harm, both from others and oneself.

Drinking at a young age is seen as something that is contrary to upholding the cultural pride Tswana people have. Alcohol is closely associated with grownups and those who drink at a young age are not viewed in a positive light. Drinking at a funeral is taboo, nor should it be done in public. Smoking amongst Tswana people is also seen as something appropriate only for adults and those of age, and not for minors. It is inappropriate for a woman to smoke cigarettes because it is seen as something that a man will do and is taboo when practiced by a female. Women are not allowed to go to taverns, especially at night because this shows lack of self-respect on their part.

Tswana people believe that a church is a sacred building which should be respected by all people, and certain practices that one would normally engage in like being under the influence of alcohol or smoking, should not be done within a church setting because that suggests disrespect towards God, and the church at large.

Theme: Food and diet

Table 9 below summarizes the sub-themes identified on food and diet.

Table 9: *Sub-themes in respect of food and diet.*

Subtheme	Sample quotes
Eating maize	“We are compelled to eat African food like maize”
Food preparation	“Before you cook you, you prepare meat, pots, pot scraper”
Ancestral ceremonies	“In order to conduct the ancestral ceremonies, you include all the cultural things, for example, African beer, African food, slaughtering of an animal”

Participants indicated that Tswana people are compelled to eat African food like maize, because it forms part of their dietary requirements. Before cooking as a Tswana person, you need to ensure that you prepare all ingredients and cooking utensils that will be needed.

Most participants stated that hosting or conducting ancestral ceremonies required a person to ensure that they prepare all necessary things such as African beer and food, as well as slaughtering an animal.

DISCUSSION

The general objective of this study was to explore the features that the Tswana culture deem socially desirable and socially undesirable, to contribute toward knowledge of social desirability within the South African context (Odendaal, 2013).

Socially desirable features in the Tswana culture

There are types of behaviour patterns, conduct, mannerisms, and attitudes that people display which are acceptable and favourable in the Tswana culture. A firm belief system, culture, family obligations, fashion, language usage, education, social conduct, and food and dietary requirements are amongst themes that were reported the most. Belief system emerged as a positive theme, under the condition that a person apply the Tswana cultural practices such as cleansing, ancestors being the mediator between them and God and abstaining from pregnancy, conscientiously. Beliefs instilled in us from as early as our childhood tend to govern

our thinking and feeling and will ultimately be displayed in our behaviour and the things we do (Hofstede, 2010). Dalton and Ortengren (2011) further state that the behaviour and acquisition thereof, by individuals, can be a result of expectations placed upon them by their culture or workplace, sometimes even both. This may serve as an indication that a belief system can be strongly influenced by culture and upbringing.

According to Lovering (2006), social learning, which takes place in the confines of culture, influences a person's perception and behaviour, which ultimately informs the way they express themselves. When discussing issues around culture, participants emphasised the traditional requirements they grew up with, as the appropriate way of living peacefully with fellow Tswana people and other cultural backgrounds, something echoed by Bagwasi (2012). Clarke et al., (1996) accredits such behaviour to social knowledge, stating that it even impacts on interactions people have with others around them, depending on the context. What drives the behaviour of Tswana people, from a participant point of view, are norms and customs they are raised with that impact their conduct, such as the following of traditional customs in the form of ancestral celebrations. Participants further indicated that the pillar of the culture was respect towards one another. Respect is believed to be the vehicle to establishing peaceful relations, and a Tswana individual who does not display respect to others, is likely to fail in cultivating healthy relationships with others around them (Bagwasi, 2012).

Hadebe (2010) found masculinity to play a big role in defining authority, however, a male figure is said not to have authority unless he is married, because his authority can only be exercised over his own family (Mtshelwane, 2015). With regards to family obligations, females are normally expected to assume more responsibility than males, which entails taking care of household chores and taking care of their husbands and children, while husbands take up an authoritative role (Tshitswana, 2003), including taking leadership of the family, providing for the family, giving direction to the family in terms of cultural expectations and things such as traditional attire. Females are always expected to submit to the authority of their husbands and display their submission by showing their husbands respect (Mtshelwane, 2015). Females are further required to adhere to conservative measures of fashion and dressing; whilst in general, the ordinary Tswana individual is required to dress appropriately, women are expected to wear clothing that covers up particular parts of their bodies that are deemed to be for their husbands' eyes only. In the Tswana culture seaparo (a dress) or diaparo (plural for seaparo) contains multiple social meanings. How an individual dresses tends to be used as a measure of relative poverty and social status, for example, when one wears makatana (tattered clothes), they are often labeled poor due to such clothes being associated with poverty, humiliation, and indignity (Ngwenya, 2002).

Tswana people take pride in their language, believing it to be the biggest differentiator between them and other cultures. Above and beyond speaking the Tswana language properly, individuals are expected to communicate with those around them appropriately, using non offensive language when talking to the next party (Bagwasi, 2012). Participants emphasized the vital role language plays in identity formation, stating that their culture and language are intertwined. One of the things that is a common marker within the Tswana culture is the performance of greetings. According to Bagwasi (2012), greetings are a significant element in the social functioning of Tswana people, due to their potent role in the establishment of interpersonal relationships, and even the opening of conversations. The expression of greeting in the Tswana culture is a word known as *dumela* (singular) or *dumelang* (plural), which means "agree" when translated into English; through this word, rapport and friendship is easily established with the addressee as well as the transmitting of a goodwill message (Akindele, 2007). Age plays a big role in the performance of greetings amongst Tswana people; the

younger party is always expected to initiate the greeting between the participants involved, due to cultural requirements. Greeting is also seen as an integral etiquette in the culture because it is believed to constitute the concept of *botho*, which refers to being humane, kind, caring, and having good interpersonal relations with others (Bagwasi, 2012).

It is the responsibility of a father to ensure that children get educated in order to lead a good life, and to progress career wise. Furthermore, parents are expected to teach children good behaviour, how to greet others, and lastly, paying respect to others. Education in the Tswana culture must address not only the academic aspect, but cultural customs as well, for it to be effective and bring forth desired results.

Social conduct as a theme in this research, emphasized elements such as *botho* (being humane) amongst humility, respecting others, following cultural norms, and eating food that is part of Tswana people's dietary expectations. Although in some cultures, the Zulu culture for example, polygamy is acceptable (Mtshelwane, 2015), in the Tswana culture, not having various relationships is an admirable trait (Pilane, 2002), and proper social conduct includes being faithful to one partner, and not having multiple sexual relations. However, we found that it is less taboo when a man has an extramarital affair than when a for women does.

Socially undesirable features within the Tswana culture

Socially undesirable behaviour refers to any form of behaviour or attitude that is frowned upon by the Tswana culture. The research findings identified a correlation between behaviours and attitudes that were regarded as acceptable and those that were unacceptable. The findings provided a strong indication that in the Tswana culture, people have an intense desire to engage only in behaviour that is acceptable in their culture, whilst trying their best to avoid engaging in any form of unacceptable behaviour. The themes that were identified as undesirable were aligned to those for desirable behaviour, including belief system, culture, family obligations, fashion, language usage, social behaviour, and education. Belief system may involve a lack of or non-participation in ancestral celebration feasts, cleansing ceremonies etc. Such behaviour is considered taboo because every Tswana person is expected to participate fully in cultural activities, and non-participation is not appreciated, as it indicates non-belief in the values the culture stands for. The theme also includes the disapproval of promiscuity, with the belief that sexual engagement should be between married people, because premature engagement in such will result in babies out of wedlock, bringing shame to families (Pilane, 2002).

Customs and beliefs form the centre of most cultures and their practices. Studies have found that the Tswana cultural group strives to maintain their traditional customs and spirituality through their rituals of slaughtering and ancestral worship; *Badimo*, ancestors, are believed to be the ones that render protection and direct them (Mothoaga, 2015). Findings in this research study accredited quality living to ancestors, meaning, abandoning Tswana cultural practices is deemed as opening a door for misfortunes to enter one's life. It is also believed that *Badimo* play a role in the present society and families by connecting them to their past as well as providing directives for the future (Mothoaga, 2015). This theme also has expectation regarding clothing. As reported in this study, traditional attire is highly dignified in the culture, and it is expected that each Tswana individual possesses a cultural outfit which denotes the culture. When it comes to dressing up, women are expected to cover their heads when attending formal cultural events such as funerals, and also ensure that certain parts on their bodies are hidden, only be seen by their husbands in private settings. Those who do not adhere to these expectations are considered disrespectful towards the culture.

Family obligations differ in the Tswana culture depending on gender, as every culture defines the worth of women within (Masenya, 2010). According to Mothoagae (2015), the Tswana culture, just like most other cultures (e.g. Zulu, Ndebele, etc.) carries a strong belief in patriarchy; with the expectation that men are born better than women in most aspects, which makes them the more superior gender (Masenya, 2010). As with most cultures, women are commonly required to fulfil household chores such as cleaning and ensuring everyone else in the house is taken care of (Hadebe, 2010). As a wife, a woman is expected to show respect and humility towards her husband. Females that do not fulfil these duties are regarded as undesirable in the Tswana culture (Mtshelwane, 2015). When coming to issues of *lenyalo* (marriage) in the Tswana culture, a common phrase used amongst them is *lebitla la mosadi ke bogadi*, which means that when a woman gets married, she belongs to her husband's family even beyond his death, should he pass on before her (Mothoagae, 2015). According to Masenya (1998) this denotes ownership over *ngwetsi* (the bride) by her in-laws. While this may be seen as oppressive, a positive aspect however, is the disapproval of divorce in the Tswana culture, thus offering women a measure of safety. *Lobola* (bride price) is paid by a woman's in-laws, as an expression of gratitude to the bride's family, and this amount is usually negotiated and depends on various factors, including her level of education.

Males are expected to lead their families and provide guidance with regards to cultural expectations and any other requirement placed on a male figure; they are deemed the leaders and protectors of their households. Males are, however, not expected to dominate their female counterparts but work together in building their family, showing them honour and assisting them with their work. Further to this, from a joint function perspective, both (males and females) are expected to set a good example for their children, teaching them mannerisms, respect, and proper language use. Traditionally, Tswana people are fond of their language and render it undesirable to have it mixed with other languages, which places responsibility upon parents, to ensure their children speak the Tswana language properly and take pride in it. According to Bagwasi (2012), children who do not know how to speak the language are considered lost. Findings also emphasized that nonpolite communication and the use of vulgar language was unacceptable.

Tswana people believe that negative social behaviour is embarrassing, and should not be engaged in. Disrespect towards the elderly by the youth, is deemed as unacceptable behaviour that cannot be tolerated amongst Tswana people, and the company of disrespectful people in general, is not kept by many in the culture, and is therefore shunned. According to Mothoagae (2014), Tswana culture/people believe themselves to be peaceful people who do not favour malicious behaviour, such as fighting. Findings concur with the aforementioned, that assaulting people or partaking in any form of violence, is undesirable and should be avoided at all costs. Furthermore, such behaviour is said to be the result of the misuse of alcohol and has therefore seen alcohol rendered unacceptable in the culture, especially for those who have not yet come of age. Tswana people believe substance abuse to be something that goes against the culture, because it has an influence on the behaviour of individuals, which is often negative, such as violent outbursts.

Unlike in the past, where warriors who went to wars were celebrated and had good social statuses, in the modern-day, education is what gives one status and recognition (Hofstede, 2010). Education is deemed the most likely source of opportunities for an individual. Those who refuse education are frowned upon, because education is deemed an accolade that uplifts the pride of the culture, and therefore plays an important role in the lives of youth.

Practical implications

Advancements in trends like globalization, have created an increasing need for people from diverse backgrounds to interact. People are no longer living nor working in insular environments; they now form part of a worldwide economy, competing on a global scale (Green et al., 2002). This has resulted in organizations becoming more diversified, to remain competitive (Robinson, 2002). According to Littrell (2002), the workforce now needs leaders, and stakeholders who have the capacity to function effectively in diverse environments. In the South African context specifically, this cultural diversity has been found, at times, to be challenging (Mtshelwane, 2015). Managing diversity can be a significant challenge for managers, making diversity management a skill that needs to be developed, for managers to be in a better position to facilitate diversity in their teams and organization (Green et al., 2015). The insights about the Tswana culture provided in this study, may serve as a foundation for education in the workplace. When managed properly, diversity has the potential to increase inclusivity in organizations, yielding a great competitive advantage (Robinson, 2002).

This study will provide organizations with access to dependable knowledge about the Tswana culture and its people, regarding social desirability. Organizations will be in a better position to understand prevalent behaviours and attitudes, and the motivation and intent behind these, that Tswana people may display. When management has a better understanding of people from a Tswana culture background, they will be in a better position to lead and inspire them (Mtshelwane, 2015).

One of the challenges that comes with a diverse work population, is the acknowledgement of differences and communication barriers (Green et al., 2015). (Koonce, 2001) states that another vital requirement that must be considered when dealing with diversity, is promoting a safe environment where employees can communicate and create dialogue. As a result of this study, the way Tswana people communicate and express themselves will be better understood, and this will help minimize misconceptions and misunderstandings that present themselves in this regard. When this is done effectively, employees will establish better ways of communicating with one another and will create opportunities to share ideas and knowledge in the organization. Tswana individuals will also grow their awareness regarding how they behave, and how they affect those around them who are not Tswana speaking, or from the Tswana culture. This will also benefit an organization through the avoidance of unnecessary conflict which tends to arise due to a lack of understanding between employees of diverse backgrounds. Managing diversity can effectively help organizations avoid negative consequences, however, this starts with understanding peoples' cultural backgrounds.

CONCLUSION

The overall objective of this study was to explore social desirability in the Tswana culture and specifically, to identify the features that are socially desirable and socially undesirable within the Tswana culture.

Based on the findings, it is evident that the expression of certain behaviours from Tswana individuals may be entirely influenced by the knowledge and values instilled within them, which govern how they express themselves in the different contexts they find themselves in. The prevalent socially desirable and undesirable patterns, behaviours or attitudes in the Tswana culture, were themed as belief system, culture, family obligations, fashion, language usage, education, social conduct, and food and diet.

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**SINO ~ AFRICA RELATIONS:
WHAT HAPPENS WHEN MY HAND IS IN YOUR POCKET?**

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ABSTRACT

China's investment in Africa, via both FDI and lending activity has greatly increased over time, yet the traditional explanations for drivers of FDI (e.g., Dunning (1980) have been unable to fully explain this increase. These theories explain economic engagement between established economies but fail to appropriately explain the nuanced dynamics in play within emerging economies. Inequities between economic parties may produce institutional pressures and dependence. Instead of China's investments being guided by mainly market-driven agendas, a broader lens incorporating economic, political, and foreign policy agenda needs to be considered. Our study examines China's economic engagement via the revealed preference perspective to examine past behaviors as a roadmap for actual preferences. We find that China's economic engagement in Africa is driven to some extent by international relations motivations as increases in Chinese investment in Sub Saharan Africa countries generally lead to greater political alignment China in UN general assembly votes.

Key Words: Foreign Direct Investment (FDI), lending, political alignment, foreign policy convergence

INTRODUCTION

Outward foreign direct investment (OFDI) from emerging economies has increased dramatically over the past decade (Fuest et al. 2021, Munjal, Varma & Bhatnagar, 2022). While a substantial body of research examining emerging economies', especially China's, OFDI has increased concomitantly, most of this research relies on mainstream theories derived from developed economies. As Buckley et al. (2018) noted, because such theories were derived from North America, Europe and Japan, largely market driven economies free from government intervention, they failed to consider how home country institutions might influence OFDI. Indeed, Buckley et al.'s (2007) examination of Chinese outward foreign direct investment (OFDI) was pivotal in highlighting the role of home country institutions potentially play in driving OFDI decisions. Not surprising, despite the increased prevalence and research, our understanding of emerging economies' OFDI has not kept pace (Bruhn, 2016).

Nowhere is this more glaring than with Chinese OFDI in Sub-Saharan Africa. The scant research on the drivers of Chinese OFDI in Sub-Saharan Africa have been inconclusive (Ross, 2015). For example, while seeking natural resources was argued to be the main driver of Chinese OFDI in Africa (Asiedu, 2006; Frynas & Paulo, 2007), Cheung and Qian (2008), Zhang et al (2013) and Shan et al (2018) do not find any significant effect of natural resource endowments on attracting Chinese OFDI. The popular press has not been left out of the debate regarding motivations of Chinese OFDI in Africa with headlines such as ‘China in Africa: Investment or exploitation’ (Al Jazeera, 2014) or ‘Clinton warns against ‘new colonialism’ in Africa’ (Reuters, 2011). Others have however countered the more pessimistic view and have argued that Chinese investments rather foster greater independence of African countries, as they are long term and without the ‘paternalistic’ or ‘imperialist’ preconditions often common with western investments (Lee, 2017).

This study builds on institutional theory to examine the motivations of Chinese OFDI in Sub-Saharan Africa (hereafter just Africa). Building on Buckley et al.’s (2018: 9) argument that it’s ‘arduous to apply general theory to Chinese OFDI’ because “...China’s institutional idiosyncrasies remain, and this means that if we are to explain, and to predict, Chinese OFDI then we must have recourse to theory of a special nature...”; we argue that a more complete picture of the drivers of Chinese OFDI in Africa needs to include non-economic factors, especially institutional forces that potentially incorporate macro political considerations into Chinese multinational enterprise (MNE) strategies abroad (Lin and Jiang, 2012). Specifically, we argue that Chinese OFDI breeds costly obligations due to the economic ties created and as Hirschman considered disparities in economic dependence as an “effective weapon in the struggle for power” (1945:17) likely to be parlayed into political influence, we expect Chinese OFDI in Africa to lead to political alignment of African recipient countries with China on international affairs. All African countries however, are not homogenous. We further argue that the extent of influence Chinese OFDI has in aligning African countries’ international politics with China will be dependent on the strength of their institutions.

This paper contributes to MNE and FDI literatures in three ways. First, it builds the nascent literature that is beginning to examine the influence of politics and political institutions on FDI (e.g. Wang, Zhu, Chen and Luo, 2021). While few studies have looked at the role of host (African) country institutions (e.g. Munjal, Varma and Bhatnagar, 2022) in attracting FDI, even less is known about home country institutional effects. We empirically investigate Buckley’s (2018) assertion of Chinese OFDI as an instrument of broader Chinese foreign policy. Second, we take a revealed preference approach in examining the motivations underlying Chinese OFDI in Africa. Revealed preference theory argues that the best indicator of actual preferences is behavior. As such, the most appropriate method to analyze the economic and political motivations underlying Chinese OFDI is by examining how actual OFDI varies across different counties/time relative to specific outcomes. In addition, eschewing any assumptions of homogeneity within Africa, we specifically examine both the within country and between country effects of Chinese economic engagement. Finally, our findings show that not all determinants of emergent market MNE strategies are in the economic sphere. With 54 votes in United Nations bodies, Africa has the largest international voting bloc. This is apparently a very valuable resource that drives attention to the continent – albeit not an economic one.

BACKGROUND AND THEORY

Institutional theory has been quite useful in aiding our understanding of how external pressures affect firm choices on FDI (Cui and Jiang, 2012; Peng, 2009). This is especially potentially so with Chinese OFDI wherein constantly changing regulation, or as North (1990: 3) would put it “rules of the game”, the definition of formal institutions, necessitated changes in MNE strategy. Prior to Deng Xiaoping’s Open Door Policy in 1978, OFDI by Chinese companies was prohibited. From then until the ‘Go Global’ policy was initiated in 1999, OFDI was mainly run by state created China International Trust Investment Corporation (CITIC). Yet even the ‘Go Global’ program to encourage OFDI by Chinese companies still needed case by case approval from the central government (Bellabona and

Spigarelli, 2007) up till 2014 when only notification was required.

The government of China still plays a major role in determining whether and how Chinese firms engage in FDI, especially since Chinese OFDI is a central part of the government's strategy (Duanmu, 2014; Li, Newenham-Kahindi, Shapiro, and Chen, 2013). Seventy-seven (77%) percent of the top Chinese OFDI firms in 2015 for example were state-owned enterprises (MOFCOM, 2016). Even for the minority of privately-owned firms, engaging in OFDI still requires close government collaboration (Jin, 2015). Much of the funding for OFDI projects are provided by state-owned banks. Furthermore, because the Renminbi (RMB) is not freely exchanged, all conversions into foreign currency to use in OFDI requires prior state approval. China's foreign reserve policy is structured to empower the government. Essentially, Chinese OFDI, rather than being mostly market driven, could also be a tool within the arsenal of the state government in its pursuit of a broader economic, political and foreign policy agenda (Buckley, Clegg, Cross, Liu, Voss, and Zheng, 2018).

Chinese OFDI in Africa

China may have missed the European 'scramble for Africa' that characterized the turn of the last century, but it has been making up for this since the 1950s. The pace of this investment has however picked up in the past couple of decades. According to China's Ministry of Commerce, Chinese overseas direct investment (ODI) in Africa grew at an average compound rate of 18% per year from 2004 to 2016. Financing of Chinese contracted projects in Africa for example, has also been increasing and peaked in 2015 at \$55bn (Krukowska, 2018). Similarly, by 2016, China was by far the largest exporter to Africa accounting for 17.5% of African imports. By mid-2017 there were more than 10,000 Chinese-owned companies operating in Africa (McKinsey & Company 2017 report).

Assertions regarding the drivers of China's engagement in Africa have generated controversy with headlines such as 'China in Africa: Investment or exploitation' (Al Jazeera, 2014) or 'Clinton warns against 'new colonialism' in Africa' (Reuters, 2011). More recently, then U.S. Secretary of State John Bolton characterized Chinese investment in Africa as predatory, i.e. 'the strategic use of debt to hold states in Africa captive to Beijing's wishes and demands.' These criticisms have only increased with China's belt and road initiative that also encompasses several African countries. Others have however countered the more pessimistic view and have argued that Chinese investments rather foster greater independence of African countries, as they are long term and without the 'paternalistic' or 'imperialist' preconditions often common with western investments (Lee, 2017).

Despite the prominence of the debate on Chinese economic footprint in Africa and the potential implications this may have on the future economic development and political stability of the continent, research on the drivers of Chinese FDI in Africa has been lagging, and results from this scant research inconclusive (Ross, 2015). There are several reasons for the equivocal state of this research. First, earlier research on drivers of Chinese investment in Africa have relied on traditional economic theories of internationalization such as Dunning's (1980) eclectic theory. Yet these theories were formulated from observations of trade between developed economies. There is reasonable evidence however that economic interactions between emerging economies may rely less on traditional economic theories and more on institutional pressures. Second, prior research assumes a homogenous China and worse, a homogenous Africa. It is unlikely the motivations underlying Chinese economic activity in Africa are stationary over time. Motivations underlying Chinese overseas economic engagement of 1975 are likely different from motivations underlying economic engagement in 2000 and unlikely the same as China of 2020. Similarly, African countries are neither homogenous nor stationary. The strength and quality of a country's institutions for example may influence the role of Chinese FDI in the economy.

From a theoretical perspective, Dunning's (1980) seminal eclectic theory of internationalization proposes that FDI activity will be driven by market-seeking, resource-seeking or efficiency-seeking motivations. Discussions and research regarding the drivers of Chinese overseas investments have generally centered on these motivations. Market-seeking FDI occurs when investments are geared towards gaining access to markets, especially those with strong/higher growth rates. Firms seek to overcome trade barriers, access distribution networks and exploit cost and investment factors (Rugman & Verbeke, 2004). Resource-Seeking FDI occurs to secure scarce raw materials and energy sources

that are available in the host country are lower prices. These are not only limited to natural resources but could also include technological resources such R&D capacity and infrastructure. Finally, efficiency-seeking FDI seeks comparatively lower cost locations for operations. Lower costs are usually driven by location specific advantages such as cheap labor that fueled FDI into China at the beginning of this century.

