UNIVERSITY OF GHANA

BRICOLAGE AND ENTERPRISE COMPETITIVE PERFORMANCE: THE MODERATING EFFECT OF INNOVATION CAPABILITY

BY

EMMANUEL AMOAH LARBI

10803906

THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MPHIL IN MARKETING DEGREE

JULY, 2022

DECLARATION

I hereby declare that this work is the result of my own research and has never been presented by anyone for any academic award in this or any other university. All references used in the work have been duly acknowledged.

I bear sole responsibility for any shortcomings.

29-07-2022

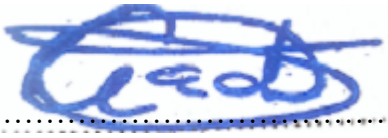
…… …..……..

EMMANUEL AMOAH LARBI DATE

(10803906)

CERTIFICATION

We hereby certify that this thesis was supervised in accordance with procedures laid down by the University of Ghana, Legon.



29-07-2022

.....

DR. GEORGE ACHEAMPONG

DATE

(PRINCIPAL SUPERVISOR)

29-07-2022

.....

DR. KWAME ADOM

DATE

(CO-SUPERVISOR)

DEDICATION

To my dear wife, Mrs. Florence Larbi, and my beloved daughter, Mirabel Amoah Larbi, I dedicate this scholarly work to you for your encouragement, support, and prayers.

To Mr. and Mrs. Amoah Aryeh, Ms. Joyce Adomah, and Charles Somuah, I can't forget your encouragement and assistance, a special thanks to you all.

ACKNOWLEDGEMENT

I am grateful to my supervisor, Dr. George Acheampong, for his tremendous support and commitment to this project through his direction and constructive criticism, as well as for being available whenever I needed him and for being patient with me despite the multiple problems I faced. I'm also grateful to Dr. Kwame Adom, my co-supervisor, for his time and objective advice.

Special thanks to Professor Robert Ebo Hinson, Professor Mahmoud Abdulai Mahmoud, Dr. Sheena Boateng, and Dr. Kobby Mensah for their unwavering support throughout this journey. I further wish to acknowledge the Head of Department, Professor Bedman Nartey, and the entire faculty members of the Department of Marketing and Entrepreneurship - UGBS for valuable advice and inputs in this research project

My profound gratitude to Oliver Aggrey and all my Mphil colleagues, particularly, Sadick, Ernest, Ahmed, Priscilla, and BB for their constructive criticisms during team discussions. Finally, I wish to thank my family, whose encouragement motivated me throughout this project.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

AGFI	Adjusted Goodness-of-Fit Index
AVE	Average Variance Extracted
CARES	Covid-19 Alleviation and Revitalization of Enterprises Support
CAPBuSS	Coronavirus Alleviation Programme Business Support Scheme
CB-SEM	Covariance Based- Structural Equation Model
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CR	Composite Reliability
DIISR	Department of Innovation, Industry, Science and Research
EFA	Exploratory Factor Analysis
EU	European Union
GDP	Gross Domestic Product
GEA	Ghana Enterprise Authority
GFI	Goodness-of-Fit Index
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GNA	Ghana News Agency
GRATIS	Ghana Regional Appropriate Technology Industry Service
GSS	Ghana Statistical Service
IFAD	International Fund for Agriculture Development
IFC	International Finance Corperation
ITTUS	Intermediate Technology Transfer Units
JICA	Japan International Cooperation Agency
KBT	Knowledge Base Theory
KOICA	Korean International Cooperation Agency
KMO	Kaiser-Meyer-Olkin
NBSSI	National Board for Small Scale Industries

NFI	Normed Fit Index
OECD	Organization for Economic Co-operation and Development
OLS	Ordinary Least Square
PLS	Partial Least Square
PLS-SEM	Partial Least Square-Structural Equation Modeling
PCA	Principal Component Analysis
RBV	Resource Base View
REP	Rural Enterprise Project
RNI	Relative Non-centrality Index
RO	Resource Orchestration
RoE	Return on Equity
RMR	Root-Mean-square Residual
SRMR	Standardized Root-Mean-square Residual
RMSEA	Root-Mean-Square-Error of Approximation
SEM	Structural Equation Modeling
SMEs	Small and Medium Enterprises
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development
VCTF	Venture Capital Trust Fund
WBES	World Bank Enterprise Survey

ABSTRACT

This study aimed to determine the impact of bricolage on enterprise competitive performance. The study also sought to determine the impact of innovation capability on enterprise competitive performance, and to further examine the moderation effect of innovation capability on the causal relationship between bricolage and enterprise competitive performance. Accordingly, an explanatory research design was employed and self-administered questionnaires were deployed to collect data. Data was collected from 228 SMEs managers and was further subjected to analysis via STATA 15. The Ordinary Least Square regression method was utilized to test the hypothesis formulated. The study identified that bricolage has a significant and positive influence on enterprise competitive performance and that SMEs that engaged in some form of bricolage positively influence their performance when compared to their peers who do not engage in bricolage. The study also revealed that innovation capability can moderate the relationship between bricolage and enterprise competitive performance and that SMEs that combine high levels of innovation capability with bricolage are better off in performance than SMEs that combine low levels of innovation capability with bricolage. The study provides evidence on the significance of entrepreneurial bricolage and innovation capability in enhancing an enterprise's competitive performance.

CHAPTER ONE
INTRODUCTION

1.0 Chapter overview

This chapter presents an introductory view of the study. The chapter introduces the study's background by interrogating scholarly views regarding the development of bricolage, enterprise performance and innovation capability. Also, the problem and research gaps that the study seeks to address are highlighted in this chapter. The chapter further discusses the objectives and the purpose of the study. In the last section of this chapter, the significance of the study and the chapter disposition are also highlighted.

1.1 Background of the study

Enterprise contribution to national development cannot be undermined due to their contribution to GDP and the economy as a whole (Desouza and Awazu, 2006; Adom, 2015; Acheampong, 2018). The Organization for Economic Co-operation and Development has indicated that small to medium enterprises occupy about 95 percent of enterprises in a nation and employ between 60-70 percent of the total workforce (OECD, 2002). According to Love and Roper (2013), enterprises have been the major source of employment in both developed and developing countries. Love and Roper (2013) further assert that enterprises' role in income distribution, poverty reduction, export growth, entrepreneurship, and industrial growth has made them more significant than ever. Again, Small and Medium Enterprises (SMEs), which forms the majority of established enterprises across the globe, contributes immensely towards global GDP (World Economic Forum, 2021). According to Gilmore et al. (2013), SMEs are defined based on turnover, firm size, number of employees, balance sheets, etc., and this makes it difficult to obtain a universally uniform definition.

In