While Dunning's eclectic theory of internationalization may explain overseas investments in general, this theory was derived on evidence from developed economies and may be less applicable to emerging economies because of the stronger role of the institutional environment. Indeed, institutional theory would propose that the home country's institutional environment has a strong bearing on internationalization strategies (Scott, 2002). Idiosyncratic institutional market imperfections peculiar to China may create permutations not covered by economic theory (Ross, 2015). For example, the central government, through its agents and state-owned enterprises, either formally or informally may influence economic engagement to be congruent with the central government's agenda. That means the prevalence of state-owned enterprises, cheap capital for internationalization provided by the government and centralized government economic planning may distort internationalization incentives (Buckley et al. 2007). Not surprisingly therefore, empirical investigations into determinants of Chinese OFDI, especially to Africa have yielded inconsistent and sometimes contradictory findings. For example, although resource-seeking incentives are seen as a driver of Chinese OFDI into Africa, empirical evidence is inconclusive. While Asiedu (2006), Frynas & Paulo (2007) find that natural resource endowments of African countries are a key driver of Chinese OFDI, Cheung & Qian (2008), Zhang et al (2013) and Shan et al (2018) do not find any significant effect of natural resource endowments on attracting Chinese OFDI.

International Political Alignment

Economic interaction between countries generally affects the value that each country places on the relationship. More economic interaction promotes further continuation of other relationships, encouraging both sides to converge on shared interests, for example, with foreign policy (Flores-Macias & Kreps, 2014). Hirschman (1945) proposed that economic interaction between asymmetric dyads would cause the smaller state to face much higher costs from disruptions in the economic relationship. As a result, he argued, increased economic dependence between states could produce foreign policy convergence. The stronger the economic interactions, the more costly the interruptions to the economic relationship. Economic interactions can therefore serve as leverage for transmission of influence by the stronger party. One area in which this influence is most apparent is in foreign policy alignment, especially as reflected in issues that pertain to the United Nations General Assembly (UNGA). Foreign policy similarity or political alignment may be achieved by economic, diplomatic or military linkages (Struver, 2016). Political alignment represents the similarity in national preferences in international affairs based on national ideologies and orientations, which are thought to be key in facilitating countries toward cohesive behavior (Gartzke, 1998).

On a fundamental level, asymmetric economic interactions increases the vulnerability of weaker countries to respond to the stronger countries' external demands, including those demands that are not directly communicated. Direct and indirectly communicated demands may be accepted due to the fear of investments and other economic benefits; thus the weaker state accommodates the foreign policy interests of the more powerful state (Dreher et al, 2008). Alignment with a stronger state allows weaker states to be considered as part of a larger collective when dealing with global policy issues, yielding additional benefits for the weaker state. Whether the goal of the foreign investments is to garner political allies, foreign policy consequences follow from trade.

The link between economic interaction and political alignment would likely apply to China and its overseas FDI to Africa. The ability of China's increased economic power and influence to gravitate weaker economic partners towards greater foreign policy alignment can be captured by three essential factors: 1) having deep and bilateral ties with weak or fragile states/countries, 2) the lack of unity among western countries – specifically when the US and the EU do not agree that may lead to evidence of a strong policy preference, and 3) the ability to rally other countries in the context of multilateral decision making, that is, bloc voting magnifies a country's voice and succeeds in pushing a country's agenda

forward (Hart & Jones, 2010). These factors are especially important when a policy vote is determined by a consensus.

China's focus on outward foreign direct investment (OFDI) has been gradual and increasing since the institution of the Open Door Policy and additional measures of economic reform initiated by Deng Xiaoping (Buckley, et al., 2018). China's evolving framework for OFDI currently represents the Chinese government's positive view of the importance of OFDI for the development of Chinese firms and particularly the need for Chinese firms to compete globally among the world's leading MNEs. These ideas culminated into China's 'Go Global' policy, established in 1999, which essentially represented a push for Chinese firms to pursue FDI (Pei & Zheng, 2015). The Chinese government's support of OFDI is a means for internationalizing Chinese firms, but also is a mechanism vital for the continued development of China's foreign policy objectives (Buckley, Clegg, Cross, Liu, Voss, and Zheng, 2007). The Chinese government's active involvement in identifying host countries reveals a new level of business-government interaction that likely influences the motivation for the increased motivation and interest in pursuing FDI (Kynge, 2017).

This however has not always been the case. It is fair to state that the days when China was characterized as "bereft of friends," "a beacon to no one – and, indeed, an ally to no one" (Segal 1999: 33) are long gone. China's rise as an economic power has been followed by its "emergence as an active player in the international arena" (Medeiros and Fravel 2003: 22). China's increased international activism has been reflected in many foreign policy arenas such as global climate talks, reforming global economic and financial systems, and water diplomacy (Hongzhou & Mingjiang, 2020). Central to China's foreign policy is the willingness to align and cooperate with other countries to build a multipolar international system that protects its interests in global politics (Struver, 2012). This is seen in coordinated policy positions and joint diplomacy for example in BRICS (Brazil, Russia, India, China, and South Africa), BASIC (Brazil, South Africa, India and China) and Shanghai Cooperation Organization (SCO).

China's unique and rapid transformation has challenged the US-dominated liberal world order (Mearsheimer, 2014). This has led to resistance especially among liberal western nations who see a threat in China's rise as a potential 'clash of civilizations'. This clash is most reflected in voting on United Nations (UN) resolutions and necessitates China seeking allies especially in Africa given African countries' political weight in International Organizations. Seeking allies in the UN "allows China to find like-minded allies and mitigates any sense that it has to operate in all circumstances under the constraints of a western-style international order" (Foot 2014, 1092). FDI from China to African countries is a key mechanism through which such allies are found.

China's movement from being an emerging economy to being an economic power crystalized during the height of the great depression. This period saw a drastic drop in FDI from western nations which created a void quickly occupied by China. Chinese economic interactions with African countries reached levels that created a dependency that was leveraged by the stronger party (China). Without the critical mass of FDI coupled with competing investments from Western countries, China did not have as much leverage from its economic interactions with African countries pre-2008 as it did post 2008. Therefore we would expect that the effect of Chinese FDI on African countries' political alignment with China will be more pronounced post 2009.

H1: The effect of Chinese FDI in Africa on international political alignment with China will be stronger post-2008.

The Moderating Effect of Governance

Our study examines the growth of China's global influence resulting from its FDI in African countries. Yet, host African countries also play a role in China's ability to utilize economic engagement for political ends. We examine the specific "opportunity" afforded to China when sub-Saharan African countries have weak governance mechanisms. We specifically argue that the effect of Chinese FDI on international political alignment will be weakened in better governed African countries for two reasons.

One of the central principles of Chinese investment is the noninterference principle or 'no conditions attached'. This is in stark contrast to investments from Western countries predicated on democracy or human rights conditions. Such conditions will be more attractive to leaders of countries

with weak governance who are more likely to be authoritarian and more likely to abuse human rights. The lack of democracy makes it possible of these leaders and the elite to direct FDI from China to projects favoring their core groups of supporters thereby increasing their chances of staying in power (Raess et al. 2022). Conversely, the allocation of FDI projects in better governed countries is more transparent and likely to the benefit of a broader swath of the population. This makes leaders of worse governed countries more amenable to the unwritten quid pro quo that comes with the FDI.

Second, democracies in Africa in general have better governance than autocracies (Guseh & Oritsejafor, 2018). When it comes to UN voting, democracies are more aligned with US positions and more opposed to Chinese positions (Carter & Stone, 2015). Better governed countries in Africa, likely democracies, have the added burden of having to explain and face public scrutiny over their UN votes, especially when such votes deviate from historical precedence of aligning with the US. This makes it less likely that any quid pro quo from FDI would remain ‘hidden’ and raises the threshold of investment likely to convince the leaders of better governed countries to align with China. This argument leads to our next Hypothesis:

H2: Host country governance factors will moderate the effect of FDI and political alignment such that better governed countries will be less susceptible to political alignment effects of FDI.

METHOD

Our initial sample includes all 54 African countries from 2001 to 2019. We collect data from multiple sources – United Nations (General Assembly votes, Bilateral FDI Statistics), World Bank (Africa Development Indicators, World Integrated Trade Solution, Worldwide Governance Indicators), China-Africa Research Initiative from the School of Advanced International Studies at Johns Hopkins University. We removed northern African countries (Morocco, Algeria, Tunisia, Libya, Egypt, Sudan) from our initial sample because these countries have distinct cultural and political characteristics from the rest of the African countries. Our final sample is an unbalanced panel data that have between 38 to 48 countries in different models, depending on the availability of data and variables that are included in the specific models.

Measures

Dependent Variable: Change in political alignment with China. Our dependent variable is the change in political alignment between each sub-Saharan African country and China. The variable is created in three steps. First, we collect yearly ideal points of all countries. The ideal point is an indicator of a nation’s foreign policy preferences that is constructed from the United Nations General Assembly voting data. Specifically, the ideal points are generated using IRT statistical model to estimate one-dimensional national preference vis-à-vis a US-led liberal order (Bailey, Strezhnev, & Voeten, 2017). The ideal points have a mean of 0 and a standard deviation of 1 with lower values indicating deviance from the US-led liberal order and higher values indicating conformity to the US-led liberal order. The ideal points improve upon conventional dyadic nation preference similarity indicators such as Affinity or S-scores (Gartzke, 1998; Signorino & Ritter, 1999) by allowing for more valid inter-temporal comparisons (Liao & McDowell, 2016). It is a more consistent measure of two countries’ alignment on political preference than voting agreement percentage, which can move dramatically due to changes in agenda even when the underlying preferences do not change. Second, we calculate political alignment with China using the following formula:

$$PA_{(it)} = (-1) * \text{abs}(\text{idealpoint}_{(it)} - \text{idealpoint}_{(\text{china},t)})$$

Where $PA_{(it)}$ is country i ’s political alignment with China at year t ; $\text{Idealpoint}_{(it)}$ is country i ’s ideal point at year t ; $\text{idealpoint}_{(\text{china}, t)}$ is China’s ideal point at year t . We use the absolute value of the difference because we are only interested in the absolute difference (align/misalign) but not the direction of the difference (more liberal/conservative). The absolute difference reflects the misalignment, so we multiple it by -1 to reflect the alignment. Finally, we create a change in political alignment with China by subtracting the previous year’s value from the current year’s value ($P.A. (it) - P.A. (i, t-1)$). Therefore, our final variable reflects the yearly change in political alignment.

Independent Variables: Our main independent variable is the *FDI Inflow from China*. We obtain bilateral FDI data from United Nations Trade and Development (UNCTAD) 's Bilateral FDI Statistics, which provides up-to-date and systematic FDI data for 206 economies around the world from 2001 to 2012. The FDI data after 2012 is obtained from the China-Africa Research Initiative in the School of Advanced International Studies at Johns Hopkins University. It is likely that investment from China exerts its influence over several years. Thus, we use a two-year moving average (in billion U.S. dollars) as our main variable. To test the robustness of the results, we also use the total Chinese investment, which is the sum of FDI inflows from China and loan from China. The loan data is obtained from the same source at China-Africa Research Initiative.

Host Country Governance. We obtain governance indicators from World Bank's Worldwide Governance Indicators (Kaufmann, Kraay, & Mastruzzi, 2010), which report on six broad dimensions of governance for over 200 countries and territories over the period 1996-2020 – Voice and Accountability, Political Stability, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. We perform a factor analysis on the six dimensions and generate a composite score using the factor loadings of the six dimensions.

Control variables. When predicting political alignment with China, we include several control variables that may correlate with economic engagements from China, including total net FDI inflow, remittance, military expense, GDP per capita, GDP growth, export to China, import from China. Net FDI inflows (measured in billion U.S. dollars) are the yearly total value of inward direct investment made by all foreign entities. Remittance is the yearly value (measured in billion U.S. dollars) of workers' remittances and compensation of employees comprising current transfers by migrant workers and wages and salaries earned by nonresident workers. Military expense (measured in billion U.S. dollars) is yearly total amount of all current and capital expenditures on the armed forces. GDP per capita (measured in U.S. dollars) is yearly gross domestic product divided by midyear population. GDP growth is measured as the annual percentage growth rate of GDP at market prices based on constant local currency. Export to China (measured in billion U.S. dollars) is the yearly total value of goods that an African country exports to China, and import from China (measured in billion U.S. dollars) is the yearly total value of goods that an African country imports from China. All the data are obtained from various databases of The World Bank, including Africa Development Indicators, World Development Indicators, and World Integrated Trade Solution.

RESULTS

The final dataset is in a format of unbalanced panel data. Thus, we use fixed-effects panel linear regressions in all analyses. The fixed-effects model accounts for unobserved country-level characteristics (e.g., culture, political environment, and historical relationship with China, etc.), and thus it may reduce potential endogeneity due to such country-level characteristics. We ran two sets of fixed-effects models. In the first set, we predict change in political alignment with FDI from China. To test the changing effects in different time periods, we split the sample into two time periods – pre-2009 and post-2009. In the second set, we test the moderation effect of African countries' governance indicators by creating interaction terms of the composite score of governance with investments from China. Descriptive statistics and correlation matrix of all variables are presented in Table 1 and Table 2.

Table 1: Descriptive Statistics

	Count	Mean	SD	Min	P25	P50	P75	Max
1 Pol alignment change	970	.002	.239	-.870	-.140	.008	.144	.908
2 FDI from China	687	.052	.197	-.452	0	.004	.040	2.881
3 Governance	961	.028	1.009	-2.908	-.654	.001	.552	2.538
4 Net FDI inflow	982	.562	1.307	-7.397	.039	.160	.545	10.028
5 Remittance	903	.611	2.514	0	.027	.086	.344	24.311

6 Military expense	941	.314	.693	.001	.043	.116	.288	6.841
7 GDP per capita	982	1935.45	3010.36	102.59	431.27	760.59	1680.20	22942.58
8 GDP growth	963	4.400	5.440	-46.082	2.353	4.554	6.438	63.379
9 Import from China	894	.537	1.798	0	0	.028	.317	15.987
10 Export to China	894	.461	2.632	0	0	0	.001	33.710

Table 2: Correlation Matrix

	1	2	3	4	5	6	7	8	9	10
1 Pol alignment change	1.00									
2 FDI from China	0.01	1.000								
3 Governance	0.00	0.070	1.000							
4 Net FDI inflow	-0.00	0.395**	0.072*	1.000						
5 Remittance	0.00	0.237**	-0.124**	0.496**	1.000					
6 Military expense	-0.00	0.307**	0.039	0.388**	0.290**	1.000				
7 GDP per capita	0.01	0.049	0.309**	0.092**	0.007	0.187**	1.000			
8 GDP growth	-0.02	0.029	0.092**	0.069*	0.007	-0.024	-0.026	1.000		
9 Import from China	-0.00	0.399**	0.116**	0.577**	0.411**	0.744**	0.213**	0.00	1.000	
10 Export to China	-0.01	0.118**	-0.036	-0.001	-0.023	0.745**	0.186**	-0.02	0.399**	1.000

Table 3 presents the regression results of predicting *change in political alignment* with China using *FDI from China*. Column (1) and (2) are the entire time periods (2001-2019), Column (3) and (4) are the pre-2009 sub-sample, Column (5) and (6) are the post-2009 sub-sample. All models are tested using country-fixed effects, and standard errors are clustered at the country level.

Table 3: Effects of FDI Inflow from China on the Change in Political Alignment with China

	DV: Change in Political Alignment with China					
	All Years		2001-2009		2010-2019	
	(1)	(2)	(3)	(4)	(5)	(6)
Net FDI Inflow	-0.002	-0.005*	0.021*	0.028**	-0.008	-0.007

	(0.003)	(0.002)	(0.008)	(0.009)	(0.007)	(0.008)
Remittance	0.003	0.003	0.003	-0.003	0.000	-0.016
	(0.002)	(0.003)	(0.003)	(0.007)	(0.019)	(0.021)
Military Expense	-0.010	-0.019	0.099	0.119	-0.027	-0.021
	(0.023)	(0.027)	(0.059)	(0.129)	(0.032)	(0.033)
GDP Per Capita	0.000	0.000	-0.000	-0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
GDP Growth	-0.005*	-0.003*	-0.005	0.000	-0.009***	-0.011***
	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)
Import from China	-0.006**	-0.003	-0.037+	0.002	-0.001	-0.009
	(0.002)	(0.003)	(0.021)	(0.048)	(0.010)	(0.011)
Export to China	-0.005	-0.008*	0.011	0.017+	-0.011	-0.008
	(0.003)	(0.004)	(0.010)	(0.009)	(0.007)	(0.007)
Constant	-0.001	-0.023	-0.003	-0.059	-0.087*	-0.077*
	(0.023)	(0.032)	(0.025)	(0.037)	(0.033)	(0.037)
FDI from China		0.017		-0.171+		0.077**
		(0.025)		(0.089)		(0.027)
Country Fixed-effect	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed-effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	774	560	345	209	429	351
N of Countries	39	38	39	29	39	38
F-statistic	36.998***	54.556***	22.069***	452.658***	65.474***	52.539***
R-square	0.200	0.189	0.191	0.147	0.168	0.144

Standard errors in parentheses. Standard errors are clustered at country-level.

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Hypothesis 1 proposed that FDI investment from China will be positively related to the change in political alignment with China. Column (2) shows that *FDI from China* is not significant, indicating that FDI from China is not related to change in political alignment in the full sample time frame (2001-2019). Thus, hypothesis 1 is not supported. Hypothesis 2 proposes that the effect of FDI investments from China will be stronger in post-2009 times. Column (4) shows that the effect of *FDI from China* is negative and marginally significant ($b = -0.171$, $p < 0.1$), indicating that *FDI from China* has a weak negative effect on the change in political alignment before 2009. Column (6) shows that *FDI from China* has a significant positive effect ($b = 0.077$, $p < 0.01$), indicating that it is positively related to change in political alignment after 2009. This provides support for hypothesis 2.

Hypothesis 3 proposes that African countries' governance moderates the effect of Chinese investment in Africa on political alignment such that countries with stronger governance mechanisms will have a weaker effect. Table 4 presents the results of testing the moderation effects of governance indicators.

Table 4: Moderation Effects of Governance on the Change of Political Alignment with China

	DV: Change in Political Alignment with China			
	(1)	(2)	(3)	(4)
Net FDI Inflow	-0.002	-0.005*	-0.004+	-0.003
	(0.003)	(0.002)	(0.002)	(0.002)
Remittance	0.003	0.003	0.001	0.001
	(0.002)	(0.003)	(0.003)	(0.003)
Military Expense	-0.010	-0.019	-0.021	-0.021
	(0.023)	(0.027)	(0.026)	(0.024)
GDP Per Capita	0.000	0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
GDP Growth	-0.005*	-0.003*	-0.004*	-0.004*
	(0.002)	(0.002)	(0.002)	(0.002)
Import from China	-0.006**	-0.003	-0.003	-0.004

	(0.002)	(0.003)	(0.003)	(0.004)
Export to China	-0.005	-0.008*	-0.008*	-0.007*
	(0.003)	(0.004)	(0.003)	(0.003)
Constant	-0.001	-0.023	-0.038	-0.039
	(0.023)	(0.032)	(0.032)	(0.032)
FDI from China		0.017	0.014	0.034 ⁺
		(0.025)	(0.025)	(0.018)
Governance			0.067**	0.067**
			(0.024)	(0.024)
FDI * Governance				-0.030*
				(0.012)
Country Fixed-effect	Yes	Yes	Yes	Yes
Year Fixed-effect	Yes	Yes	Yes	Yes
Observations	774	560	560	560
N of Countries	39	38	38	38
F-statistic	36.998***	54.556***	74.843***	69.923***
R-square	0.200	0.189	0.164	0.164

Standard errors in parentheses. Standard errors are clustered at country-level.

⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Column (4) shows that the interaction term (*FDI from China * Governance*) is negative and significant ($b=-0.030$, $p<0.05$). Thus, the moderation effect of governance is supported. We graph the interaction effect and conduct marginal effects analysis to further investigate the interactions between FDI investments and governance.

Figure 1: interaction Plots of FDI Inflow from China and Governance

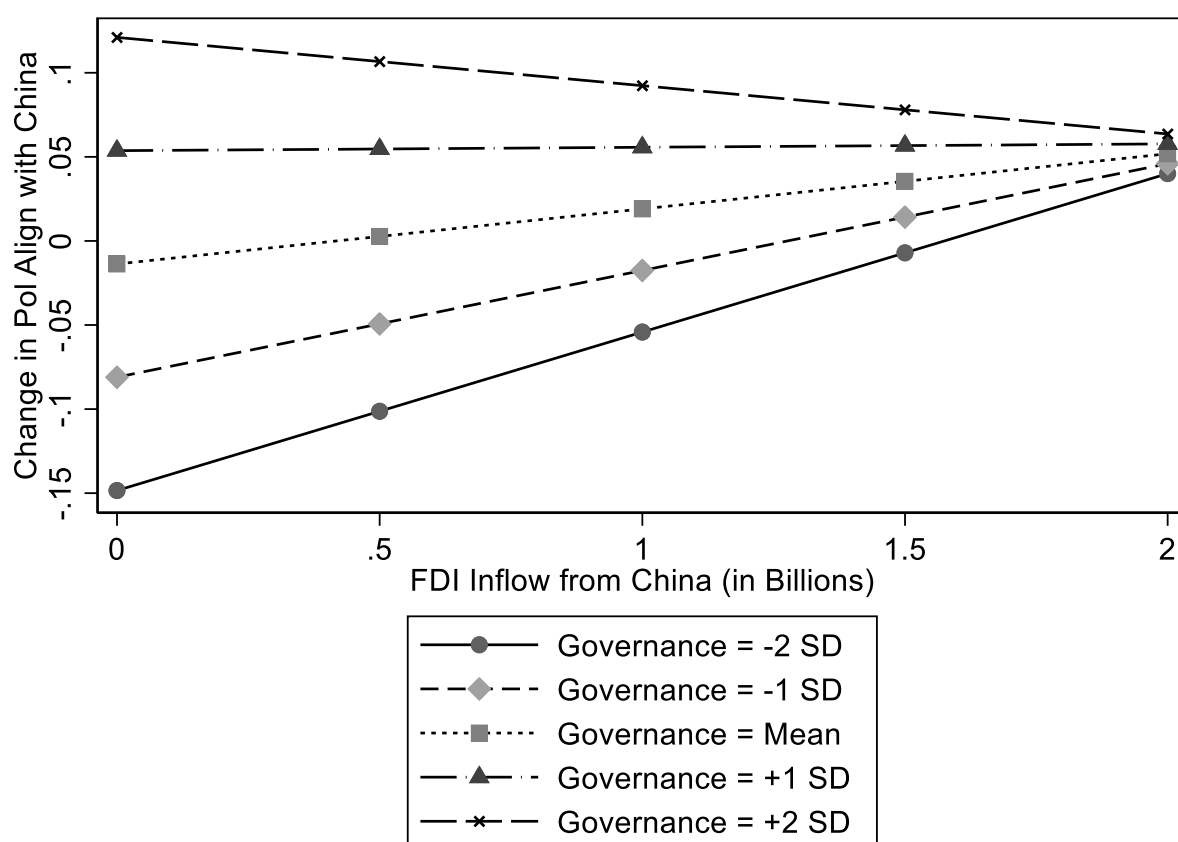


Figure 1 shows that *Governance* weakens the positive effects of *FDI from China* on the *Change in Political Alignment with China*. Marginal effects analysis shows that the positive effect of *FDI from China* becomes insignificant when *Governance* reaches the value of 0.5 (about half S.D. above Mean), and turns into negative as *Governance* continues to increase. The negative effect becomes significant when *Governance* reaches the value of 1.6 (about one and a half S.D. above Mean). Therefore, *Governance* weakens the positive effect of *FDI from China* and flips the positive effect into a negative effect. The strong moderation effects also explain why the main effect of *FDI from China* is not significant.

Supplementary Analysis

To test the robustness of our results, we run the same two sets of models with the total investment from China as the independent variables.

Table 5: Effects of Total Chinese Investment on the Change in Political Alignment with China

	DV: Change in Political Alignment with China					
	All Years		2001-2009		2010-2019	
	(1)	(2)	(3)	(4)	(5)	(6)
Net FDI Inflow	-0.002 (0.003)	-0.009 (0.005)	0.021* (0.008)	0.011 (0.014)	-0.008 (0.007)	-0.013 (0.010)
Remittance	0.003 (0.002)	0.003 (0.003)	0.003 (0.003)	0.008 (0.008)	0.000 (0.019)	-0.019 (0.020)
Military Expense	-0.010 (0.023)	-0.015 (0.023)	0.099 (0.059)	0.165 (0.156)	-0.027 (0.032)	-0.023 (0.032)
GDP Per Capita	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)

GDP Growth	-0.005*	-0.003 ⁺	-0.005	0.000	-0.009***	-0.010***
	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)
Import from China	-0.006**	-0.004	-0.037 ⁺	-0.039	-0.001	-0.008
	(0.002)	(0.003)	(0.021)	(0.056)	(0.010)	(0.009)
Export to China	-0.005	-0.009**	0.011	0.014	-0.011	-0.003
	(0.003)	(0.003)	(0.010)	(0.012)	(0.007)	(0.007)
Constant	-0.001	-0.026	-0.003	-0.063	-0.087*	-0.075*
	(0.023)	(0.033)	(0.025)	(0.042)	(0.033)	(0.036)
Total Chinese Investment		0.029**		0.007		0.038*
		(0.009)		(0.113)		(0.016)
Country Fixed-effect	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed-effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	774	560	345	209	429	351
N of Countries	39	38	39	29	39	38
F-statistic	36.998***	132.453***	22.069***	68.208***	65.474***	59.071***
R-square	0.200	0.202	0.191	0.131	0.168	0.140

Standard errors in parentheses. Standard errors are clustered at country-level.

⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5 presents the main effects of *Total Chinese Investment* using the full sample, and the pre-2009 and post-2009 sub-samples. Column (2) shows that *Total Chinese Investment* is positive and significant ($b=0.029$, $p<0.01$), Column (4) shows that *Total Chinese Investment* is not significant, and Column (6) shows that *Total Chinese Investment* is positive and significant ($b=0.038$, $p<0.05$). Together, the results indicate that *Total Chinese Investment* has a positive effect on the *Change in Political Alignment with China* during the entire sample period (2001-2019) and during 2010-2019; however, it has no effect during the 2001-2009 period. Thus, it is generally consistent with the primary results using FDI investments from China.

Table 6: Moderation Effects of Governance on the Change of Political Alignment with China

	DV: Change in Political Alignment with China			
	(1)	(2)	(3)	(4)
Net FDI Inflow	-0.002	-0.009	-0.008	-0.008
	(0.003)	(0.005)	(0.005)	(0.005)
Remittance	0.003	0.003	0.001	0.001
	(0.002)	(0.003)	(0.003)	(0.003)
Military Expense	-0.010	-0.015	-0.016	-0.017
	(0.023)	(0.023)	(0.022)	(0.021)
GDP Per Capita	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
GDP Growth	-0.005*	-0.003 ⁺	-0.004*	-0.004*
	(0.002)	(0.002)	(0.002)	(0.002)
Import from China	-0.006**	-0.004	-0.004	-0.003
	(0.002)	(0.003)	(0.003)	(0.004)
Export to China	-0.005	-0.009**	-0.008**	-0.009**
	(0.003)	(0.003)	(0.003)	(0.003)
Constant	-0.001	-0.026	-0.040	-0.040
	(0.023)	(0.033)	(0.033)	(0.032)
Total Chinese Investment		0.029**	0.027*	0.019*
		(0.009)	(0.010)	(0.008)
Governance			0.060*	0.063*

			(0.025)	(0.024)
Total Chinese Investment *				-0.022*
Governance				(0.009)
Country Fixed-effect	Yes	Yes	Yes	Yes
Year Fixed-effect	Yes	Yes	Yes	Yes
Observations	774	560	560	560
N of Countries	39	38	38	38
F-statistic	36.998***	132.453***	153.407***	240.814***
R-square	0.200	0.202	0.181	0.181

Standard errors in parentheses. Standard errors are clustered at country-level.

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 6 presents the interaction effects between *Total Chinese Investment* and *Governance*. Column (4) shows that the interaction term is negative and significant ($b=-0.022$, $p<0.05$). Thus, *Governance* weakens the positive effect of *Total Chinese Investment*, which is fully consistent with the primary results using FDI investment from China.

DISCUSSION AND CONCLUSION

In this study, we investigate the relationship between economic engagement and political alignment between China and sub Saharan African countries. We specifically examine FDI investments from China to determine the resultant alignment evidenced by voting patterns in the UNGA. Macropolitical considerations of FDI investments are not new. Gao, Want, and Che (2017) explored the influence from political conflict influenced location choices. However, most of the existing research that examines the influence for FDI separates economic influences from political influences. The theoretical inquiry regarding the motivation for investment via FDI is grossly understudied. The need to understand the influences and outcomes would guide us to consider a broader lens for the potential outcomes of FDI.

Economic engagement via FDI within emerging economies may provide additional benefits for both the investor and the recipients. The opportunity to leverage economic engagement via weaker states may manifest as political alignment. We explore the potential relationship between economic engagement and political alignment to detect convergence of political policy among China and many emerging African countries. We use Hirshman's (1945) lens to support overlap between economic and political engagement. Weaker states may feel obligated to align with the providers of economic engagement. Keohane and Nye (1977) note the disparities among the FDI investor and recipient states breeds obligation and dependency. As such, we examine the FDI transactions between China and many African countries to recognize the outcomes of the imbalance of power. We explore this gap in the literature.

Using the empirical context of China's outward FDI, we test the influence of economic engagement on political alignment among emerging African countries. Our data sample was split into pre-2008 and post-2008, to examine whether the effects of Chinese investments differ before and after the economic recession that took place around 2008. First, our study promotes the combination of both economic and political drivers of Chinese engagement in Africa. We test the relationship between FDI from China and change in political alignment. Our analysis reveals a positive relationship, however the relationship is not statistically significant for the data prior to 2008. The analysis of a relationship between FDI and change in political alignment post-2008 was positive and significant. This signifies a relationship between economic and political environments. The effect of the recession strengthened the relationship between China's economics investments and political alignment with countries in Africa.

Second, we analyzed several governance indicators using moderation effects. Our goal was to determine whether indicators such as governance and political stability influence political alignment. We examined the moderation effect with FDI from China. Our results reveal that only FDI from China and political stability result in political alignment. This finding demands further study. We posit that this result provides the first indication that political stability among African countries may influence whether FDI results in political alignment. The dynamism of the nuance of political stability incorporates how power is distributed, in addition to the extent to which laws are generally obeyed or disobeyed. The resulting political stratification or distribution of power determines the stability of the existing governance system. Further analysis is needed to more fully examine the drivers and antecedents of political stability and how they may differ from other governance dimensions. Our analysis did not reveal that individual governance dimensions influence political alignment. These results demand further investigation to separate and isolate the factors of submission to the laws and whether laws are or can be enforced which resultingly shape the political and governmental environment.

Lastly, economic investments from the West are classified as having strings attached. Western governments want to influence the governance of the states that receive investment. However, China

touts that its investment comes without strings attached. China has stated that it does not want to interfere in Africa's internal affairs (The Times, 2018). This lack of interference is not necessarily true and comes with some strings attached. President Xi of China, requires participants at Beijing's summit to forgo diplomatic relations to Taiwan. This translates to China doing business with a broad spectrum of regimes, some of which have corrupt regimes that subject their citizens to extremely poor living conditions.

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Figure 2A - Annual FDI Inflow from China (in Millions U.S. Dollar)

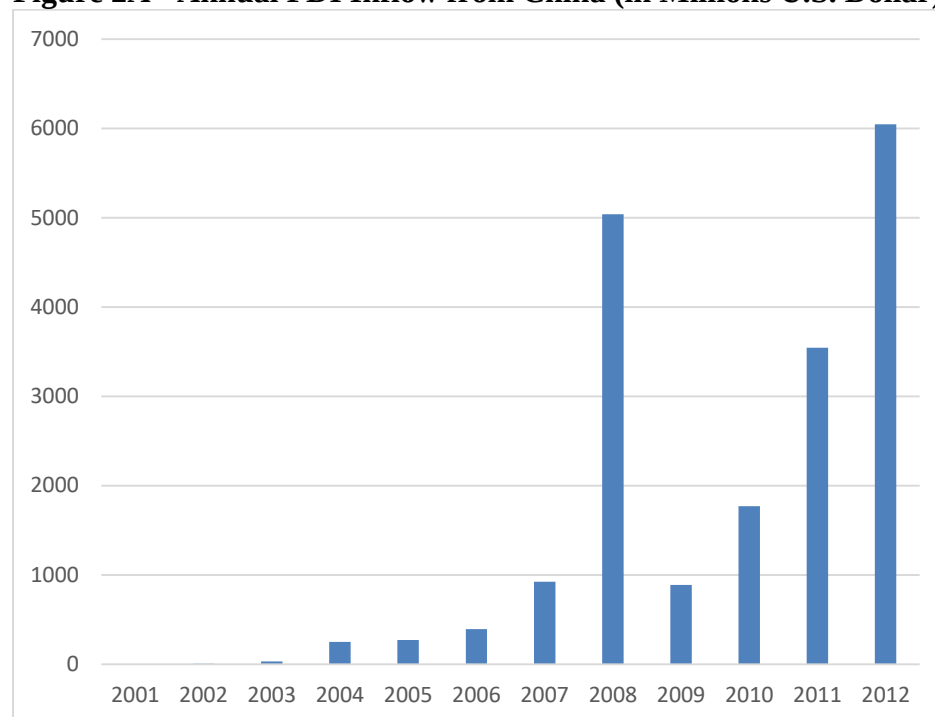
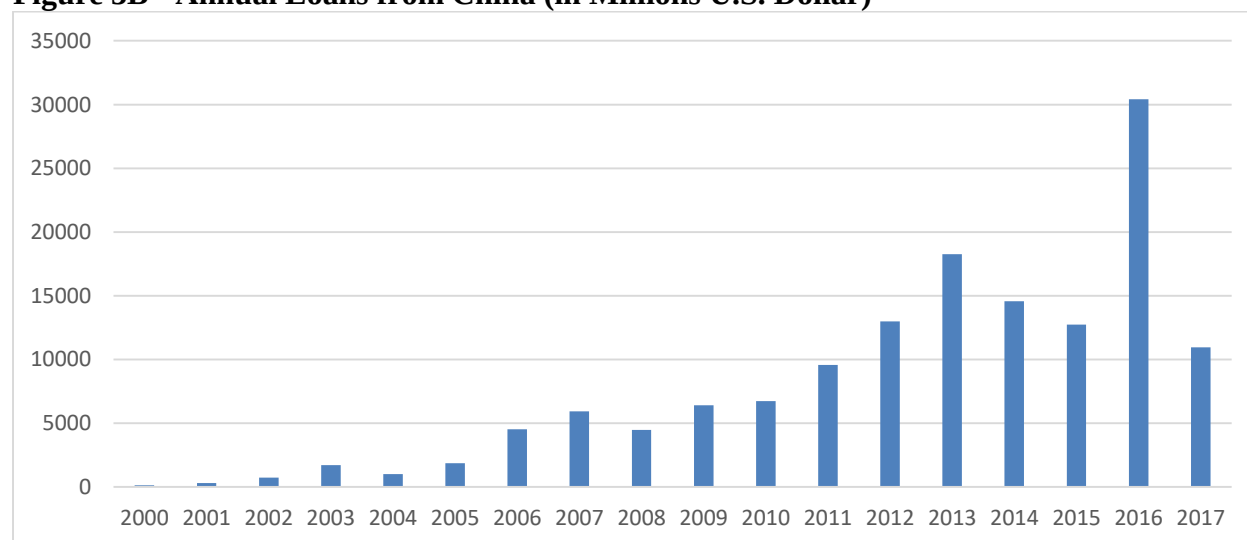


Figure 3B - Annual Loans from China (in Millions U.S. Dollar)



Part 6: Sustainability and Green Management

EXPLORING THE CHARACTERISTICS OF SUSTAINABLE BUSINESS PRACTICES: EXPERIENCES FROM THE KENYAN FOOD AND BEVERAGE MANUFACTURES

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ABSTRACT

Sustainable food production is a well-explored topic among scholars and practitioners. However, there is little knowledge concerning how African food manufactures manifest sustainability in their business operations. In order to contribute to fill the existing gaps, we conduct an empirical analysis of Kenyan food and beverage manufacturers, which have joined the UN Global Compact initiative. We analyzed if sustainability reporting is a common practice and what types of sustainable activities and practices are common in this sector. Based on our findings, sustainability is a growing interest for the studied companies. Almost all of the case companies mentioned sustainability in their website, nevertheless sustainability reporting is not yet widely conducted in a systematic manner. Most common sustainability related practices concern collaboration with local communities. In addition, growing number of companies pay attention to energy efficiency and waste management. We can conclude that even though the significance of sustainability is recognized, it is not yet approached strategically. This study has implications on the academic and practitioner literature as it represents a pioneering attempt to shed light on how the Kenyan food and beverage manufactures deal with sustainability issues.

Key words: sustainability, food production, UN Global Compact, sustainability reporting

INTRODUCTION

In the last two decades, the concept of sustainability has gained prominent relevance across corporations around the world. Although all industries are required to take steps towards sustainable practices, it seems that food industry in particular is under severe global pressure. If nothing changes in the way food is produced and consumed, food production should be increased by more than 60% by 2050 (FAO, 2010) in order to feed the growing population: as a consequence, the environmental impacts associated with food production systems will become even more severe and will increasingly surpass the planetary boundaries. This means that the global food system requires transformational change in order to be able to feed the world's global population while staying within the biophysical limits of the planet (Willet et al. 2019). The Food and Agriculture Organization of the United Nations (FAO) states that food sector has to increase its production while simultaneously decreasing the negative impact of this production and distribution (FAO, 2012). The topics of the environmental 'food print' (i.e. the environmental impact) of production and distribution of food commodities, and the socio-economic imprints of supply chains are emerging strongly (Béné et al., 2019). Strategies are, therefore, urgently needed to address sustainability holistically in the food sector by integrating and assessing the economic, environmental and social dimensions as well as nutritional aspects (Ingrao et al., 2021).

Applying holistic approach allows to measure the food system performance and identify areas of improvement (Chaudhary et al., 2018). This is particularly relevant in low- and middle-income countries where food systems are both driving and driven by rapid transformations and where the prevalence of the triple burden of malnutrition¹⁷ is high (Béné et al., 2019). Moreover, in East-African region climate change is a persistent threat to food security (see Mahrous, 2019).

This study adopts an original approach to sustainability within the Kenyan food and beverage industry by analyzing sustainability practices of national companies. Although there is currently a wide range of literature available regarding the topic of sustainability, the majority of academic studies have focused on large corporations, primarily located in developed nations (Venkatraman & Nayak, 2015; Theyel & Hormann, 2012). Thus, what is missing from the literature is an overarching understanding of the breadth and depth in which Kenyan companies actually pursue business-relevant activities that are not only economically focused but also address broader social and environmental impacts. Furthermore, little specific information exists around what kind of specific tools, techniques and models food companies should adopt and implement in order to achieve a sustainable and greener future. We doubt whether many of the sustainable development mechanisms and tools that are developed within Western large corporations are also suitable for developing countries manufactures. The few studies that have been carried out indicate that it is only quite recently that sub-Saharan African countries societies have begun to value social and environmental responsibility of companies (Tilt et al., 2021). So far, the overall amount of companies providing extensive CSR or sustainability reporting is relatively low (Kühn et al., 2018). While the aspects of sustainability and climate have been recognized among a growing number of Kenyan publicly listed companies, (see for example Kivuva, 2022) the academic research is lagging behind and more specifically so far there seem to be hardly any studies available, which focus particularly on the food and beverage sectors' sustainability.

The main objective of this paper is to explore this under-studied topic by analysing the sustainable business practices in Kenyan food and beverage manufactures and by focusing on a subset of companies who have shown interested in sustainable development by joining the UN's Global Compact initiative. The initiative is the world's largest strategic, voluntary, corporate social responsibility (CSR) and sustainability initiative for companies. It is based on ten principles ranging from human rights and labor standards to environmental and anti-corruption issues, which are all derived from key international declarations (UNGC, 2012b). The primary goal of the initiative is to provide participants with the resources and expertise needed to implement the 10 UNGC principles as well the Sustainable Development Goals (SDGs). Currently (05/2022) there are 18 Kenyan food and beverage companies that have joined the initiative.

The research is guided through two research questions:

- RQ1. What kind of sustainability practices Kenyan food and beverage companies have adopted?
- RQ2. Is sustainability considered as a critical/strategic element of the business?

This study makes an original contribution to several important areas: firstly, studies on sustainability have mainly focused on companies representing developed nations, little is known how well companies originating in developing countries are approaching sustainability. This study will provide novel knowledge on this topic. Secondly, this is one of the first studies to deliver empirical evidence on the issue of sustainability actions of Kenyan food and beverage manufacturers. Empirical information is critical in order to make the food production more sustainable.

BACKGROUND

What are Sustainable Business Practices in the Food Sector?

¹⁷ Triple burden of malnutrition refers to the coexistence overnutrition, undernutrition, and micronutrient deficiencies (see e.g. Pinstrup-Andersen, 2007).

Sustainable business practices involve environmental-friendly and socially responsible initiatives implemented by a company to reduce its environmental footprint and contribute to equitable social development. The type of initiatives that a company implements often depends on their financial resources and the extent to which they are willing to reduce carbon emissions and promote social sustainability. Besides, the implementation of sustainable business practices helps companies to save money.

A number of frameworks, guidance documents, and standards have aimed to create guidelines for more sustainable practices in the food industry. Yet, these standards, reporting frameworks and analytical tools fall short of an industry consensus, or a holistic, comprehensive framework for responsible practices in the food sector. Some investors continue to push for profits over responsibility, trying to force company management into behavior that ignores socio-environmental impacts in the supposed interest of shareholders. Moreover, there remains a disconnect between conversations around responsible land use practices, health and nutrition, climate change, and the role of the private sector, despite the interdisciplinarity of food systems and the necessary transformations. Finally, the existing guidance documents on responsible investment in agriculture and food systems do not yet provide explicit guidance on alignment with the Sustainable Development Goals (SDGs).

In addition, Green Business Practices are still a relatively new concept hence there is no census regarding the suitability of some of the indicators given the diversity of the business settings.

For this reason, the UN Sustainable Development Solutions Network (SDSN) and the Columbia Center on Sustainable Investment (CCSI) have developed a conceptual framework to define SDG-aligned business practices in the food sector. One goal is to bring coherence and rigor to SDG measurement, reporting, and tools. Another goal is to ensure that such frameworks enable highly responsible SDG-oriented companies to differentiate themselves clearly from peer companies that aim to pursue business as usual.

The SDSN-CCSI conceptual framework for responsible corporate practices in the food sector considers business sector alignment with sustainable development based on four pillars:

1. Product lines: Address the impact of products and services on human wellbeing and the planet's sustainability. Are product lines healthful and product use conducive to wellbeing and supportive of the living standards and life goals of consumers?
2. Sustainable operations: Consider the environmental and social impacts of the business and its operations, including resource use (land, water, energy) and emissions, respect for human rights, and decent work conditions.
3. Sustainable value chains: Reflect the company's role in and responsibility for the broader ecosystem of which it is part, its interaction with its supply chain, producers, parallel industries, and consumers. How does the company collaborate to promote, incentivize and ensure more sustainable practices and better livelihoods in its value chain?
4. Good corporate citizenship: Refers to how companies are governed internally, and how they engage externally. In both of these areas, it assesses whether companies encourage and reward conduct that strives to internalize externalities, and whether companies value and do not undermine the effective deployment of law and policy that advances inclusive sustainable development.

These four pillars are meant to be applied to the food sector, using up-to-date evidence and data and policy guidelines regarding each of the four pillars. Relevant best practices and standards specific to food and agriculture, as well as expertise in ecological sciences, nutrition, health, agriculture, corporate governance, and law, will be incorporated. For all pillars, the consistency of business practices with the Sustainable Development Goals (SDGs) are to be specifically examined.

According to Ghoshal 2011, businesses are now embracing green marketing as an approach of selling their services and products better and faster. Green Marketing entails activities such as modifying products, packaging in environmentally friendly, advertising products as eco-friendly, as well as eco-certification. He further explains that firms practice green marketing for the following reason; it is cost effective; change in customers attitudes demanding green products; pressure by governments to adopt green marketing through laws and regulations; pressure from other businesses in the same sector and finally desire to make profits.

A number of studies have been conducted at global level to understand what is the impact of sustainable practices for companies and if being sustainable makes them more competitive and brings added value to the companies' performance.

According to Ambec and Lanoie, (2008) implementing green business practices is likely to reduce costs for an organisation. First, it gives it an upper edge over their competitors in the same business. Companies may address environmental degradation through several mechanisms such as selling pollution control technologies, reducing their costs and managing risks that are likely to occur due to environmental degradation.

Martinez (2013) advised that environmental concerns should be integrated into the daily activities of an organisation. Green business practices should be highly entrenched into the organisation's strategy and operations into what he calls Environmental Social Responsibility (ESR). He further noted which frameworks are vital for the successful implementation of ESR listing management support and leadership as the main factor. The findings further showed that systematic pressures such as shareholders disapproval, economic instability and market volatility are the main constraints to successful implementation of ESR

Santos and Brito (2008) in trying to find out the best approach in addressing environmental challenges in an organisation, they identified use of environmental management systems as the key approach. This can be achieved through establishment of environmental objectives and targets, collection of prerequisite environmental data, analysing, and reporting of this information to measure firm's environmental performance. Such system is vital in mainstreaming environmental aspects in the organisation's activities.

Weslyne et al. (2017) noted that manufacturers globally, go green so as to be competitive, to give back to the society and external stakeholders. They conducted a study among 59 US Midwestern SMEs in order to explore what motivates them to implement green business practices. The research revealed that majority of the firms are concerned about competitiveness and the costs involved than the social responsibility. Furthermore, the government policies and customers pressure seem not to matter so much to the SMEs but rather indirect pressure through incentives to practice green by the government, support programs and what other players are doing pushes them more for survival to the future.

In France, Delmas and Pekovic (2012) looked at how employee's satisfaction is affected by green business among 5,220 employees in French Companies. The aim was to show how a company's environmental policies affect its productivity and employee's satisfaction. These companies had willingly implemented best international standards and eco-labels such as ISO 14001 certification, they were considered green. The outcome showed that these companies fared 16% much better in terms productivity and employee's job satisfaction. Here, the workers are highly motivated, involve in more training and have more interpersonal relations, making them to be more productive than firms that do not embrace the practice.

Chukwuka & Eboh (2018) researched on ten manufacturing businesses in Nigeria. They aimed and investigating how green business practices impacts on organizational performance of these companies. The results of the research showed that Green Business initiatives have a substantial positive impact on the selected company's productivity. Manufacturing firms from in developing economy that reduce

their environmental impact are more productive than those that do not. It also found that green initiatives significantly and positively affect employees' productivity leading to productivity of the firms and clean environment.

The adoption of Green business practices could be hindered by various factors like lack of government support. Lee (2008) found that the government can boost awareness on green business practices through increasing funding, business training to promote the green supply chain initiatives and developing taxation policies. Failure to take part can be a barrier in green supply chain development. Cramer (2002) found other barriers lack of information regarding environmental benefit led to fewer firms adopting the green initiative, lack of management support, high Investment costs and existence of other techniques. Walker et al. (2008) categorized these challenges as external barriers of which he identified weak legislative frameworks, inability by the suppliers to commit to green business practices and other barriers affecting specific industries. High costs to fully implement green practices and lack of authenticity by leadership were identified as the internal challenges. Kotler (2004) identifies other factors such as regulations and policies varying from one country to another. This makes it difficult for regional and global monitoring. Also, environmental factors vary from region to region, motivating consumers differently (Kotler & Gay, 2004).

Sustainable Business Practices among Food and Beverage Companies in Kenya

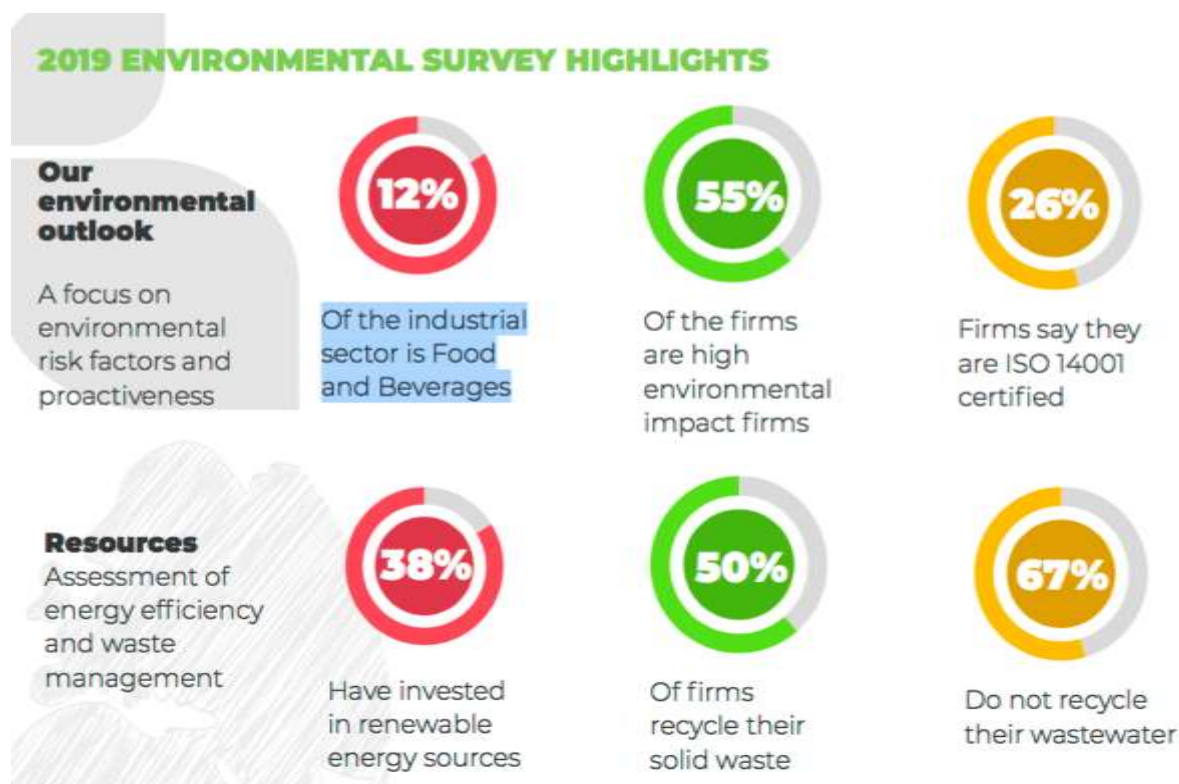
Kenya is one of the most dynamic economies in Africa, with well-developed regulations and a rapidly improving business environment.

The government of Kenya in a bid to protect the environment, instituted various policies, legislative and institutional frameworks to govern all activities of businesses (Odhiambo, 2014). For example, the constitution of Kenya assigns specific obligations to the individuals and the state on matters related to the management of the environment and the sustainable use of resources (Mwenda & Kibutu, 2014). Article 69(2) of the constitution of Kenya, 2010, states that every Kenyan has a duty to cooperate with the authorities in the protection and conservation of the environment and ensuring ecologically sustainable development as well as use of resources. Articles 185 (2) and 186 (1) as well as article 187 (2) of the constitution have distributed functions for protecting the environment between the national government and the county governments with a view to instituting a system of development that is sustainable and that enhances good governance as far as the environment is concerned (Mwenda & Kibutu, 2014).

As a result, a number of firms in Kenya have embraced ecological procurement practices in order to comply with the regulatory requirement and at the same time improve their procurement performance. For example, Cadbury Kenya Limited and East African Breweries Limited, just to mention a few, have invested in implementing eco-procurement practices (Odhiambo, 2014). According to the Kenya Association of Manufacturers KAM, (2017) there are a total of 217 food and beverages manufacturing companies in Kenya registered with the Kenya Association of Manufacturers. Manufacturing firms in Kenya are made of both multinational and local firms and a large number of them are based in Nairobi City County which hosts capital city (KAM, 2017). The stratification of the sector is as follows: dairy and meat processing firms, grain milling firms, edible fats and oils processing firms, beverages, fruits and vegetable processing firms, fish processing firms, wines and beer and spirits firms (Okello, 2010).

Manufacturing sector in Kenya, apart from being considered as the country's economic growth lever under Vision 2030 (RoK, 2007), is expected to contribute to the realisation of the government big four agendas (RoK, 2017). However, the sector has experienced decline in performance over period of time (KAM, 2017) registering losses of 50 million annually as a result of procurement related issues (Hervani, Helms, & Sarkis, 2015). This has created doubt on the sector ability to contribute effectively to the realization of the country development agenda under vision 2030 and the big four agendas (RoK, 2017). Figure 1 below summaries the highlights of the environmental survey conducted by KAM in 2019.

Figure 1. Highlights of the environmental survey (KAM, 2019)



The firm's adoption of sustainable business practices is initiated by legal requirements, voluntary measures and standards, corporate social responsibility initiatives or a combination of these factors. However, certification practices are relatively fair considering 26 percent of firms were observed to certify with ISO 14001 with a low record of 12 percent stating membership with the United Nations Global Compact initiative- Kenyan Chapter (UNGCK).

Majority of Kenyan companies say they are adopting environmental management practices to meet legal demands, satisfy customer requirements and build good long-term relations with suppliers. Normally, environmental management practices may add value to a firm's brand, and enhance company's reputation. Decisively, companies in Kenya fail to appreciate the sense of the significant positive reputational benefits in implementing environmental waste management both economic, environmental and social. Firms need to align their business operations with nationally determined contributions and other national development strategies. National government should use the dynamic space of voluntary environmental schemes as a test ground on how they can tailor make mandatory requirements.

In Kenya, some of the studies on green marketing that have been undertaken include the following: Kiongera (2003) surveyed on some of the green marketing practices that are implemented at Bamburi Cement in Athi River; Chebet (2013) established behaviours of consumers in the Kenyan supermarkets in relationship to green marketing. Aida (2016) sought to establish whether how Kenyan airlines are adopting green marketing practices and it has ant non-financial impact on their performance. Bakari (2013) conducted a research among small and medium sized enterprises in Mombasa. He aimed at finding out if they practice any greening of their business. These studies in Kenya mainly concentrated on green marketing and green supply chain practices and did not consider the green business practices and their effect on performance in food companies in Kenya and thus the need for this study.

METHODOLOGY

This paper is a qualitative exploratory study since it focuses on the food and beverage manufactures sustainability practices, a subject that is still incipient in the extant literature, mainly in the Kenyan context. In cases of emerging subjects, the exploratory approach is the most adequate (Yin, 2014).

Sample

Our research focused on the sustainability practices of Kenyan food and beverage manufactures. The first step was to find suitable case studies. We acknowledge that sustainability reporting is still rare among African companies (Tilt et al., 2021). Therefore systematically going through companies sustainability report might not be an option. However to be sure of this, we randomly selected few public listed food and beverage companies from the Nairobi Securities Exchange, (like coffee producer Eaagads, Kapchorua Tea Kenya, Kenya Orchards, Limuru Tea, Unga Group) and looked at whether these companies have published standalone sustainability or CSR reports. We found out they have not. Therefore, we decided to select those Kenyan food and beverage manufacturing companies who are members of the UN Global Compact-initiative. We assume that companies which have joined this initiative are interested in sustainable development and potentially implement various sustainable business practices.

UNGC initiative started 1999 and currently has more than 9,500 participating companies and 3,000 non-business participants globally. The initiative urges its members to take global responsibility and adapt their strategies and operations to the ten principles. The aim is to enhance private sector actors in their CSR efforts and integrate the 10 principles and Sustainable Development Goals (SDGs) in their strategies and operations.

Although the UNGC has faced some critics that companies join it only for positive public image without really implementing the principles (e.g. Rasche et al., 2013), some studies offer contrary findings by suggesting that the duration of UNGC participation affect the level of UNGC implementation (e.g. Schembera, 2018). Each UNGC participant is required to report on their progress concerning how they implement the ten principles and SDGs into their business. This is done by publishing annually a Communication of Progress (COP) report to measure and demonstrate progress to stakeholders.

The UN Global Compact Network Kenya is coordinated by Kenya Association of Manufactures (KAM) and was established in 2005 and currently it has 270 members. In total 18 companies are from the food and beverage sector. These 18 manufactures focus on dairy, meat, vegetables and fruits, confectionery, alcoholic beverages or non-alcoholic beverages production. The companies sizes vary from a small entrepreneur to a large listed companies whereas two are foreign subsidiaries. We believe that the combination of different kind of actors offers us interesting insights on the current stage of sustainable business practices among the Kenyan food and beverage industry manufacturers.

A brief profile of each manufacture is presented in Table 1.

Table 1. Profile of the Kenyan food and beverage manufactures taken into consideration in the study

Company	Main products	Established, nro of employees	Type of company	Year joined UNGC
African Coffee Roasters EPZ Ltd	Coffee (roasted)	2015, 53 (in 2020)	Subsidiary of a foreign retailer	2017
Bidco Africa	Cooking oils	1986, 22000 (in Kenya)	Family-owned	2009
East African Breweries Ltd (EABL)	Beverages	1922, 1600 employees	Publicly listed (NSE)	2012

Eastern Kenya Ltd	Produce	Tea		1948, over 20,000 employees in total	Privately held	2006
Frigoken		1.1.1 Horticultural produce		1989, 3000 employees,	Privately held	2016
Kakuzi		Avocado, macadamia, commercial forestry, livestock & butchery, blueberry, tea		1906, 870 employees,	Publicly listed (NSE)	2019
Kapa Oil Refineries Ltd		Cooking Oils, margarine, baking powders, noodles, personal and home care	late 1960s	400 employees,	Privately held	2012
Kenya Bixa Ltd		Food colors and byproducts		1979, 130 employees	Privately held	2013
Kenya Sweets Ltd		Candies		1943, 18 employees	Privately held	2012
Krystalline Salt Ltt		Salt producer		1984, 700 employees, 2000 seasonal workers	Privately held	2013
Mars Confectionery Kenya Ltd	Wrigley	confectionery, pet food, and other food products		in Kenya 2006, under 200 employees (in Kenya)	Subsidiary of Mars, US company (Family-owned)	2021
Melmax Farm Fresh		Farming, chillies		2018	Privately held, startup stage	2019
Melvin Marsh Int.Ltd		Tea		1995, 120 employees	SME, privately held	2016
Nestle Kenya		Various processed food products		1967 in Kenya	MNC	2020
Nyangorora Banana		Banana products		2006, 2013* as Ltd 17 employees	Privately owned SME	2014
Ololo Farming Company Ltd.		pasture-reared poultry & eggs, grow mushrooms/farming	2017, around 15 employees		Family-owned,	2020
Panini Corner Ltd		catering services, bread manufacturing, soon coffee	2007,		Privately held	2017
Sasini PLC		Tea, coffee, avodaco, macadamia, dairy, retail	1952, 6000 employees		Publicly listed in (NSE)	2015
Spice World Ltd ¹⁸		Lentils, grams, spices	1990, under 500 employees		Privately held	2022

Data have been obtained by analyzing the COP reports. In addition, we investigated companies' websites and screened possible sustainability or CSR reports. In case sustainability reports were not published, we researched and screened the annual reports and searched for a specific Sustainability or CSR section. Besides these official reports, information was obtained by using the following key words on the corporate website: "sustainable, sustainability, responsible and corporate social responsibility".

Data analysis

We applied a summative content analysis to analyze the sustainability strategies of the selected companies. Summative content analysis is a widely used qualitative research technique and is particularly useful to generate meaningful insights and identify general trends with respect to the unit of analysis (Hsieh and Shannon, 2005). Content analysis has long been used as a very frequent method when studying sustainability and CSR reports (Asif et al., 2011; Milne & Adler, 1999; Vuontisjärvi, 2006). Content analysis allows compressing huge data from various texts into fewer content categories

¹⁸ Spice World Ltd joined UNGC in May 2022 and not published in COP report

according to organized and explicit standards (e.g. Bryman & Bell, 2003). Our data analysis consisted of three different stages: preparation and pre-analysis of data, (establishment of the analysis' aim and categories), analysis (coding and categorization), and interpretation (drawing of the main conclusions).

In Phase I, as we were exploring an emergent field of study, we begun the process by screening the companies' sustainability reports and the communication beside the COP report. At this stage, we also investigated whether companies had a Stand-alone sustainability/CSR report, a sustainability section in their website and if sustainability related issues were mentioned in company's mission, vision or values.

In Phase II, COP reports as well sustainability reports (if available) were read carefully. We classified and coded the content using the FAO's (2012, 2014) sustainability initiatives' guidelines for Sustainability Assessment of Food and Agriculture (SAFA). SAFA has four set of practices – good governance, environmental integrity, economic resilience and social well-being. Further, each practice consists of a comprehensive list of six environmental, seven social, five institutional and four economic indicators, including both qualitative and quantitative ones (FAO 2012). We used Excel-sheet for the coding and a separate sheet for pointing out illustrative examples. It is worth noticing, that the mandatory COP reports are based on a company's self-assessment.

In Phase III - the data interpretation stage - we combined the most common sustainability practices under three different categories: Internal (within the company), Supplier relationships and other external/stakeholder relationship (inc. Community involvement). These practices were interpreted to identify their scope and content and how systematically they are adopted in the companies' operational activities.

FINDINGS

This section discusses the results of our empirical study. We present our findings by first analyzing the general trends of sustainability reporting and communicating. Afterwards, we have a look at the actual sustainability practices by using the framework of dividing sustainability practices into three different categories: Internal operations, supply chain and supplier relationships and other stakeholder relationship.

Sustainability Reporting

We began our analysis by having a look at whether the companies produce any other sustainability reporting materials besides the COP reports. Table 2 below presents an overview on sustainability reporting (stand-alone sustainability reports), section in website.

Table 2. Status of sustainable reporting on the studied companies

Company	Standalone report	Sustainability or CSR section in website
African Coffee Roasters EPZ Ltd		X
Bidco Africa		X
East African Breweries Ltd (EABL)	x	X
Eastern Produce Kenya Ltd		X
Frigoken		X
Kakuzi	x	X
Kapa Oil Refineries Ltd		X
Kenya Bixa Ltd		X
Kenya Sweets Ltd		
Krystalline Salt Ltd		X
Mars Wrigley Confectionery Kenya Ltd	x	X
Melmax Farm Fresh		
Melvin Marsh Int.Ltd		X
Nestle Kenya	x	X
Nyangorora Banana		
Ololo Farming Company Ltd.		X
Panini Corner Ltd		

As we seen from table 2, only four (East African Breweries, Kakuzi, Mars and Nestle) manufactures publish either specific standalone sustainability or CSR/ESG report. These two Kenyan publicly listed companies - Kakuzi and East African Breweries (EAB) - have detailed reports and both of these companies have been awarded a prize for their sustainability reporting or sustainability work. Both of these companies are listed in Nairobi and London stock exchange. It is easy to assume that public listed companies and subsidiaries of MNCs apply a more regulated process of reporting on sustainability and CSR related issues.

The importance of sustainability seems to be understood as 14 out of 18 manufactures did have specific sustainability section in their website. In their website companies for reported various information, for instance their mission statements concerning sustainability (Frigoken), inclusive agribusiness practices (Bidco), CSR activities (Kapa Oil Refineries), providing information on their raw materials (Melvin Marsh, Ololo Farm) or presenting in which SDGs they businesses are linked (Sasini, Krystalline Salt).

As mentioned earlier, all the selected companies are members of the UN Global Compact (UNGC). UNGC facilitates companies to define, implement, measure and communicate their sustainability strategy. The membership demand companies to publish annually a communication in progress (COP) report. Therefore, all these companies (except Spice Worlds which only recently joined the initiative) have published a communication in progress report (COP). The content of the report emphasizes reporting on human rights and the ten Principles of Business Ethics. In addition, UNGC requires companies to identify Sustainable Development Goals (SDGs) and define how their business align with them. Therefore, based on the SDGs they report their progress. The reporting format is guided by the Global Reporting Initiative. However, the form and content of the report varies a lot. There seem not to be any specific format. The length varies between 12 pages up to 40.

In these reports, most of the companies indicated clearly to which SDGs they have committed, such as Kakuzi ‘we have focused on six of the United Nations Sustainable Development Goals (SDG’s)’, Kapa Oil ‘our core SDG is 9 but we also have a focus on eight others’, or Kenya Sweets ‘we have selected one SDG:SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.’

Management of Internal Operations

Our analyses revealed that Kenyan food and beverage manufactures engage particularly in four different activities relating to managing internal sustainability operations: investing in energy-efficient methods, generating electricity from solar power, responsible HR practices, (including safety working methods, health services, staff training, fair recruitment, gender-aspect), managing waste (reducing, reusing and recycling policy). In addition, two manufactures mentioned that they have set up a specific CSR department or committee.

The most frequently mentioned sustainability practice relates to employees’ well-being, as 10 companies reported different human resource policies. These included different practices such as, the health and safety practices, human rights, fair labour practices, skill development, talent management and job rotations. Due to the ongoing COVID-19 pandemic, several manufacturers mentioned that they have adopted specific COVID measures. Among the studied manufacturers, seven mentioned employee training but only two had developed sustainability related training content.

An overview of energy related practices reveals that energy efficiency is a seen as a critical factor. That is natural as energy cost are typically among the highest operating expenses for food and beverages manufacturing companies, so implementing cost-effective energy savings strategies can have a direct and significant impact on profitability. Our data revealed that several Kenyan food and beverage manufactures are active in energy efficiency and investing in this. This meant for example conducting energy audits (four manufactures), investing in solar energy (six manufactures). Four manufactures had established specific targets for energy reduction, while the majority of the companies mentioned that they monitor how much they have been able to reduce energy costs after they have installed solar panels

for their manufacturing units. For instance, Kapa Oil installed solar photovoltaic (PV) grid-tied system for internal use in 2018. Kenya Sweets mentioned 30 per cent savings on energy costs after they started to monitor energy consumption, and Sasini reported that after investing in solar energy 2016 they have reduced energy cost by 22% since 2016

It seems that while some manufactures were motivated by cost savings to reduce electricity, only three of the studied manufactures, so far, calculate in a detailed manner the impacts to carbon reduction.

Water-related practices were reported by seven manufactures. These practices mainly focused on monitoring water usage, wastewater treatment (cleaning, reusing) and harvesting rain water. Some of the manufacturers owns the farming land close to their facilities, so they mentioned, for instance Sasini water is recycled in its factory wastewaters by filtrations through man made lagoons and the resultant clean water is channelled to their farms. Frigoken reported that currently over 60% of water used for vegetable washing is recycled and it has invested in creating internal water re-use system which uses waste water from processing for the washroom facilities.

Relating to waste management, eight of the studied manufacturers informed they have waste management procedures. More or less all the waste management activities were related to sorting and with the ‘Three Rs’ (reduce, reuse and recycle). Companies mentioned issues, such as using recycled packing materials and monitoring their waste. To conclude, waste-issues were mainly connected to non-food waste. Hence, the question of potential food waste along the food production supply chain was not raised up by any manufacturer.

Food Supply Chain

Sustainability practices relating to supply chain focused entirely on collaborating with farmers. This is quite obvious as the manufactures need to secure they receive good quality raw materials. Nevertheless, other aspects of the supply chain seem to be taken into considerations, such as logistics and packing materials – however, we acknowledge these might be included in the internal practices. Collaboration with farmers included several issues, like offering free or subsidized seedlings, fertilizers and free veterinary services. However the most common form of collaboration is training. Even though, ‘direct’ sustainability relating to farming practices are not most frequently mentioned couple of companies mentioned the issue of sustainability. Below are few concrete examples of collaboration with the farmers.

Kakuzi offers free seedlings to small-scale farmers, sponsors macadamia open days and their managers continuously offer agronomic extension services. In other words, the company acknowledges how educating farmers to adopt sustainability practices will positively affect the whole supply chain by reducing the carbon emissions. Eastern Produce Kenya (EPK) has implemented CSR requirements for their supply chain as part of their total quality management and audits its’ regularly. In addition, they assist smallholders in various ways, such as offering training in good farming practices, extension service provision, roads and other infrastructure and maintenance. They aim to form fair long-term contracts with suppliers. Bidco Africa engages with farmers through multiple partnerships such as Safaricom’s Digifarm, which according to the company has seen an empowerment of up to 20,000 smallholder farmers across the country.

It would be easy to argue that food and beverage manufacturers’ collaboration with farmers is perhaps the most critical part of the sustainability practices in the food production. Particularly in Africa small-scale farmers face several climate-related issues, such as “water scarcity”, biodiversity conservation and management and soil fertility is depleted (Lotter, 2015). To conclude, it seems that several manufactures are seriously aiming to improve the farming practices. Some of them also consider the sustainability aspects. Nevertheless, if we compare with the FAO’s listings (2012, 2014) we can notice that several key elements of land biodiversity is missing or at least not reported. This is something that certainly has a space for improvement. In addition, based on our data, collaboration with other actors in the food production value chain, seem not be occurring.

Stakeholder Engagement

Stakeholders can play a significant role in a firm's sustainability efforts, because, if managed well, they can offer valuable assistance and resources beyond “simply” exerting pressures on companies

(Journeault et al., 2021). Partly these activities are overlapping with the supply chain activities, however, we did not consider collaboration with farmers and included only other kinds of stakeholder engagement. Therefore, in this category we included collaboration with various stakeholders, from local community to international organizations, communication with society and corruption and bribery. Concerning collaboration with international organizations, as already mentioned, the most frequent one is being a Member of UN Global Compact. Based on our empirical data, it remained unclear what kind of collaboration do the manufactures have with UN Global Compact, besides providing support for updating their progress annually. Nevertheless, we assume that UN Global Compact offers access to valuable expertise, should standardize sustainability requirements and legitimize their sustainability or CSR programs.

Based on our findings, stakeholder engagement seems not to be systematic or strategically oriented. It is more charity-based. All companies' have either partnered with their communities or with local NGOs or schools. The most common practices employed are philanthropic actions such as charitable campaigns and donations (drugs, food, sanitation, etc.), cultural and sporting sponsorships and education programs, which are managed by their own institute. These community-oriented practices were rather widely reported.

What was slightly surprising, is that interaction with the local community seems not to occur widely. Krystalline Salt mentioned that they have a specific CSR committee whose role is to follow and interact with the community on human rights issues. However, more manufacturers manifested their intention to be good corporate citizens by reporting their zero-corruption policy. This is an important aspect in the Kenyan context as there has been a long history of corruption and bribery scandals in the country and society's pressure has increased recently. Coincidentally, based on our analysis, Kenyan food and beverage manufactures seem not to practice or at least do not report tight collaboration with various stakeholders beyond community and different kind of charity-oriented activities.

DISCUSSION AND CONCLUSION

This paper aims at identifying if and what kind of sustainability practices Kenyan food and beverage manufactures have integrated in their operations to make a shift towards sustainability. We started by first having an overview if companies are reporting on sustainability issues. Then we moved on taking a closer analysis on the actual sustainability practices. The results of this exploratory research present some implications to the academic and practitioner literature. As for academic literature, this paper contributes as the first attempt to shed light on the way Kenyan food and beverage industry is dealing with sustainability issues. Whereas for the practitioner literature, on the other hand, both industry and policy makers could employ these results as an assessment to identify the main sustainability gaps or difficulties to establish a (joint) action plan or policies to improve the whole industry performance to tackle some fundamental sustainability issues and make the food production more sustainable.

Theoretical Implications

While sustainability reporting and sustainability practices are a widely studied topic among the management scholars, little if any research has focused on African companies. In this study we took the initial steps of conducting empirical analysis of Kenyan food and beverages manufactures sustainability reporting and sustainability practices.

Based on our findings, we can conclude that sustainability reporting is still rather rare at least considering the depth of the reports as highlighted here. Consistent with previous findings on sustainability reporting, (e.g. Hahn & Kuhnen, 2013; Winkler, 2017) and in general on sustainability practices (Banerjee, 2008) our study indicates that among Kenyan companies, corporate size positively influences adoption, extent, and quality of sustainability reporting. Publicly listed bigger corporations are well-ahead of their sustainability reporting and they integrate sustainability into their corporation practices.

Nevertheless, we can say that interest in sustainability reporting and communication is emerging. Majority of the studied companies have a specific sustainability section in their website. This indicates that companies understand the need to communicate on their sustainability efforts. For these UNGC members, the mandatory Communication on progress report can be seen as the first step towards adopting sustainability reporting in a more structured manner.

Besides sustainability reporting, this study revealed interesting findings on sustainability practices. Previous studies have emphasized that different countries might have different institutional factors that shape the CSR and sustainability practices (e.g. Kolk, 2005). Although sustainability reporting was not detailed enough, we can say that all of the studied companies have adopted sustainability practices at least to some degrees. Based on our study, so far key sustainability practices seem to focus on the social dimension i.e. companies contribute to communities. This resembles Hamann et al. (2020) research on how corporations aim to build community resilience by involving local actors to be partners and offering them resources. In a developing country, the widespread perception is that due to the difficulties of state not promoting adequate quality of life for all its citizens, other actors take bigger responsibility. This supports the results of previous studies that suggest that CSR and sustainability reporting strongly focus on philanthropic engagement in the local community (e.g. Kühn et al., 2018). Some of the activities differ substantially from Western sustainability approaches, such as arranging child-care facilities for the employees (for instance, Sasini has established six-day care centers in their tea estates). Similar kind of activities most likely are not found among developed nations' manufacturers' settings. Institutional factors seems to shape their activities. In fact, based on our findings, we feel that several companies have adopted kind of, as Williamson et al. (2006) call 'informal approaches' that may apprenticeship programs, and community program sponsorship.

Community involvement seem to highly embedded in the whole food production value-chain. Collaboration with various small-scale farmers is taking various forms and coincide with the previous studies, which emphasise the challenges that small-scale farmers in Africa face, such as educational and research needs (Jouzi et al., 2017) therefore small-scale farmers should reach for external knowledge. While sustainability issues are partly included in these collaborations, there is still space for improvement to make the whole food production value chain more sustainable. For instance, the issue of food waste was not mentioned even though this is a glaring challenge in Kenya and Africa by extent. In addition, we noticed that sustainability is considered within the corporation's internal practices as well particularly relating to energy efficiency. Several of the studied manufacturers monitor regularly their energy usage and invest in green-energy solutions. Whether these actions are motivated partly due to cost-reduction, we cannot say based on this study.

To conclude, Kenyan food and beverage manufactures have integrated various sustainability practices within their manufacturing and overall business processes. Some of these are more 'informal' in nature. GRI and other sustainability reporting tools are not yet widely applied. While few manufacturers have set up sustainability related KPIs, none is yet mentioning science-based climate targets like several developed nations corporations are currently setting (e.g. Giesekman et al., 2021).

Practical Implications

So far, there has been a lack of greater understanding of the extent of adoption of sustainability practices by African food and beverage manufacturers and the ways these firms might work with their stakeholders for common social and environmental purposes. Knowledge on these factors is critical in order to combat with climate change matters in food production. This study is one the pioneering studies offering empirical insights on what kind of sustainability practices companies are manifesting but also what kind of sustainability related challenges Kenyan food and beverage manufacturing companies are still facing.

Based on our initial findings, it seems that sustainability reporting by these companies do not following any common guidelines even though these companies are members of the UN Global Compact. Nevertheless, it is positive that sustainability as well as SDGs are mentioned more and more often and companies are motivated to share publicly their sustainability efforts. We believe that there

would be a space for sustainability reporting trainings and consulting services focusing on sustainability strategies.

By evaluating the sustainability practices, we can conclude that several aspects are still poorly addressed and sustainability issues are pursued more accidentally than with a clear strategy. Hence, there are lot of opportunities for improvement. We recommend that, manufacturers would set up more specific goals and KPIs to measure the progress. Improvement efforts could focus on defining formal commitments and goals, establishing of a sustainability measurement system, defining sustainability goals and amplifying sustainability training within the corporations. We can see that publicly listed companies are well ahead on sustainability related matters and have made good progress. Nevertheless, nothing prevents the smaller manufacturers from improving their performances. We recommend that companies would adopt more strategical approach to sustainability. As we have seen in a country like Kenya, regulations can get tight extremely fast as evidently experienced a few years ago when the ban of plastic bags which was basically implemented in one night. Therefore, more companies should adopt an early-adopters' approach and begin their transformation to be sustainable. Sustainability should be understood more widely, for instance relating to waste. Based on our findings, the issue of potential food waste along the food production supply chain was not raised up by any manufacturer. However, food loss and waste occur at each stage of the global food value chain, from agricultural production to final consumption; at the post-harvest and processing stages, there is also waste in each step of the transport, storage, processing and distribution stages. Therefore, food and beverage manufacturers should analyse the waste management within the whole process and collaborate with various stakeholders and supplies to improve this.

To sum up, few of the studied manufacturers have already taken steps towards sustainability. However, to make their contributions more effective and perennial it is fundamental that they improve consistently their external actions not only with suppliers but also with customers. In addition, they should integrate internal practices into their organizational management systems and set up specific KPIs.

Finally, we would also like to make a suggestion for the policy makers. As we noticed that the food and beverage manufactures are closely co-operating with the small-scale farmers, we suggest that this collaboration should be considered when envisioning how to improve the food security in Africa; the local manufacturers have a role. In fact, this issue is now under discussion, as a multinational-company KFC, which has been in Kenya since 2011 revealed that it is importing all the potatoes (Siele, 2022) instead of sourcing them from the local small-scale farmers. Naturally it is a long and expensive process to set up all collaboration arrangement, but it would be critical for improving the livelihoods of local farmers as now a food waste is a huge problem (UNEP, 2021). Currently collaboration with stakeholders seems to be limited with being a member of UN Global Compact and running a charity programmes in the communities. We encourage the food and beverage manufactures to explore more innovative partnerships, for example with Universities and research institutions. This might accelerate them adopt new green practices and set up scientific-based targets for business operations.

Limitations and Avenues for Future Research

Some limitations must be highlighted. This paper is a work in progress. So far, the results reflected in the data we collected from the companies' sustainability and annual reports, if these were not available, we collected data from their website. As we noticed, concerning some companies available data was rather limited. Moreover, this is an exploratory research based on a small number of cases, therefore one must be careful in generalizing its results. We acknowledge that they are huge number of Kenyan food and beverage manufactures which have not joined the UN Global Compact initiative. These companies include both well-established big industry players as well as small entrepreneur-driven 'artisan' kind of ventures aiming to change the food industry. Studying various types of companies would offer fruitful avenues for future research.

Throughout this paper we have emphasized that there are few manufacturers that are performing extremely well while others are just taking the early steps. Therefore, future inquiries are needed in order to profile the maturity level of companies' sustainability strategies or develop a typologies that divides sustainability practices into high and low categories. These kind of profiles and typologies are widely used in previous studies (e.g. Baumgartner & Ebner, 2010; Theyel & Hofmann,

2012) but not concerning African companies. In addition, another interesting question to explore concerns the stakeholder relationships. Based on this research, it seems none of the companies has done that for instance materiality assessment, however to confirm this statement, we need to study how these food and beverage manufactures manage their stakeholder relationships.

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SUSTAINABLE ADOPTION OF FOURTH INDUSTRIAL REVOLUTION TECHNOLOGIES BY SMES: THE CASE OF THE SOUTH AFRICAN ECOSYSTEM

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ABSTRACT

The 4th Industrial Revolution (4IR) brings with it a myriad of technologies with the ability to enhance business innovation, competitiveness, and sustainability. However, the prevailing narrative is that the 4IR is incompatible with small businesses due to their underdeveloped capabilities, and limited resources. Therefore, there exists a possibility that small businesses may be left out of the Fourth Industrial Revolution. This is particularly alarming for African nations such as South Africa, due to the significant role SMEs play in job creation and economic improvement. Building from the sustainable entrepreneurial ecosystem and the Triple Helix concepts, we developed a framework and propositions to guide 4IR ecosystem stakeholders toward the sustainable adoption of 4IR technologies by South African SMEs.

Keywords: Fourth Industrial Revolution (4IR), entrepreneurial ecosystem, SMEs, sustainability, conceptual framework, South Africa

INTRODUCTION

The 4th Industrial Revolution (4IR) is rapidly taking hold in advanced economies. 4IR encompasses a variety of advanced and emerging technologies, such as artificial intelligence (AI), additive manufacturing, autonomous vehicles, 5G, blockchain, internet of Things (IoT) and Industrial Internet of Things (IIoT), robotics, and quantum computing (Isabelle & Westerlund, 2022; Schwab, 2017; Sutherland, 2020). This revolution is developing exponentially in comparison to the previous three industrial revolutions (Serumaga-Zake & van der Poll, 2021). However, the transition to the 4IR not only requires adopting new technologies but necessitates the transformation of firms toward sustainable business models (Sutherland, 2020).

Large firms have reaped benefits from the 4IR but overall, small and medium enterprises (SMEs) have lagged behind due to a myriad of well documented human, technical and financial challenges. The challenges experienced by SMEs in Africa, and particularly in Sub-Saharan Africa, are acute (Emmanuel, 2022; Sutherland, 2020). Yet, by 2030, Africa's potential workforce will be among the world's largest and youngest, and so, paired with the needed infrastructure and skills for innovation and technology use, the 4IR represents a massive opportunity for growth (Adegbite & Govender, 2021; Ndung'u & Signé, 2020). In South Africa, the focus of our research, SMEs provide 64% of employment (SEDA, 2021) and play an important role in alleviating social issues related to unemployment, poverty, and inequality. However, unemployment stands at 34.5% (StatsSA, 2022). In that vein, it is believed that African SMEs could technologically leap-frog previous industrial developments and sustainably

innovate by transitioning to 4IR to improve their competitiveness and internationalization (Adegbite & Govender, 2021; Emmanuel, 2022).

The academic literature has devoted relatively little attention to the development of 4IR in Africa, to the exception of recent studies on SMEs in the manufacturing sector (Gumbi & Twinomurinzi, 2020; Serumaga-Zake & van der Poll, 2021). Furthermore, the sparse literature is conflicted related to potential impacts of the 4IR on Africa (Adegbite & Govender, 2021; Serumaga-Zake & van der Poll, 2021; Rapanyane & Sethole, 2020; Seseni & Mbohwa, 2018). Yet, it is imperative to investigate the participation of South African SMEs in the 4IR to avoid their demise, which would negatively impact South Africa's economic development.

We answer the calls for research on a 4IR framework for developing economies to address challenges and opportunities promised by this new industrial revolution (Serumaga-Zake & van der Poll, 2021; Olaitan et al., 2021). To address the knowledge gaps associated with the sustainable adoption of 4IR technologies by African SMEs, we explore how 4IR ecosystem players in South Africa could develop a strong and enabling environment to support entrepreneurs and SMEs in this transition. We do so by taking a dynamic approach to the concept of entrepreneurial ecosystem (Cao & Shi, 2021) coupled with a Triple Helix perspective (Etzkowitz & Leydesdorff, 1995, 2000) to develop a 4IR ecosystem framework. Building from the scholarly literature, an examination of the South African ecosystem and our 4IR framework, we then develop propositions to provide directions for future research and to guide government, policy makers and other ecosystem players in their quest to a successful transition to the 4IR.

LITERATURE REVIEW

SMEs in South Africa

Small and Medium Enterprises (SMEs) represent about 90% of businesses and more than 50% of employment worldwide. In the formal sector alone, SMEs contribute up to 40% of national income in emerging economies (World Bank, n.d.). Accordingly, SMEs are drivers of economic growth and important contributors to job creation as well as economic development, particularly so in developing countries. Definitions of SMEs vary per geographical regions. According to the National Small Business Act 102 of 1996 (Revised Schedule 1), small businesses in South Africa are defined as having up to 250 employees and an annual turnover of between R5 million to R220 million depending on the sector. The role played by these SMEs cannot be overstated. They are key drivers of job creation, economic growth, development, and innovation (Adelowotan, 2021; Serumaga-Zake & van der Poll, 2021). In South Africa, like many other countries, SMEs provide 64% of employment thereby alleviating poverty (SEDA, 2021). However, with an unemployment rate of 34.5% (StatsSA, 2022), South Africa is in need of SMEs for the creation of jobs and is therefore a priority for the South African government.

4IR technologies in the context of South Africa

The Fourth Industrial Revolution (4IR) refers to the current and evolving environment in which disruptive technologies are changing the way people live and work. 4IR encompasses a number of advanced technologies such as the Internet of Things (IoT) and Industrial Internet of Things (IIoT), autonomous robots, augmented and virtual reality (AR, VR), 5G, drones, additive manufacturing, big data and analytics, cloud computing; blockchain, artificial intelligence, and emerging technologies, such as quantum computing and generic engineering that have not yet reached their maturity but will be transformative (Isabelle & Westerlund, 2022; Schwab, 2017; Serumaga-Zake & van der Poll, 2021). The Industry 4.0 terminology refers to the integration of these technologies into manufacturing practices.

The United Nations Sustainable Development Goals, established in 2015, is a blueprint for peace and prosperity for people and the planet. Its 2030 agenda encompasses 17 Sustainable Development Goals (SDGs) and 169 targets to end poverty and hunger, along with strategies to improve health, education, spur economic growth, and tackling climate change in all countries, regardless of their development status (Mabkhot et al., 2021; Sætra, 2021; UN, n.d.). Sustainable industrialization is also

part of the UN's SDGs (Dagnaw & Tsigie, 2021). The World Economic Forum (2020) estimates that advanced and emerging technologies under the 4IR umbrella could accelerate progress towards over two-third of SDG goals. Recent research has also mapped the 4IR technologies over the various SDGs to determine their influence on specific goals with a view to guide policy makers (Mabkhot et al., 2021; PwC, 2020). That said, inequalities exist in regions' current digital readiness and levels of technology adoption. Consequently, Europe, East Asia and North America would benefit the most from the application of 4IR technologies for sustainable development while Latin America and Sub-Saharan Africa would stand to gain the least.

In the context of South Africa, 4IR technologies have the potential to solve many of the country's socio-economic issues. For example, 3D printing has been earmarked by the Nation Department of Human settlement for printing of houses (Academy of Science of South Africa, 2021), thereby solving the issue of access to housing.

As for mobile digital financial services, South Africa had nearly half of global mobile money accounts in 2018 and will see the fastest growth in mobile money through 2025. Already, we have witnessed the transformational power of formal financial services through mobile phones, such as M-Pesa, reaching the underserved, including women, who are important drivers for sustainable poverty eradication. These financial services allow households to save in secure instruments to enlarge their asset base and escape cycles of poverty (Ndung'u & Signé 2020).

Artificial intelligence (AI) and blockchain are also attracting interest in Africa, as they have the potential to successfully address social and economic challenges (Ndung'u & Signé, 2020). Blockchain is seen as a potential solution to various challenges that include financial issues related to lack of credit access in African countries (Mavilia & Pisani, 2022), verification of property transactions and records (Gebre, 2018), access to financial services at affordable costs and elimination of intermediaries (Mavilia & Pisani, 2022; Monrat, Scheele & Andersson, 2019). In this regard, Ortlepp (2019) and Saba (2021) designed Blockchain-based prototype mobile application for the financially excluded such as the unbanked rural farmers in Qunu, Eastern Cape in South Africa. These Mobile Apps enable small businesses, even in the informal sector, to create authentic financial or credit history reports, which should be sufficient as financial records to access loans from banks. This contributes to their sustainability.

Other 4IR technologies are also having an impact. For example, the Internet of things (IoT) is expected to optimise the efficiency of manufacturing SMEs in South Africa, so they can gain competitive advantage and become sustainable (Serumaga-Zake & van der Poll, 2021).

Africa has yet to harness the full potential of its agricultural sector, and 4IR technologies provide an opportunity to do so. Farming alone accounts for 60 percent of total employment in Sub-Saharan Africa, and the food system is projected to add more jobs than the rest of the economy between 2010 and 2025 (Ehui 2018).

The importance of SMEs adopting 4IR technologies

South Africa suffers from the triple scourge of unemployment, poverty, and inequality. SMEs play an important role in alleviating these social issues and as such, it is important that they adopt digital technologies to remain sustainable. In the context of this research, we consider sustainability as both the ability of SMEs to survive as well as their sustainable development, that is, the UN's definition of "meeting the needs of the present without compromising the ability of future generations to meet their own needs." It is envisaged that SMEs will benefit significantly from the digital revolution and in turn, better solve the social ills faced by the country. In that regard, the benefits of adopting 4IR technologies by small businesses are discussed next, in the context of the triple scourge of unemployment, poverty and inequality.

Unemployment and poverty – There are divergent academic views regarding the impact of 4IR technologies on employment. Some scholars are of the opinion that 4IR will further increase the unemployment rate. For instance, Serumaga-Zake & van der Poll (2021) and Rapanyane & Sethole (2020) argue that 4IR technologies such as machines and robots are more likely to replace humans in the workplace, thereby increasing the unemployment rate. Serumaga-Zake and van der Poll (2021) further highlight the use of low-cost labour becoming redundant because of the use of 4IR technologies,

leading to the potential reshoring of manufacturing back to developed countries. This could have a devastating effect on the manufacturing sector in South Africa, currently a labour-intensive sector.

Conversely, other scholars believe that 4IR technologies will have a positive impact on jobs in the country. Adegbite and Govender (2021) state that through the Internet of Things and other 4IR technologies, SMEs can join global value chains to find new customers and suppliers, improve quality and productivity, mass produce & optimize resources. Serumaga-Zake and van der Poll (2021) highlight a similar benefit concerning manufacturing SMEs, stating market spread and access to global e-business. This can result in increased sales and revenue through exports and therefore increased employment (Adegbite and Govender, 2021). Seseni and Mbohwa (2018) state that jobs will be created because the new technologies require highly skilled individuals, even though some will be lost in industries such as furniture manufacturing, which consist of a significant number of low skilled labourers. Similarly, the World Economic Forum argues that although there will be job losses, there will be a creation of new jobs while the remaining jobs will become more productive (Levin, 2018). Hence, the prevalent view is that although 4IR technologies might cause job losses, there is the potential for job creation, which would help improve the employment rate of the country for existing firms as well as for new ventures. That said, the new 4IR related jobs will require higher skills, yet there is significant skills shortage in South Africa (Sutherland, 2020).

Inequality - South Africa ranks first as the country with the highest level of inequality in the world, with a Gini coefficient of 0.67 (Sulla, Zikhali & Cuevas, 2022). Consequently, it is important to consider the impact of 4IR technologies on inequality in the country. Yet, the literature is divided on this aspect with some authors believing that 4IR technologies have the potential to further increase the inequalities present in South Africa while others offer a contrasting opinion. Selelo and Khwela (2022) argue that 4IR technologies are advocated by large companies to increase their production because these companies are well-resourced, at the detriment of small businesses. The authors recommend support to SMEs, in the form of finance and skills development, so they may also partake in the digital revolution. Menon and Fink (2019) also believe that the 4IR has the potential to bring more inequality within a country, as it may promote non-inclusiveness. They therefore recommend policy changes that are inclusive, open, and agile. Even though SMEs can benefit greatly from 4IR technologies, they face challenges that hinder their adoption of such technologies. These challenges are discussed next.

Challenges in adopting 4IR technologies in South Africa

South African SMEs face various challenges in their quest to partake in the digital revolution. While major challenges are related to lack of finance and skills (Bayode et al., 2019; Semenya & Dhliwayo, 2020), our study considers challenges that have their roots in the pre-conditions necessary for adoption of 4IR technologies namely electricity and digital infrastructure. For instance, access to advanced technologies in Africa is constrained by infrastructure parameters such as low tele-density, internet density, and broadband penetration (Sanou, 2018). We believe that these challenges require stakeholders such as the government to take up and solve, and to create an enabling environment for SMEs and entrepreneurs.

Electricity - In South Africa, electricity supply remains a challenge that has an impact on adoption and effective implementation of 4IR technologies. This instability is caused by the existing power generation infrastructure being outdated and poorly maintained, resulting in increasing power outages (Bayode et al., 2019). These power cuts affect businesses and their productivity. It appears that the revised plan to address the electricity infrastructure is delayed (Winkler, 2022)

Digital Infrastructure – The lack of digital infrastructure leads to a lack of access to the internet, which is necessary for using 4IR technologies. Gillwald, Mothobi and Rademan (2018) found that only 53% of South Africans have access to the internet. However, some scholars believe that lack of access to the internet it is not necessarily a hinderance to using technology. Mabulele (2020) indicated that although there are barriers to gaining access to technology, such as infrastructure and internet connection, there is generally a positive attitude from SME owners about access to technology. Said differently, although access and connection to the internet may be a challenge, SME owners have indicated that they have access to technology tools they need to run their businesses. Conversely, other scholars found a positive relationship between the internet and technology. In their study of e-commerce adoption by SMEs, Twi-

Brempong et al. (2019) explained that the positive relationship is due to the commercial activities being carried out online, hence the requirement for internet access.

The ecosystem concept and its evolution

Originated from the field of biology, an ecosystem, from a business organizational perspective, refers to a structured system of elements, operating in a highly complex environment, and set up to promote innovation and creativity to address economic and social problems (Moore, 1993). Actors typically involved in business ecosystems include firms, universities, entrepreneurial organizations, and government agencies, working interdependently and in a geographically defined environment (Cetindamar et al., 2020; More, 1993).

Since 2015, the concept of entrepreneurial ecosystem has attracted the attention of policymakers, academics, and practitioners as a way to frame policy to cultivate entrepreneurship (Acs et al., 2014; Autio et al., 2018; Isenberg, 2010; Spigel, 2016). An entrepreneurial ecosystem is broadly defined as a “community of multiple coevolving stakeholders that provides a supportive environment for new ventures creations within a region” (Cao & Shi, 2021, p. 75). Autio (2016) considers entrepreneurial ecosystems as “fundamentally interaction systems comprised of loosely connected, hierarchically independent, yet mutually co-dependent stakeholders” (p. 20). In that vein, entrepreneurial ecosystems draw from the innovation system literature although with a focus on the generation of entrepreneurial knowledge rather than the generation of innovation (Cao & Shi, 2021). Industrial clusters, defined as a geographically close group of companies and local institutions that are interconnected in a particular field (Porter, 1998), share some similarities with entrepreneurial ecosystems. However, clusters are interactive systems that enable the sharing of knowledge and knowledge spillovers related to either a particular industry or technology (Maskell, 2001). For instance, Scale AI, an Artificial Intelligence (AI) supercluster in Canada (Scale AI, 2022) aims to accelerate the integration of AI across business sectors. The government supported supercluster is a consortium of private firms, research centres, academia. The Johannesburg Software Cluster is an example in South Africa. Entrepreneurs involved in an entrepreneurial ecosystem learn how to effectively organize their start-up to scale-up and succeed rather than learning about a specific industry or technology (Spigel, 2016).

The evolution of entrepreneurial ecosystems, such as those in Singapore, Tel Aviv, and Waterloo, have concentrated mostly on advanced nations (Kon et al., 2014; Spigel, 2017; Wong et al., 2007). Yet entrepreneurship and the creation of new ventures are considered the economic backbone of many nations, both advanced and emerging. Factors and determinants of successful entrepreneurial ecosystems in advanced economies cannot be assumed to be directly applicable to emerging nations. Hence, a localization lens is required as each geographical context is unique (Spigel, 2017). Therefore, a deeper understanding of the characteristics, processes, and corresponding policy implications of entrepreneurial ecosystems, particularly in emerging economies, is crucially needed (Cao & Shi, 2021). We argue that this is imperative to ensure the adequacy of ecosystems to enable the crucial transition of small firms to the 4IR.

The importance of sustainability has become more prominent and has led to the emerging field of sustainable entrepreneurial ecosystems (SEE) over the recent years. This novel area of research, which connects the investigation of entrepreneurial ecosystems and sustainable entrepreneurship, examines how entrepreneurial ecosystems can contribute to the development of sustainable entrepreneurship, in support of the Sustainable Development Goals (SDGs), a topic that Volkmann et al. (2021) consider neglected. It is argued that sustainable entrepreneurship differs markedly from traditional entrepreneurship on several dimensions, particularly the economic, ecological, and social dimensions of sustainability of core business models, taking into consideration the larger societal and environment contexts (Volkmann et al., 2021). Therefore, several research areas are emerging to examine whether the archetype of the Silicon Valley ecosystem, emulated around the world, can foster sustainable entrepreneurial activities.

In summary, while there are numerous studies on the fourth industrial revolution and SMEs, most focus on the SMEs’ adoption of 4IR technologies such as blockchain and cloud computing (Adane, 2018) and some on their readiness (Adegbite & Govender, 2021). Furthermore, most studies focus solely on SMEs in the manufacturing industry (Gumbi & Twinomurinzi, 2020; Serumaga-Zake & van der Poll, 2021), perhaps due to its significant contribution to South Africa’s GDP. It appears that little is known about the participation of South African SMEs in the 4IR, especially due to the challenges

they face. The technological complexities of the 4IR may pose challenges to small businesses in that unlike large businesses, these SMEs do not necessarily possess the skills and financial capability to match these complexities. This could possibly lead to their inability to participate in the 4IR revolution and consequently their demise and negatively impact South Africa's economic development. Hence, the accrued importance of a strong and enabling 4IR entrepreneurial ecosystem in South Africa.

THEORETICAL FRAMEWORK

Cao & Shi (2021) consider the concept of an entrepreneurial ecosystem fragmented and suffering from weak theoretical grounding. They emphasise the need for a dynamic study of ecosystems as opposed to a static one that only identifies the key role players. To this end, they view ecosystems from a three-point logic of networks, resources, and governance.

It is our thinking that the 4IR understanding, adoption, and application are still very low – especially in developing economies such as South Africa – and like the entrepreneurial ecosystem, still lacks theoretical grounding. Instead of coming up with a study of a 4IR ecosystem that is static as criticized by Leydesdorff (2012) and Cao & Shi (2021), we adopt a dynamic approach. We will therefore adopt Cao & Shi (2021) approach as a basis for understanding the 4IR entrepreneurial ecosystems. As pointed out by Cao & Shi (2021) more fine-tuned theory of entrepreneurial ecosystems can then be generalized to other contexts.

Networks

System-level innovation outcomes in entrepreneurial ecosystems are a result of specific interaction contents, interaction patterns, and resulting structural elements (Cao & Shi 2021). The networking pattern with its vertical and horizontal knowledge flows and spillovers (Autio et al., 2018) are of both a formal and informal nature. It is a combination of these myriads of interactions that drives the entrepreneurial process of opportunity identification and exploitation and is expected to drive the 4IR.

The Triple Helix (TH) Innovation Model - In most discussions of an ecosystem, the government (be it national or regional), institutions of higher learning (universities and research institutions), and specific industries or communities are the focal elements (Etzkowitz & Leydesdorff, 1995, 2000). Though the 4IR is still finding its foot in the higher education sector and government funding is expected to improve its implementation (Yende, 2019), it is the same higher education institutions that are expected to play a critical role in the 4IR ecosystem.

The current research and empirical evidence of the Triple Helix (TH) innovation model (Etzkowitz & Leydesdorff, 1995, 2000) based on university-government-industry relations for developing knowledge-based innovation has been primarily focused on developed countries such as the US, Japan, and European countries, with little done on developing countries (Lu et al., 2007). Extending this concept to developing economies such as South Africa, the principle is applied in the construction of a 4IR ecosystem.

The TH is an innovation-based system that is driven by university, government, and industry partnerships. This network become more relevant, especially in South Africa where more than two-thirds of universities/institutions of higher learning are government funded. In a Chinese study, Lu, et al. (2007) argue that both the formation and operation of the knowledge production system reflect the three dimensions within the TH model: normative control (government), wealth generation (industry), and novelty production (university and public research institutions), on the other hand, Bidmon & Knab (2018) highlights dynamic institutional interactions and transformational processes in creating the knowledge economy. We adapt the same thinking in advocating key role players for the South African 4IR landscape.

With the model of university-industry-government relations, one can measure the extent to which innovation has become systemic instead of assuming the existence of national (or regional) systems of innovations on *a priori* grounds (Leydesdorff, 2012). Overall, labour mobility and informal contacts between people in different organizations have been seen to provide the potential to diffuse knowledge and ideas between organizations (Lundmark & Klofsten, 2010). Enterprises of all sorts are conducting 4IR strategy plans and they need institutions of higher learning to advise them in their strategic thinking

and implementation. This, despite too many businesses remaining unclear as to the strategic value of 4IR technologies. The use of data is integral to company performance. Yet, Yende (2019) points out that rural-based institutions of higher education are themselves lagging far behind in 4IR adoption and application.

The technological advances in data, sensors, automation, and AI will impact the whole of society and it is the duty of governments to see that it does so fairly (Fitch Solutions, 2019). The private sector, especially those companies that serve the increasingly complicated technology ecosystem, has an important role to play too (Fitch Solutions, 2019). Compared to previous industrial revolutions, 4IR is growing exponentially (Serumaga-Zake & van der Poll, 2021). Now is the time to plan for participating in rather than observing the Fourth Industrial Revolution (Fitch Solutions, 2019). This is the reason why we advocate the need for an 4IR ecosystem to ensure that no one is left behind. Currently, the most likely business sector to be left behind would be the SME sector because of the traditional reason usually, limited resources (Adelowotan, 2021; Selelo & Khwela, 2022; Seseni & Mbohwa, 2018), be they personnel or financial.

Higher Education is generally held responsible for the lack of 4IR skills in the country. Sutherland (2020) argues that the education system produces too few appropriately qualified STEM graduates to meet the current demand. This could be because education institutions are still maintaining an outdated focus, training students for jobs that do not exist anymore (Makgato, 2019). While that may be the case, Carrim (2022) stressed the emphasis on STEM education in universities that is currently taking place to develop competencies in 4IR related areas. This is because the most sought-after skills will be in STEM due to the emphasis on robotics, data and sophisticated computer-based approaches (Carrim, 2022). Information, Communication and Technology skills are also of importance in the revolution. However, Sutherland (2020) highlighted the lack of ongoing training for individuals in this field.

Other key actors of importance are Innovation Intermediaries. They are viewed as crucial and critical actors in the innovation landscape (De Silva et al., 2018; Vidmar, 2021) and are essential for maintaining a successful innovation ecosystem (Sieg et al., 2010). The role of Innovation Intermediaries is well documented in the literature and varies from knowledge brokering (De Silva et al., 2018), providing innovation stakeholders with infrastructure and tools (Vidmar, 2021) and innovation management and influencer of Science, Technology and Innovation (Vallejo et al., 2019) amongst other things. In South Africa, a number of innovation intermediaries such as incubators, accelerators, makerspaces and digital fabrication laboratories (better known as Fablabs) exist. Incubators such as Small Enterprise Development Agency (SEDA) Incubators, Shanduka Black Umbrella, Raizcorp, Startupbootcamp Afritech and Timbali Technology Incubator have a special focus on SMEs and technology. They have programmes in place for mentoring, training facilitating finance and infrastructure as well as to strengthen technology commercialisation. There are also several Fablabs such as e-kasi Labs. Situated in the townships, these Fablabs are meant to foster innovation and entrepreneurship in townships (The Innovation Hub, 2022). Other Fablabs and Makerspaces are situated in universities such as the University of Pretoria, Vaal University of Technology and Bloemfontein University of Technology. These were initially funded by government (The South African Department of Science and Innovation) and have machinery such as 3D printers and other advanced tools (Schonwetter & Van Wiele, 2020) specifically for university students, staff and communities at large to help them make and perfect products or prototypes that address local needs.

Schonwetter and Van Wiele (2020) found that there are barriers to the use of these Fablabs. In their study, interviewees indicated that access to the labs is a challenge. They explained that transport to and from the labs as well as access to university premises is difficult. Other interviewees indicated that fees charged were another challenge. It appears that to cover operational costs, these labs charge a small fee especially in the case of individuals exceeding the allocated amount of use (Schonwetter & Van Wiele, 2020), which acts as a barrier to the use.

Resource logic

The second dynamic of the 4IR ecosystem (borrowed from Cao & Shi, 2021) is the resource logic. These are viewed as resource allocation systems driven by entrepreneurs and regulated by institutional contexts (Cao & Shi 2021; Harrison & Leitch, 2010). Entrepreneurs act as the coordinators of resource flow by bringing together labour, capital, and knowledge provision. It refers to the cultivation,

accumulation, and recycling of high-quality resources entrepreneurs require (Cao & Shi, 2021). Resources are provided by various stakeholders, in the form of state grants and subsidies, human resources from educational institutions, mentorship from existing firms, and infrastructure from other business entities (Cao & Shi, 2021). This links well with the structural networks analysed earlier. However, according to the social network theory, if critical resources are tightly embedded in close social circles, it then becomes significantly difficult for entrepreneurs to access them (Mesquita & Leu, 2007). It implies a void in the resource allocation system.

The Fourth Industrial Revolution (4IR) has ushered in a new era of economic disruption with uncertain socio-economic consequences for Africa, which seems to be lagging behind the previous industrial revolutions (Ndung'u & Signé, 2020; Sutherland, 2020). Improvements in Africa's ICT sector have been largely driven by expanding mobile digital financial services.

In recent years, the ICT sector in Africa has continued to grow, a trend that is likely to continue. Of late, mobile technologies and services have generated 1.7 million direct jobs (both formal and informal), contributed to \$144 billions of economic value (8.5 percent of the GDP of sub-Saharan Africa), and contributed \$15.6 billion to the public sector through taxation (Ndung'u & Signé (2020). Failure to recognize and capitalize on 4IR opportunities, conversely, will impose considerable risks on African stakeholders. Without attempts to move beyond existing models of innovation, entrepreneurship, and digital growth on the continent, African businesses risk falling further behind, exacerbating the global "digital divide" and lowering their global competitiveness (Ndung'u & Signé, 2020).

By 2030, Africa's potential workforce will be among the world's largest and youngest, and so, paired with the needed infrastructure and skills for innovation and technology use, the 4IR represents a massive opportunity for growth (Adebite & Govender, 2021; Ndung'u & Signé 2020).

Digitization has impacted economic growth through inclusive finance, enabling the unbanked to enter formality through retail electronic payments platforms and virtual savings and credit supply technological platforms. More broadly, digitization is enabling entrepreneurs and businesses to rethink business models that are more impactful, sustainable, and connected to other sectors of the economy. Businesses are able to design products and trade online, and individuals are able to operate financial services and payments for shopping and investments. The government is also migrating to online platforms to conveniently provide public services.

The availability of critical infrastructure such as 5G connectivity will allow businesses and people to embrace 4IR and this infrastructure is primarily a government role (Fitch Solutions, 2019, Gillward et al., 2018). 5G is firmly underway in South Africa (Gillward et al., 2018). The Independent Communications Authority of South Africa (ICASA) concluded the long-standing radio frequency auction in March 2022, releasing spectrum for 5G, so that all South Africans can be online by 2024 (Business Tech, 2022; ICASA, 2022).

It is imperative for SME consultants/advisors, most of whom are housed in government agencies, universities, and NGOs to convince SMEs that they can support their requirements to improve customer engagement, find new revenue streams and reduce costs through the use of AI, predictive analytics and IoT (Fitch Solutions, 2019). The government should show that they are part of it alongside IT vendors, system integrators and hyper scale cloud providers. It must leverage 5G capabilities, especially low latency connectivity and IoT and show businesses that it can support them as they seek to become more agile and productive using 4IR technologies (Fitch Solutions, 2019). SMEs should work closely with government and academic institutions to shape evolving technology policy (Fitch Solutions 2019). Government must invest in the country's infrastructure which can create smart cities, smart societies, smart factories and smart workers and ensure all society is ready for 4IR (Fitch Solutions, 2019, C4IR, 2022).

Governance logic

Governance logic, that is, effective governance of the entrepreneurial ecosystem, is proposed as a critical policy tool for entrepreneurship-driven economic development (Auerswald, 2015). This element is primarily driven by government policy and governs the enablement of the 4IR environment. It is this aspect that basically forms the bedrock of the 4IR ecosystem and pre-empt the extent of its success or effectiveness.

Policies concerning 4IR technologies in South Africa are not yet clearly articulated. With regards to Artificial Intelligence for example, Gwagwa, Kraemer-Mbula, Rizk, Rutenberg & De Beer (2020) note that policy responses in Africa concerning the technology are still at their early stages. A few scholars, including Ge et al. (2017), have suggested the development of such policies, which should also include guidelines for implementation, awareness raising, investment and ecosystem, transparency, integrity, and traceability.

Clearly, the 4IR presents significant opportunities as well as challenges for Africa. The key issue for policymakers is how to position their economies to benefit from the 4IR while managing the challenges that it presents. African governments must invest in education and reskilling programs to ensure that technology supplements, instead of replaces, labour (Ndung'u & Signé 2020). As innovation is at the heart of the 4IR, reinforcing state and institutional capacity to drive and support innovation and create an enabling business environment is essential for success.

The African Continental Free Trade Agreement offers a unique opportunity to enhance governance around the 4IR. With aligned policies and procedures, the continent can adapt to the rapid changes of the 4IR and leverage it to accelerate participation in global value chains (Ndung'u & Signé 2020). To make the most of the 4IR, African governments and entrepreneurs need to recognize new niches for industry and leverage them to achieve sustainable, inclusive growth, and take decisive steps to close the gaps in digital skills, infrastructure, and research and development (Ndung'u & Signé 2020).

Through the Department of Science and Innovation, the South African government has established the Centre for the Fourth Industrial Revolution (C4IR South Africa), hosted by the Council for Scientific and Industrial Research (CSIR), to spearhead 4IR. The CSIR entered into a collaboration and affiliation agreement with the World Economic Forum (WEF) that enabled the centre to join C4IR Network, a global network of the centres for 4IR (C4IR, 2022). The C4IR Network facilitates sharing of global insights and best practices in technology governance among members.

The C4IR South Africa centre is co-developing and piloting governance and policy frameworks to keep up with the pace of technology evolution. This aligns with the aspects highlighted by Cao and Shi (2021) with regards to the need for governance structures, critical for ecosystem support.

The Centre draws on the private sector, government, academia, and civil society to co-design technology governance frameworks. This aspect also relates to the element of networks and resources. The governance policy and resources are aptly summarised by the South African president Ramaphosa; “South Africa is preparing itself to take the great quantum leap into the future, and in doing so to ensure that technological advances benefit all, and not a select few. By 2030, we aim to be a nation that has fully harnessed the potential of technological innovation to grow our economy and to uplift our people. To this end, we have established a Presidential Commission on the Fourth Industrial Revolution to develop an integrated national response strategy. The commission is composed of representatives of tech start-ups, academia, cybersecurity specialists, researchers, social scientists, trade unionists, and other representatives from key economic sectors.” (Brookings, 2020).

In the same speech Ramaphosa, mentions the need for having a skilled workforce, digital citizens, and the focus on a number of sectors such as agriculture, mining, manufacturing, information and communications technologies, and electronics (Brookings, 2020). He points out the government's prioritized attracting investment in ICT infrastructure, especially fibre optics, the process of licensing high-demand broadband spectrum, and the next generation super-fast 5G which is already being rolled out in parts of the country. The Council for Scientific and Industrial Research is recognized as a continental leader in research into complex contemporary challenges from climate change early warning systems to water security, to biotech and nuclear research (Ramaphosa in Brookings, 2020). The Department of Communications and Digital Technologies (DCDT) has been tasked with the development of a PC4IR Strategic Implementations Plan (PC4IR SIP) to realise the recommendations of the PC4IR Report (PC4IR Report gazetted September 2020).

Constraints in the adoption of 4IR exist. Cao and Shi (2021) pointed to the presence of institutional voids, resource scarcities (including financial, human, knowledge, and physical infrastructure), and structural gaps in the form of the absence of actors and networks. The issue is whether the institutions are constructed dynamically to be able to accommodate both formal (rules and regulations) and informal

(cultural aspects) institutions. As it stands, the current setup in South Africa is new and its robustness can only be tested or confirmed over time. The C4IR is only 2 years old, and the policies, rules, and regulations are still to be tested and integrated with other relatively new systems and cultures.

The scarcity of different resources, such as finance and skills has been confirmed, especially in emerging economies such as South Africa and this hinders the establishment and growth of new ventures. It is expected that 4IR should spur the establishment of new ventures that exploit the new 4IR technologies and the business opportunities that come with it.

Guided by a review of scholarly literature on the entrepreneurial ecosystem in South Africa along with an overview of advanced technologies and requirements underpinning the Fourth Industrial Revolution (4IR), we developed a 4IR ecosystem framework shown in Figure 1, to which we then map the 4IR enablers and barriers in South Africa, shown in Table 1.

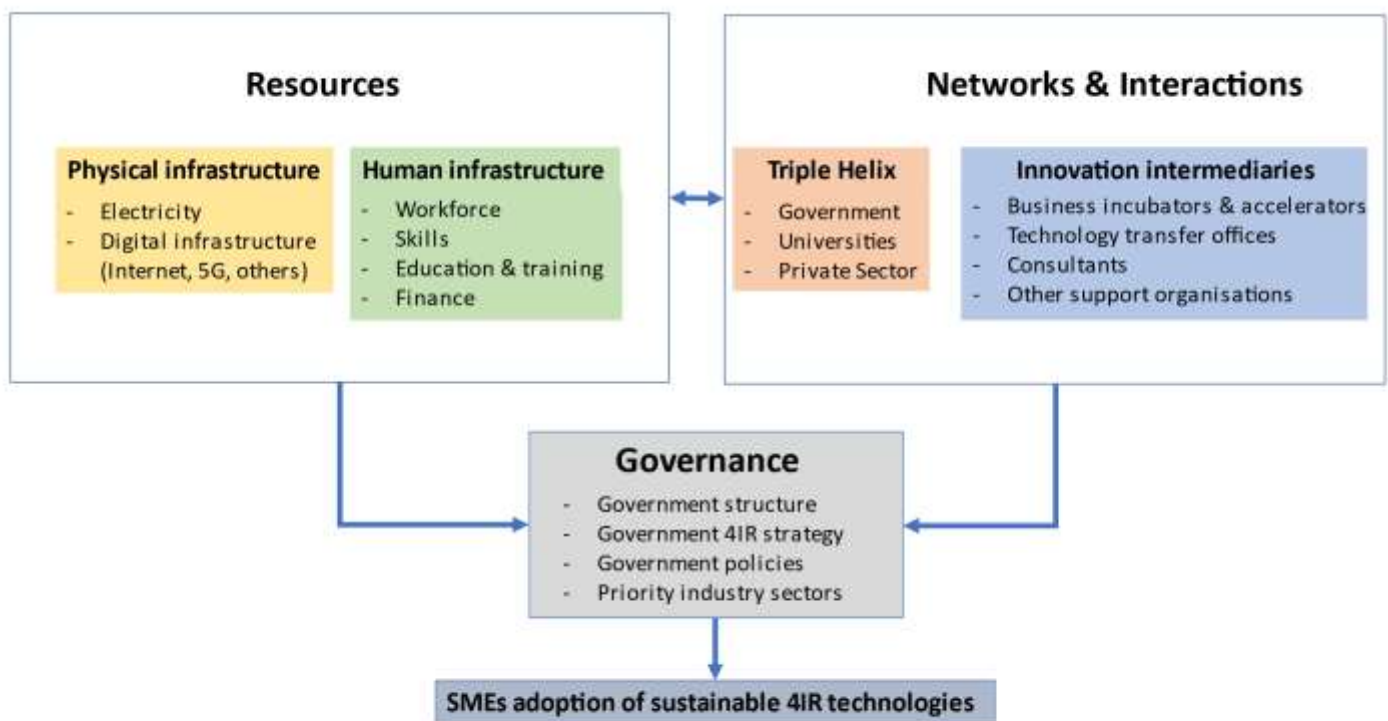


Figure 1. 4IR Ecosystem Framework

Table 1. 4IR ecosystem enablers and barriers in South Africa

Three-point logic	Enablers	Barriers	Observations
Resources – Physical			
Electricity		√	South Africa regularly experiences power outages due to aging power generation infrastructure.
Digital Infrastructure (Internet access, 5G networks, others)		√	Although 53% of South Africans have access to the Internet, affordability remains a challenge and barrier to access. Cellphones and cost of data are too expensive and limit usage and access.

	√	5G networks are already being rolled out to parts of the country. Long-standing radio frequency auction concluded in March 2022, releasing spectrum for 5G.
Resources – Human		
Workforce	√	It is envisaged that by 2030, Africa's potential workforce will be among the world's largest and youngest. Paired with the needed infrastructure and skills for innovation and technology use, the 4IR represents a massive opportunity for growth.
Skills	√	4IR related jobs will require higher skills, yet there is significant skills shortage in South Africa, specifically for innovation and technology use.
Education & training	√	The education system is held responsible for producing inappropriately qualified STEM school leavers and there is lack of ongoing training for individuals in ICT.
Finance	√	The scarcity of finance hinders the establishment and growth of new ventures, as well as the participation of SMEs in the digital revolution.
Networks		
Government	√	The government appears to be an active player in funding Research and Development through various government agencies including the Department of Science and Technology. Through incubators and Fablabs, they appear to support entrepreneurship and inclusiveness in the digital revolution.
Universities	√	Although Universities are held responsible for lack of appropriately qualified STEM graduates, there is an emphasis of STEM education currently taking place in universities, to develop competencies in 4IR related areas.
Private sector		
• Large firms	√	Large firms (MNCs) have invested in 4IR infrastructure such as 5G to benefit from the digital business as well as to be competitive. 4IR is seen as today and tomorrow's business imperative.
• Small firms	√	Small firms are technological laggards. The economy is structured and driven by oligopolistic firms in major industries with small firms being peripheral/downstream players.
Innovation intermediaries	√	There is a significant number of incubators and Fablabs available in the country, specifically related to 4IR. However, barriers related to access and fees charged for overuse must be resolved.
Triple Helix	√	Community engagement /common good mandate is a supportive approach. However, there is fragmented R&D and low IP registration. Limited commercialization of university innovations. Government-Universities relationship appears paternal where the latter's existence is dependent on the former. Snippets of successful outputs exist.
Governance		

Government structure	√	Government structures are in place and include funding agencies such as Technology Innovation Agency and Department of Science and Technology. Furthermore, structures are in place for the integrated national response strategy through the Presidential Commission on 4IR.
Government strategy	4IR √	Implementation of PC4IR Strategy recommendations through various departments including the Department of Communications and Digital Technologies (DCDT) as well as C4IR South Africa.
Government policy	√	South Africa is challenged to implement complex policies. Currently policy responses concerning 4IR technologies are still at their early stages. An improvement on cybersecurity and data protection legislation is required.
Priority industry sectors	√	There are many 4IR related challenges identified in priority sectors (Agriculture, mining, manufacturing) such as technology impact on labour, inclusion, etc. These need to be addressed by various stakeholders.

Source: Authors

DISCUSSION AND CONCLUSION

In this paper, we aim to address the challenge of South African SMEs being potentially left out of the rapid transition to 4IR and we examine the role of the ecosystem to support their sustainable adoption of 4IR technologies. To do so, we developed a 4IR ecosystem framework, building from Cao & Shi's (2021) ecosystems dynamics and the Triple Helix model of innovation (Etzkowitz & Leydesdorff, 1995, 2000).

We now turn our attention to the development of propositions to further advance the understanding of the role of the South African entrepreneurial ecosystem to support the sustainable adoption of 4IR by SMEs. Our review of the literature and the information in Figure 1 and Table 1 pave the way to the following propositions.

Several key prerequisites are essential for the successful adoption strategies of 4IR technologies for SMEs in South Africa so that they can be sustainable and competitive (Emmanuel, 2022; Serumaga-Zake & van der Poll, 2021; Sutherland, 2020). The Government must lead several of these prerequisites – particularly those related to the physical infrastructure. Thus, we state the following propositions related to resources – physical (RP)

Proposition RP1: *The Government ensures adequate, stable, and affordable electricity, as it is an enabler to adoption of 4IR.*

Proposition RP2: *The Government invests in high-speed Internet infrastructure and supports wider and more affordable access to the Internet.*

We argue that the Government as well as other ecosystem players must all play a role in increasing the awareness of 4IR technologies and their benefits to SMEs, and to enable the efficient development of required skillsets. Hence, we state the following propositions related to resources – human (RH).

Proposition RH1: *The 4IR ecosystem players educate SMEs on the benefits of 4IR.*

Proposition RH2: *Universities and other education institutions educate and upskill the workforce for higher skill jobs that 4IR technology requires, emphasizing STEM.*

Proposition RH3: *The 4IR ecosystem players enable 4IR technology diffusion & adoption.*

Proposition RH4: *The 4IR ecosystem players provide targeted funding to support SMEs' transition to sustainable 4IR.*

Proposition RH5: *The 4IR ecosystem players train SMEs on Business model innovation for 4IR.*

A combination of interactions among ecosystem players drives the entrepreneurial process of opportunity identification and exploitation and is expected to drive the 4IR (Autio et al., 2018; Cao & Shi, 2021). Innovative approaches such as shared services and cooperative projects, and novel business models will facilitate the 4IR transition (Adelowotan, 2021; Serumaga-Zake & van der Poll, 2021; Vidmar, 2021). Extending the Triple Helix innovation model to developing countries such as South Africa and taking into consideration the needs for strong links among all key ecosystem players (Gachiea, 2020), including intermediaries such as incubators and accelerators, we formulate the following propositions related to Networks and Interactions (N):

Proposition N1: *4IR ecosystem players identify factors inhibiting SMEs' adoption of 4IR technologies for sustainable development.*

Proposition N2: *The 4IR ecosystem players develop tools to assess SMEs readiness for 4IR.*

Proposition N3: *The 4IR ecosystem players support SMEs to evolve their business models.*

Proposition N4: *4IR ecosystem players encourage the collaboration and sharing of best 4IR practices with and among SMEs.*

Proposition N5: *Innovation intermediaries, such as business incubators and accelerators, remove barriers such as access to intermediaries and fees for overuse.*

Proposition N7: *The 4IR ecosystem enables and supports cooperative projects between MNCs and SMEs, using a collaborative and open innovation paradigm.*

Governance is crucially important for the effective design and implementation of policy tools for economic development and the enablement of the 4IR environment (Auerswald, 2015; Cao & Shi, 2021; Serumaga-Zake & van der Poll, 2021; Sutherland, 2020). South African president Ramaphosa has demonstrated a willingness to prepare the country for the 4IR and to transition the country towards a digital economy to improve its competitiveness. He has also put in place structures and initiatives to spearhead the 4IR, has identified priority sectors, and has recognized the many challenges that need to be addressed. Thus, we offer the following propositions related to governance (G):

Proposition G1: *Government provides an enabling 4IR environment by following through with the implementation of 4IR strategies and initiatives.*

Proposition G2: *Government identifies and mitigates adverse socio-economic effects to 4IR, particularly to SMEs.*

Proposition G3: *Government sets up programs to support SMEs in their acquisition of necessary 4IR technologies.*

Proposition G4: *Government improves cybersecurity and data protection legislation.*

Proposition G5: *Having identified agriculture as one of the priority sectors, the government encourages increased use of 4IR technologies for climate smart agriculture.*

Owing to their importance for job creation and economic development and capitalizing on the regional integration within the African continent enabled by the ACFTA and the African Union Agenda 2063, entrepreneurs and SMEs in South Africa must be supported to avoid being bypassed by the 4IR and falling further behind, which would further widen the digital divide (Emmanuel, 2022). Prior research has emphasized the benefits small firms can derive from the adoption of 4IR technologies, which include survival, sustainable industrialization, improved quality and productivity, improved competitiveness, access to regional and global value chains, legitimization of economic activities, and contribution to UN SDGs (Adane, 2018; Adegbite et al, 2021; Dagnaw et al., 2021; Isabelle & Westerlund, 2022; Serumaga-Zake & van der Poll 2021). Thus, we formulate the following propositions related to the impacts of adoption of 4IR by SMEs (I)

Proposition I1: *Through the 4IR ecosystem, SMEs develop a 4IR adoption strategy and implementation approach.*

Proposition I2: *Through the 4IR ecosystem, SMEs develop their sustainable industrialization.*

Proposition I3: *With the adoption of 4IR technologies, SMEs improve their productivity.*

Proposition I4: *With the adoption of 4IR technologies, SMEs access global value chains.*

Proposition I5: *The adoption of 4IR technologies contributes to the legitimization of SMEs.*

Proposition I6: *The successful adoption of 4IR technologies by SMEs contributes to job creation and economic development.*

As with all research, the results of this study need to be viewed in light of its limitations. Our study, 4IR ecosystem framework and propositions focus on one Sub-Saharan country, South Africa. That said we are confident that our work is generalizable to other African countries and LMICs. Furthermore, our research builds on conceptual connections not previously acknowledged in the literature, and have not yet been studied empirically, which pave the way for future research directions and empirical investigations.

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INDIGENOUS KNOWLEDGE (IK) SYSTEMS AND WEALTH CREATION: RWANDA'S POTTERY FROM TRADITIONAL TO MODERN PERSPECTIVE

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ABSTRACT

Due to colonization, in Africa, indigenous communities did not have opportunities to preserve and protect their cultural and natural knowledge systems that had been used for years. However, within some communities, indigenous knowledge (IK) has survived and is manifested in practices such as traditional craftsmanship which is the empirical focus of the present paper. This paper aims at analyzing how IK is combined with knowledge from the Global North to understand the phenomenon of institutional logics in Batwa pottery. This exploratory abductive case study used purposive and theoretical sampling techniques to get the respondents who participated in this study from five pottery micro-firms. Empirical qualitative data was collected using interviews and observation, coded and analyzed using MaxQDA 2020. Both an indigenous traditionally-based and a western market-based institutional logic co-exist in Batwa pottery. The likely source of tensions from the outside is not perceived as a problem by the interviewed potters. The potters connect to a nationally-based meta-logic that is linked to Rwandan identity and history. This meta-logic relates to the Batwa being a historically disadvantaged group, to the history of colonialism that the interviewees see as one reason for the decline of traditional pottery, and to national divisionism that culminated in the 1994 genocide against the Tutsi and was replaced by a desire to see and build Rwanda as a unified nation.

Keywords: Indigenous Knowledge, Indigenous Knowledge Systems, institutional logics, Rwanda, pottery

INTRODUCTION

Indigenous or traditional knowledge relates to what native people know and practice, that they have absorbed and performed for generations, including traditions that have grown via trial and error and have proven adaptable to modification (Eyong, 2007). Across the World, communities possessed particular indigenous knowledge systems that were appropriate to themselves (Nakashima, 2010). These ways and structures within the society were used for particular purposes. Indigenous knowledge systems served as a foundation for many western countries to reach western or modern knowledge. In Africa, due to colonization, indigenous communities had poor opportunities to preserve and protect their cultural and natural knowledge systems that had been used for years (Emery, 2000). Yet, within some communities, indigenous knowledge has survived and is manifested in practices, such as traditional craftsmanship that will be the empirical focus of the present paper.

The Batwa community in Rwanda is known for its tradition of pottery. Today, their traditional handicraft gives them an opportunity to develop business activities building on their indigenous knowledge. Batwa pottery products are bought by local Rwandan customers not belonging to the Batwa community themselves, as well as by tourists from overseas who appreciate the genuinely African handicraft. However, making business by selling traditional pottery products also means that indigenous knowledge is meeting knowledge stemming from a totally different context. Suddenly,

concepts like marketing, efficiency and competition enter the world of traditional craftsmanship alongside with new technologies and tools. But how does indigenous African knowledge go along with knowledge from the market economies of the Global North? How does Batwa pottery still represent indigenous knowledge after adopting non-indigenous practices and what do Batwa potters do to preserve indigenous knowledge while benefiting from potential commercial gains resulting from adopting new practices?

Conducting a multiple case study of Batwa pottery firms, this paper aims at analyzing how traditional craftsmen from the Batwa community combine indigenous knowledge and knowledge from the Global North, applying an institutional logics perspective. Institutional logics (Friedland, 1991; Thornton & Ocasio, 1999; 2008) refer to broad belief systems that provide order to different spheres of society. Institutional logics provide actors with guidance how to act in specific situations (Thornton & Ocasio, 2008). In this sense, they are closely related to identity, be it on the level of identities in relation to social groups (Tajfel & Turner, 1979) or of organizations (Albert & Whetten 1985). However, there may be situations where two or more logics are relevant at the same time and such guidance may point into different directions that are not necessarily reconcilable in an easy manner. The phenomenon of competing institutional logics has been found to be an important trigger of change in institutions (Reay & Hinings, 2009) and identities (Dutton & Dukerich, 1991), but it does not necessarily mean that one institutional logic replaces the other. Seemingly competing institutional logics can also end up co-existing (Reay & Hinings, 2009). With the present paper we aim to make the following contributions: Empirically we respond to Jackson's (2013) call of bringing the indigenous knowledge into African management research, by analyzing how indigenous knowledge is combined with knowledge from the Global North. We also contribute to the literature on institutional logics, by addressing Thornton & Ocasio's call to look at institutional change in the global, multi-national context, going beyond the "expectations of western culture" (2008, p.121). Finally, we hope that our work can contribute to practice, by rising practitioners' and policy makers' awareness of how the meeting of African indigenous knowledge and knowledge from the Global North happens and what practical implications it has.

The remainder of this paper is structured as followed. First, we present a theoretical framework outlining the literature on institutional logics and indigenous knowledge. After outlining our methodological approach, we present the empirical setting of Batwa pottery as well as five cases of Batwa pottery firms. These form the basis of our analysis. The paper concludes with a summary of our main findings as well as implication for theory and for managerial practice.

THEORETICAL FRAMEWORK

The theory section of our paper focuses on literature addressing institutional logics. We also briefly address the concept of indigenous knowledge.

Institutional logics

Institutional logics as a theoretical perspective had its breakthrough in the 1990s with the seminal work of Friedland (1991) as well as Thornton & Ocasio (1999). Broadly speaking, institutional logics refer to institutionalized practices and rule structures (Thornton & Ocasio, 2008) that provide guidance in specific spheres of society, such as the market, the bureaucracy or the church. Typically, an institutional logic provides organizing principles for a field (Reay & Hinings, 2009) but in practice, there may be several logics existing in the same field and competing with each other (Currie & Guah, 2007; Lander, Koene & Linssen, 2013; Thornton & Ocasio, 2008; Reay & Hinings, 2009). Thornton and Ocasio (2008: 804) defined institutional logics as "the socially constructed historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality". These logics link institutions and action (Reay & Hinings, 2009) in a system of "embedded

agency” (Garud et al., 2007; Thornton & Ocasio, 2008; Seo & Creed, 2002), meaning that agency and change are possible despite institutional forces guiding behaviors. Friedland (1991) defined five institutional sectors with specific logics, namely the capitalist market, the bureaucratic state, democracy, the nuclear family and Christian religion. However, subsequent authors writing on institutional logics have not limited the concept to a pre-specified set of institutional sectors, but often defined logics inductively from their empirical data. For instance, Lander et al. (2013) in a study of Dutch accountancy firms, distinguish between a traditional trustee logic and a rising commercial logic that are guiding how accountancy firms and their staff should work. As institutional logics on a field level influence firms and individuals who are operating in the field, there is an obvious link to notions such as organizational or professional identity. This also explains that very similar phenomena are addressed in the organizational identity literature although the institutional logics concept may not be used. Examples include Albert & Whetten's (1985) elaboration on the identity of universities moving between a normative and a utilitarian identity or Glynn (2000) studying a symphony orchestra where musicians feel torn between artistic and commercial demands.

The dynamics arising from potentially conflicting institutional logics have thus received quite some scholarly attention, particularly along examples of organizations or professions whose traditional logics become challenged by market-oriented commercial logics. Reay & Hinings (2009) studied competing logics in the health care sector of Alberta in Canada. Similarly, Currie & Guah (2007) looked at the British health care sector that increasingly followed a commercialized logic which had an impact on the development and implementation of IT systems. Lander et al. (2013) examined the aforementioned accountancy firms, again characterized by a strong professional identity of accountants that becomes challenged thorough more commercialized practices. One key question in such studies is of course what happens to the conflicting logics over time. Quite commonly, such a process is described as one logic replacing the other (Greenwood, Oliver, Tawren, 2002). Co-existence remains a temporary phenomenon (Reay & Hinings, 2009) and usually the new logic wins over the old. Hence, Currie & Guah (2007) found that the British healthcare sector was characterized by different institutional logics during different historical eras, namely professionalism, managerialism, and market. This said, they also remark that the old logics have not just disappeared. While professionalism does not have a dominant role any longer, it continues to exist and competes for influence in a setting that is overall dominated by a market logic. Reay & Hinings (2009) point at the literature that has identified how old logics survive ‘under the radar’ (Battilana, 2006; Maguire, Hardy, Lawlence, 2004; Reay & Hinings, 2009). They themselves find four mechanisms that allow seemingly competing institutional logics to co-exist over longer periods of time; (1) separating decisions, (2) seeking advice from representatives of the other logic, (3) working together against a common enemy, and (4) jointly innovating. These reconciliations of logics very much happen on the level of actors who represent the different logics but benefit from cooperation under certain conditions. Lander et al. (2013) identify a process of blending experimentation, where actors selectively mix elements from two logics. Pache & Santos (2013) identify decoupling or compromising as two strategies the literature suggests for handling competing logics. However, in their empirical study they find that selective coupling is an important alternative strategy. Similar to blending experimentation, actors select elements of the two logics and combine them. These elements as such are however intact and are not adjusted to become more similar to the other logics. Overall, the literature on competing logics has gone beyond the assumption of one institutional logic replacing the other. Rather, there is a variety of strategies how two seemingly competing logics can co-exist even over extended periods of time. The study therefore seeks to understand the phenomenon of institutional logics in the case of IK and knowledge from the Global North in Batwa pottery.

Indigenous knowledge

The emergence of what is considered indigenous knowledge (IK) may probably be traced back to the dawn of humanity (Sen, 2005). However, the concept as such is relatively new, posing among other things a challenge to ‘western’ thinking and conceptualization (Horsthemke, 2008). ‘Indigenous knowledge’ is frequently distinguished from ‘knowledge from overseas’ or a ‘global’, ‘cosmopolitan’, ‘occidental’, ‘formal’, or ‘world’ (system of) knowledge (Semali & Kincheloe, 1999; Hoppers, 2002), either tacitly or explicitly. Indigenous knowledge proponents argue

that studying IK has significant educational and ethical implications (Horsthemke, 2008). The possibility of applying indigenous knowledge to current times arises from its creative potential (Durie, 2005) and this might have been the case in Batwa pottery.

While Subba Rao (2006) defines IK as a type of local, tacit knowledge that is specific to a given culture or civilization and serves as the foundation for local decision-making, Sen (2005) views IK as customary knowledge passed down over the generations by indigenous peoples through oral tradition. This clarifies that indigenous knowledge is owned by indigenous people and not primitive ones. Indigenous people are an ethnically dissimilar ethnic category of people having a distinct identity from the rest of the society, who rely on community resources for survival and are not powerful politically (Eyong, 2007). Without considering this political issue brought here by Eyong (2007) indigenous people can merely be viewed like people who have normally lived in a place or country and not arrived from elsewhere. The case of Batwa matches the definition of Durie (2005) who describe indigenous people as a vulnerable group of people that have been neglected for a long time. Traditional or indigenous knowledge, according to Nakashima, Krupnik & Rubis (2018), is the entire branch of knowledge, ability, and traditions preserved and produced by peoples usually in the countryside, who have long histories of connection with nature. Indigenous knowledge is once again elucidated as a community's common knowledge, abilities, and beliefs resulting from individual and communal experiences (Ocholla & Onyancha, 2005). This definition brings the idea that indigenous knowledge means experiences shared among community members (UNISDR, 2008). For the purpose of this study, indigenous knowledge systems refer to the relationship between historical, economic, social, and environmental ways and structures of working with local sources and skills that are transmitted from generation to generation. In addition to the institutional logics existing in Batwa pottery, there is a need to answer the call on whether these logics co-exist with each other.

METHODS

Research design and approach

This exploratory abductive case study aims at gaining a comprehensive understanding of the phenomenon (Silverman, 2013) of IK and knowledge from the Global North in Batwa pottery. The use of abductive (Rashid, Rashid, Warraich, Samee, 2019) qualitative approach helps comprehending social phenomena taking place in pottery making using indigenous and modern economies knowledge. The abductive, unlike the deductive approach, helps to ascertain and handle unanticipated information (Kapitan, 1992) and not be limited to any amount of empirical data like induction (Kovács & Spens, 2005). Unlike induction, abduction admits actual theory, and this enhances the theoretical strength of case analysis. The focus of this study is on the intensive personal involvement and in-depth responses of individuals through interviews (Cohen et al., 2007), and observation.

Theoretical sampling

Both purposive and theoretical sampling techniques (Glaser & Strauss, 2012) have been used. Purposively, experienced micro-firms intending to improve pottery making were considered in this study. In the first cohort, participants from two firms making pottery as a business company and a cooperative were interviewed. The data were coded and analyzed to see how African indigenous knowledge is blended with modern knowledge in traditional and modern pottery and ceramics making. In the second cohort, other participants from other two micro-firms of the same category were also interviewed to enrich the data and information related to the phenomenon. This also intended to get more data on whether Batwa pottery still represents indigenous knowledge, and preserves Rwandan culture and tradition, despite the adoption of non-indigenous practices. Finally, participants from another micro firm were interviewed to fertilize the data on what is done in pottery making to preserve indigenous knowledge while benefiting from potential commercial gains from the adoption of the new

practices. The number of firms was determined by the data reaching its saturation (O'Reilly & Parker, 2013)

Ethical considerations

Researchers should pay much attention to ethical issues and they should receive informed consent (Creswell, 2014). For this reason, we have ensured to provide the prospective respondents in our investigation with accurate information. In this regard, we explained the objective, the span of the activity, and the research procedures. Both research ethics clearance and informed consent were sought before any research activity.

Participants

The initial inclusion criteria included being a pottery-making firm that survived at least 5 years in pottery making. In addition to being a firm (a company or cooperative) within traditional pottery-making, there should also be some evidence of applying a modern perspective for improved pottery making, such as attempts to introduce new technology or to go beyond traditional sales methods. The participants' roles in their firms appear in Table 1.

Table 1: Interviewees for the study

Business Firm		Respondent's Identification		
No	Company/cooperative	Province/District	Respondent's position	
1	Best Potters Ltd	Southern district	Province/Kamonyi	Chairman and Potter Managing Director and Potter
2	Kacyiru Cooperative of Modern Pottery	Kigali city/Gasabo district		President and Potter Business activities manager and Potter
3	Abakomezamwuga Cooperative of Pottery	Kigali city/Gasabo district		President and Potter Vice-president and Potter
4	Gatagara Cooperative of Pottery	Southern district	Province/Nyanza	President and Potter Business activities manager and Potter
5	Munjanga Pottery Ltd	Western district	Province/Karongi	Managing Director

Source: Configured by the authors

To ensure the adequacy of theoretical sampling, the number of firms was determined by data saturation. That is, the achievement of the information depth and breadth (O'Reilly & Parker, 2013) when no new instances were emerging.

Data collection and analysis procedures

Data collection was first conducted from mid-August until mid-October 2021, and it was repeated in April-May 2022. It included qualitative interviews with micro-firm leaders (Table1) and observations at the business firm's working and selling places. Interviews were held in the local language, translated, and transcribed in English. MAXQDA2020, a software for analyzing data using mixed and qualitative approaches was used in coding the data and analyzing them. With use of the software, variables were coded at three levels. The first order category resulted in second order category of variables and this eased the work to get the three types of aggregate categories or institutional logics from potters. Abductive thematic scanning was used to answer the research questions. An interpretivist philosophical paradigm guided our data analysis. The discussion of the interpretation included empirical evidence to justify the data.

To ensure methodical rigor, the criteria for trustworthiness were followed (Kuckartz, 2014). Transparency was guaranteed by describing the analysis process in a detailed manner for a wide insight (Nowell et al., 2017). The credibility of the data analysis was ensured by the triangulation of data. To ensure reflexivity, qualitative data were enriched with researchers' notes put down during data collection and transcript proofing (Korstjens & Moser, 2018). Transferability was established by providing evidence that the findings could apply to other contexts (Sundler et al., 2019). The achievement of dependability, credibility, and transferability established confirmability (Nowell et al., 2017).

Empirical results

In this section of the paper we start by presenting Batwa pottery as a phenomenon before providing case descriptions of five Batwa pottery business.

Batwa pottery

Pottery making is traditionally associated with the Batwa community in central and eastern Africa and especially in Rwanda. Batwa are indigenous inhabitants that are found in central and eastern African countries and their name is commonly used in those countries. In the Albertine Rift area of central Africa, in the current countries of the Democratic Republic of Congo (DRC), Rwanda, Uganda, and Burundi, Batwa lived as hunters, gatherers, and eventually potters in the high elevation forests all over the lakes (Lewis, 2000). Unfortunately, in recent decades, these gatherers and hunters were no longer given the option of continuing their traditional way of life (Huggins, 2009).

The Batwa have been a highly marginalized, poor, and politically unrecognized group of people in all countries where they lived in general and particularly in Rwanda. However, after the 1994 genocide, the government of Rwanda has recognized the Batwa as other Rwandans and they are no longer marginalized. After ethnic-based ideology led to Genocide in Rwanda, there is no longer ethnic-related identification and the name Batwa is no longer commonly used to refer to an ethnic group. The name has been replaced by "*abasigajwe inyuma n'amateka*" translated as "people who have been marginalized throughout country history".

The Batwa community in Rwanda, unlike those in the region, no longer live in forests or other isolated areas, they live now together with other people in villages whereby semi-modern houses have been constructed for them. Like other citizens, these people are encouraged to participate actively in the development of the country. Despite having been marginalised for a long time, the Batwa community has not abandoned their traditional profession and the majority of these people continue to work and earn living from pottery making in their villages.

Although pottery making is a traditional profession of the Batwa community, some of them, especially those who live in areas where clay soil is scarce, live on money and food from other activities. For instance Batwa community in Northern Province, Musanze district, Kinigi sector, used to live on hunting but today they do crop-farming and breeding as well as other activities done by people in that area. Pottery making is now mostly practiced in Southern Province (Kamonyi, Nyaruguru, Muhanga and Nyanza districts), Western Province (Karongi district), Eastern Province (Bugesera district) and Kigali city (Gasabo district). The fact that pottery is only practiced in the above-mentioned areas has a lot to do with the availability of clay soil in the above-mentioned places.

Best Potters Ltd.

Best Potters Ltd. was founded in 2018 by Olivier Ntamugabumwe and Jean Bosco Hategekimana and other three people. While four of them come from Batwa families, only one person is not from traditional potters, Batwa. All these people live in a village with around 116 families of Batwa potters. Prior to starting the firm, Olivier was the secretary general of COPORWA, the Community of Potters of Rwanda. Jean Bosco was a member of a local educational NGO, the Kalimba

Foundation, which has as its goal to raise the livelihood of potters. They saw that the potters in their village had a very low income. They got low prices for their products, spent a lot of time on transporting them to the markets and were sometimes badly treated by public officials. The idea of Best Potters is to produce products with higher quality that can compete with ceramics produced in Asia that are flooding the Rwandan market. The idea to start their company was a reaction to the fact that various cooperatives of pottery had failed before. The company employs 12 independent potters and all of them come from Batwa families. While the company still values Rwandan tradition in pottery making, Best Potters Ltd intend to raise pottery making to a higher modern level by introducing contemporary modern tools and equipment for value addition and more competitive advantage.

Olivier and Jean Bosco emphasize the traditional character of Batwa Pottery, building on knowledge passed on from generation to generation. To them, it represents an identity defining element of the Batwa community:

“It is the main characteristic that differentiates our community from others. Pottery making, therefore, is in our blood.” (JBH)

At the same time, they see Batwa pottery also as a reflection of Rwandan culture with the three traditional social groups in Rwanda having different professional specializations, namely the Batutsi focusing on livestock breeding, the Bahutu doing crop-farming, and the Batwa making pottery. To Jean Bosco and Olivier, this represents a traditional division of labour that was disrupted through colonization:

“Unfortunately, when colonizers came to Rwanda, they only focused on crop-farming and breeding and overlooked pottery. Discrimination and marginalization of potters or Batwa started there because their profession was undermined and this links with what led to 1994 genocide.” (JBH)

In this sense, the founders of Best Potters, describe their company as a means of overcoming divisionism that they see as a consequence of colonization. Olivier and Jean Bosco do not perceive the introduction of more modern production technologies, tools, and design as a threat to the indigenous knowledge the Batwa pottery represents. On the contrary, they believe that the introduction of modern molds and electric kilns is a necessity for making traditional pottery survive in competition with products from China and other parts of the world. Hence, they do not see a conflict between indigenous knowledge and new technology, but rather a symbiotic relationship:

“We are in industrial ceramics not traditional pottery. But remember this does not undermine traditional pottery which is the foundation of what we are doing today. [...] We are sure that for most of the process to make pottery, the cultural heritage and tradition are preserved. This is because most of the pottery products we produce today need hand use at high rate.”

GATAGARA Cooperative of Pottery

Pottery making and business at Gatagara started in 1997 by a self-help group initiated by a Belgian known as Joseph Adrien Fraipont Ndagijimana. The Belgian had come to establish a center for the disabled and he also introduced this business to help Batwa potters in the surroundings of the center who were vulnerable. He, therefore, wanted to raise their livelihood. Batwa potters continued to work as members of the self-help group, and this was passed on from generation to generation. Gatagara self-help group became a cooperative in 2018. The main goal of this cooperative is to renovate pottery making from traditional pottery to ceramics. The idea for this renovation is based on the view that they did not improve their livelihood before. Currently, the cooperative counts 11 members and 11 workers as well who work regularly with the cooperative. Members of the cooperative and workers are all Batwa. This emphasizes and proves how pottery making in Rwanda belongs to the Batwa community as stated by Jean Pierre Nshunguyinka, the current president of the cooperative, and Jean Marie Vianney Munyambibi the manager of the cooperative activities:

“our parents worked under the self-help group initiated by Fraipont and when they were no longer capable, we joined and continued from where they were”.

“...pottery is a tradition that has been practiced only by Batwa for a long time as a profession. This tradition has been considered a specific division of labor for us besides crop-farming and breeding that were for other Rwandans.”

Jean Pierre Nshunguyinka and Jean Marie Vianney Munyambibi highlight that besides Batwa pottery tradition as a character, they also welcome everything that contributes to the modernization of pottery making and business. This concerns designs, techniques, tools, equipment, business plans and market segmentation that are used. They do not take their pottery as isolated, and they agree that it is affected positively by globalization.

“In addition to decoration, coloring, and other techniques that can be used for innovation, you can keep the traditional character of your pottery and its originality...this is what we strive for. globalization goes with modernization; pottery-making is not isolated...besides pottery products, other plastic, metal or wooden products influence your thinking for new designs. This all depends on your business plan and market segmentation”.

Gatagara potters are not only interested in the domestic market but also the regional and international one. They are also aware that only pottery production that gives room for competitive advantage is the bridge to those markets although it requires huge efforts in the production process. Additionally, Gatagara potters, believe that they have not satisfied the domestic market and their local customers value their products more than the imported ones. Jean Pierre Nshunguyinka and Jean Marie Vianney Munyambibi stated:

“Our vision is to become a big ceramic industry producing high-quality products that compete domestically, regionally, and internationally...with those from China and elsewhere. We not only need modern molds, electric kilns but also training for techniques to use them”

“We recently noticed that our products are no longer competed by the imported ones...local customers have discovered the secret...imported products are made in a highly filtered and cleaned clay and they are fired at a lower temperature (1000° C) compared to ours (1300° C). This makes them lighter. When our product falls from a table, it cannot be broken easily but these imported products are immediately broken.

KACYIRU Cooperative of Modern Pottery

The business started informally in 1998 by 12 people under the ABISHYZEHAMWE association. They became a cooperative in 2007. Today they are 53 members of the Kacyiru Cooperative of modern pottery and they all come from Batwa families. While 33 of them are female, 20 are male members. Their business is about modern pottery making and pottery products selling. This business helps them to generate income that makes it possible for them to live in Kigali city where life is relatively expensive compared to other places in the country. Batwa people were marginalized for a long time until the 1994 Genocide when the government recognized their vulnerability and committed to raising their livelihood. However, Batwa, due to having been marginalized for a long time, had a culture of begging, and this continued until recently. Jonathan Gatera, the President of the cooperative, and Emmanuel Dushimimana, the manager of the cooperative's activities affirm that the income generated helped them and their relatives to get rid of that bad culture.

“...you know Batwa have been known as people who live on begging. But this business helped us and our relatives to get rid of that old and bad culture. We work for ourselves, and we generate enough income for us and our families”.

While it is commonly known that pottery making has belonged to the Batwa community for a long time Jonathan Gatera and Emmanuel Dushimimana argue that some other people other than Batwa used to practice pottery making. According to them, these were known as ABAYOVU. They insist that ABAYOVU were people from other social groups who might not have had other means to earn life and they had lived closely for so long with Batwa families who finally taught them how to make pottery. The interviewees also insist that other people other than Batwa cannot perform this profession as much good as the owners, Batwa.

“...across the country pottery-making is and has only been practiced by Batwa and anyone else who does so and is not part of them is given another name commonly known as ABAYOVU”.

“...pottery started with our ancestors, it continued with our grandparents and parents and today it belongs to us. Even though other people can do this, they cannot perform it as well as the Batwa community because it is in our blood....”

Potters at Kacyiru cooperative of modern pottery mainly produce outdoor vases. These vases are big and relatively beautiful. It is surprising to see how they manage to do this without any modern equipment. Jonathan Gatera and Emmanuel Dushimimana explain that this is because they grow up closer to pottery making and this has built a love of this profession among them. They also insist that pottery skills contribute to Batwa primary school students' performance.

“...the difference of our pottery lies in how it is made by hands. Many visitors from abroad fail to understand how a potter here makes a product that is taller than him/her using his/her hands.

“...we have been with pottery tradition since our childhood; We love pottery and we live it, it is part of our lives. At primary school, Batwa students get the maximum grade in one subject entitled "productive work" due to their pretty pottery products.

Jonathan Gatera and Emmanuel Dushimimana highlight that modernization of pottery making does not conflict with Batwa pottery tradition, rather it improves and sustains it while yielding products with Rwandan traditional character

Whatever level of modernization, your products remain Rwandan. All of us are Batwa and our skills are based on the indigenous knowledge from our parents... all the clay soil that we use is Rwandan and experiments have shown that Rwandan clay is so special. Our modern products then keep the traditional character from the clay soil itself, the indigenous skills used, as well as local and traditional materials that are used.

The interviewees insist that while metal cooking materials cause some diseases, pottery products constitute a solution to this problem.

“it is known that the use of metal utensils and many other domestic tools is a source of some terrible diseases. This is not the case for pottery products. The clay itself is part of reliable medicine”.

Kacyiru potters, to increase market opportunity and reduce transportation cost, made their production place not different from the selling place on the road. Because they sell their products to many local customers and tourists and they are aware that the country is developing faster, they insist that they must develop their business based on that pace.

ABAKOMEZAMWUGA Cooperative of Pottery

The members started to work together as an association of Batwa potters in 2004 and became a cooperative in 2010. The cooperative counts 25 members from Batwa families of which 10 are male and 15 are female. In addition to the members, they also have other workers who do not attend regularly and their average per day is between 5 and 7. Their business is pottery making. *Zuleika Mukarusanga*, the President, and *Abdel Karim Ndori*, the Vice President state that they inherited pottery from their parents, and they do not have any other kind of profession in the Batwa community. Their main goal is to improve pottery production in terms of quantity and quality for a more competitive advantage. They insist that this improvement should build on their parents' indigenous knowledge and skills to upgrade this profession for it to be loved and enjoyed for increased income generation.

Most of the cooperative members are Muslims because they first met in religious matters. As they were all potters, they thought that working together and sharing religious beliefs would help them since they already knew each other very well. *Zulaikha and Abdelkarim* affirm that they built on their former relationship as believers and it enhanced trust among themselves.

“...Usually, Muslims are known to be honest people, especially among themselves. Doing business in a cooperative sometimes has been faced the issue of mistrust. Sharing the same belief, increased our trust and became beneficial to our business.

Zulaikha and Abdelkarim insist also on gender inclusion and role distribution in pottery making. According to them, long a time ago, pottery was only made by females and the role of males was only to extract and carry the clay soil:

“In our childhood, our fathers dealt with clay soil extraction, children were there to carry the clay to our mothers to make pottery products to be used domestically.” (Abdelkarim Ndori)

Zulaikha and Abdelkarim insist that it might have been the case for only pottery products to be used domestically. Male potters could also make pottery products for business purposes. However, the number of Batwa female potters is still higher than that of their male counterparts. It is not known whether this gender inclusion also comes from pottery-making tradition. The interviewees equate Rwandan or regional pottery tradition with Batwa pottery tradition because only Batwa social groups have practiced pottery making for a long time in the region. This is linked with different scholars' views that pottery making is only practiced by Batwa not only in Rwanda but also in Burundi, DRC, and Uganda.

“...Rwandan pottery tradition [and why not regional pottery] means Batwa pottery tradition because our parents practiced this for a long time, from generation to generation” (Zuleika Mukarusanga)

According to Zulaikha and Abdelkarim, the use of machines does not show that somebody is a real potter when he/she cannot do it by hand. They link this ability with a strong relation between Batwa [potters] and pottery making which also denotes Batwa pottery tradition. They emphasize however the necessity of new technology for modernizing their pottery making. To explain how this technology does not affect Batwa pottery tradition, they refer to the pottery making process.

“...if you cannot make pottery by hand, you are not a true potter. Pottery making is an art and hand use proves the mastery of the art”. However, technology is also important for modernization, and it does not alter our pottery tradition. With it, pottery making also starts with clay preparations, pottery-making operations, decorating, drying, and ends with firing.

According to Zulaikha and Abdelkarim, their products are big-sized, and the size does not only prevent competition in the domestic market but also it is a barrier to them reaching the outside-the-country market. They are also faced with the issue of substitutes.

“Our main products are very big, and it is not easy for anyone to bring similar products from abroad nor for us to take our products outside the country due to transportation challenges. Another challenge is related to substitutes especially those made from cement”.

MUNJANGA Pottery Ltd

This pottery-making and selling business started in 2007. The business owner and Managing Director, Stephanie Mukantwari who is not herself Batwa, affirms that pottery-making in the region is a traditional profession that has belonged to the Batwa community for a long time. In her company, however, as they are not from Batwa families, they practice pottery making but they do not inherit it from their parents. The business employs 15 regular workers who are not Batwa and other irregular ones whose number varies between 4 and 6 per day. The idea to start a pottery business while she is not from the Batwa family was prompted by the training she had received from the PPMR, a project that was supporting the development of rural areas. During the training, they were encouraged to start small businesses. As PPMR was training some youth in pottery making, she approached two of them and they accepted to be her employees in the business she was going to start. They started the business informally, but later they became a micro-firm. Stephanie Mukantwari attests that pottery making is a traditional profession of Batwa and how challenging it is to run a pottery-making business when you are not from them.

I am 62 years old now and since my childhood, pottery making has been practiced by Batwa. Not being from that social group has affected my business because at the initial stage people could not understand

how somebody who is not from the Batwa family could run a pottery business. Sometimes, I could feel worried and frustrated.

Stephanie admits that the main goal of her business is to raise pottery making to a modernized stage that can help to generate income and create wealth for sustainable livelihood not only for her family but also for everyone who contributes to its success. To achieve this goal, they try to be more innovative by thinking about better pottery designs and techniques that can help them to produce pottery products that satisfy the needs of potential customers.

Stephanie Mukantwari who had two workers trained by PPMR at the very beginning, needed other workers to increase production. No others were available except Batwa potters who had had a traditional training. She recruited them but due to different perspectives and visions, they failed to continue together. She kept them for a while to train other workers from non-Batwa families.

“...apart from those former trainees of PPMR, I added some Batwa because they showed more ability and basic experience in pottery making and they did not need any training. However, their mindset was still in basic pottery making where they just wanted us to make simple and cheap products to sell after three or five days regardless of the amount we would get. They could not wait for the monthly salary hence I only kept them until when others were trained”.

The Managing Director, Stephanie Mukantwari, who acknowledges not being a potter by tradition, maintains that pottery making in her business borrows from Batwa pottery tradition since many of her workers were trained by people from Batwa families.

“I am not a potter by tradition. Simply most of my workers who are not also Batwa got some of their pottery-making skills from Batwa. Formally acquired pottery skills of my workers are upgraded by on-job training for better improvement and modernization of pottery products.

Stephanie Mukantwari also emphasizes similarities in pottery making across the country and supports the view that Batwa pottery tradition should be equated with Rwandan pottery tradition.

“What we do has a lot in common with pottery-making that has been practiced by Batwa for so long. All of us use clay soil extracted from swamps in our country as well as other raw materials used for decoration and coloring. The process is the same and some slight differences are in terms of how one firm uses these materials for decoration and coloring.

In addition to resemblance for all Rwandan pottery and that this borrows from Batwa pottery, Stephanie Mukantwari also acknowledges the positive effect of new technology and globalization.

“Like Batwa pottery, we also use raw materials from Rwanda and all our pottery making borrows from the legacy of Rwandan pottery tradition in design and decoration despite modernization at different stages. With globalization, we do not want to limit ourselves to what we see locally, but also what is found everywhere in the world. Internet prompts all this because, with it, we do not need to fly to have access to different types of pottery products that are made all over the world.”

Stephanie emphasizes the uniqueness of Rwandan pottery which is built not only on the traditional skills but also on the materials used.

“Rwandan pottery produces unique products. It is hard for pottery making that is practiced by Rwandans in Rwanda with Rwandan materials to carry Chinese tradition despite the imitation of Chinese designs. Modernization does not make our pottery lose the Rwandan traditional character”.

Based on the types of customers of pottery products which also include tourists and hotels, Stephanie, like many other potters, views pottery products as a means to attract many tourists and preserve the cultural heritage embedded in those traditional handicraft products.

“Our products are loved by tourists, and hotels buy many of our products. This can be one of the ways to attract more tourists and preserve our cultural heritage”

It has been noted throughout the paper that pottery making belongs to the Batwa community. Stephanie and her company are a good example that other people other than Batwa can formally learn and practice pottery making despite not being attracted to this kind of profession.

“...none of our workers is from Batwa; we are an example showing that even other categories of Rwandans can learn and make pottery. However, we also have that testimony that other people other than Batwa do not like this profession. When you want to train the youth in this, that’s the first thing they tell you that it is a profession for only Batwa”.

DISCUSSION

The interviewees in our five cases are embedded in a context where both an indigenous traditionally-based and a western market-based institutional logics co-exist (Reay and Hinings, 2008). What appears as a likely source of tensions from the outside, however, is not perceived as a problem by the Batwa potters we have interviewed. They reconcile the two potentially competing logics in the belief that Batwa pottery needs modernization in order to survive. In so doing, we claim that the potters connect to a nationally-based meta-logic that is linked to Rwandan identity and history. This meta-logic relates to the Batwa being a historically disadvantaged group (Huggins, 2009), to the history of colonialism that our interviewees see as one reason for the decline of traditional pottery, and to national divisionism that culminated in the 1994 genocide against the Tutsi and was replaced by a desire to see and build Rwanda as a unified nation. We start this discussion by outlining the indigenous traditionally-based institutional logic, before moving to the western market-based institutional logic and then concluding with the nationally-based institutional meta-logic enabling the two previous logics to co-exist.

The indigenous traditionally-based logic

The indigenous traditionally-based logic is based in the traditional way of living of the Batwa community and in particular the tradition of making pottery (Lewis, 2000). This is well explained by the interviewees’ arguments as presented in Table2.

Table 2.Indigenous traditionally-based logic

1st order category	2nd order themes	Aggregate category/Institutional logics
Traditional way of living	Ancient tradition	
Tradition of making pottery		
Pottery, a division of labor beside breeding and crop-farming		
Connection with Batwa identity	Batwa group identity	Indigenous traditionally-based logic
Batwa being potters even in pre-colonial Rwanda		
Pottery is claimed to be in Batwa blood		
Open to everyone, pottery is still predominantly exercised by Batwa		
Passed on from generation to generation	Connecting generation	
Passing on skills and product designs		

Source: Configured by the authors

Our interviewees emphasize that pottery is tightly connected to Batwa identity, with the Batwa people being the potters in pre-colonial Rwandan society and having a division of labor with the other two traditional groups in Rwandan society; the breeding Batutsi and the crop-farming Bahutu. Hence, pottery was exclusively done by the Batwa. In the Batwa community, pottery has been passed on from generation to generation, this includes the passing on of skills, product designs. The centrality of pottery to Batwa identity is reflected in the claim of pottery being “in the blood” of the Batwa people. Also, pottery is described as an art and a mental skill. While today the craft is in principle open to everyone, it is still predominantly exercised by Batwa who are supposed to be particularly skillful potters.

The western market-based logic

The western market logic (Alford & Friedman, 1991) emphasizes efficiency, competitiveness, market-orientation and innovation. The potters we interviewed were all interested in developing pottery, both when it comes to the production of pottery items and the commercial development of their businesses and this is summarized in Table 3.

Table 3. Western market-based logic

1st order category	2nd order themes	Aggregate category/Institutional logic
Efficiency, competitiveness, market orientation and innovation		
New business practices from western market thinking	Marketing	
Business plan		
Use of modern equipment for improved products	Value addition	Western market-based logic
Value chain improvement		
Adjustment of new designs to the demand of customers		
Development of new design	Product modernization	
Potters' interest to grow and succeed in competition		

Source: *Configured by the authors*

Traditional Batwa pottery products have suffered from competition by cheap products from China and other countries from the Far East that partly also offer higher quality. Improving different parts of the value chain has therefore been a strategy applied by the pottery companies to meet this competition. Such improvements include the preparation of clay with higher quality and the use of modern equipment like modern molds and electric potter's wheels that partly is described as improved old equipment. But there is also a willingness to make new products that have both been traditionally used. Potters develop new designs and they are willing to adjust products and designs to the demands of customers, even beyond what Batwa potters produced traditionally. The pottery firms also introduce new business practices that are imported from western market thinking, such as business plans and market segmentation. Some of the potters have ambitious plans of expanding their businesses to industrial levels.

The nationally-based meta-logic

In its more recent history, Rwanda has suffered two national traumas, colonialism and the 1994 genocide. Rwanda society is therefore strongly impacted by the attempt to overcome the consequences of these traumas. Rwanda is one of the few modern countries in Africa that had a national existence prior to colonization, albeit not exactly in the form of a European nation state. Rwandans had a common language, a common religion/mythology and they lived in a territory overlapping with but being somewhat bigger than modern Rwanda under the leadership of a king and a common aristocracy

Many Rwandans today see the pre-colonial past as an era where Rwandans lived in relative harmony and the three major groups in society formed a symbiosis where each group had its specific profession, that of the Batwa being pottery. Colonialism is today seen as the root of divisionism that disturbed and destroyed the traditional structure of the society and the relative harmony it ensured.

Some of our interviewees describe colonialism as the root-cause of the economic misery many Batwa found and still find themselves in, as colonialists supported breeding and crop-farming and overlooked pottery. Interestingly, pottery is described interchangeably as Batwa pottery and Rwandan pottery. Hence, while on the one hand its importance for the identity of the Batwa community is emphasized, it is also seen as a part of Rwandan national heritage at large. Being successful with pottery, not least through the adoption of new technology and commercial practices, is an opportunity for Batwa to overcome the status of disadvantaged people that they have had for a long time and hence also for Rwandan society to overcome the divisionism the country has suffered from. The national-based meta-logic is summarized in table 4.

Table 4. Nationally-based meta-logic triggers

1st order category	2nd order themes	Aggregate category/Institutional logic
Experience from colonialism and the 1994 genocide Colonialism, the root cause of Batwa's economic misery	Misery due to colonialism	Nationally-based meta-logic
Pre-colonial relative harmony and post-colonial divisionism Breeding & crop-farming backing vs pottery-making overlooking	Labor division unity vs pottery overlooking	
Batwa pottery, representing Rwandan pottery Pottery practiced mainly by Batwa across the country	Rwandan pottery ownership by Batwa	
Overcoming disadvantaged status and divisionism through Adoption of new technology and commercial practices	Improved business & emancipation	

Source: *Configured by the authors*

This nation-based meta-logic of overcoming divisionism is an institutional logic that is very important to the Rwandan society at large and where a co-existence (Reay & Hinings, 2008) of the indigenous tradition-based logic and the western market-based logic (Alford & Friedman (1991) supports the meta-logic; two seemingly rivaling logics can legitimately prevail side by side. Of course, even without the meta-logic, one could imagine our interviewees seeing the adoption of a market-based logic as a necessity for the Batwa pottery tradition to survive in the long run. However, with the connection to the nation-based meta-logic, the co-existence of two logics becomes a means for achieving a greater goal that goes beyond the heritage of the Batwa people and the commercial success of the pottery firms.

CONCLUSIONS

This multiple case study of Batwa pottery firms analyzed how traditional craftsmen from the Batwa social group combine indigenous knowledge and knowledge from the Global North. With the guidance of Institutional logics we have acted in specific situations (Thornton, 2008 & Ocasión) to figure out the institutional logics in relation to Batwa potters as a social groups (Tajfel & Turner, 1979) in their pottery making business (Albert & Whetten 1985). Extant literature on institutional logics has identified a number of outcomes the meeting of conflicting logics can lead to, including ways how they can co-exist (Battilana, 2006; Maguire et al., 2004; Reay & Hinings, 2009). Our study adds to this literature, by identifying meta-logics as a mechanism reconciling seemingly conflicting logics. Throughout the study, we noticed that conflicting institutional logics can co-exist by referring to a meta-logic that organizes society across specific institutional fields. The idea to overcome divisionism is an important institutional logic to the Rwandan society at large, where a co-existence (Reay & Hinings, 2008) of the indigenous tradition-based logic and the western market-based logic (Alford & Friedman (1991) supports the meta-logic; two seemingly rivaling logics can legitimately prevail side by side.

While the study makes the aforesaid contributions, it also has drawbacks that present opportunity for further research. The tragic recent history of Rwanda with the 1994 genocide of course constitutes an idiosyncratic context, that has few if any counterparts elsewhere. It is hence not obvious that similar phenomena like the nation-based meta-logic can be found elsewhere. Still, it would be interesting to see whether research can identify other cases of conflicting logics being reconciled by reference to a meta-logic that serves as an organizing mechanism of society at large. Such a meta-logic might not have to be nation-based, like in the Rwandan case. It could refer to anything that addresses a society as a whole. Of course, institutional logics are only one perspective of interpreting indigenous knowledge and a business sector such as traditional African craftsmanship. Other lenses, such as identity, postcolonial theory or learning might likewise be fruitful. Additionally, the same approach can also be used to understand the handcraft phenomenon in other aspects such as basketry, mats and woodcraft. Finally, further research can also look at the organizational resilience in handcraft sector using social capital and institutional theory

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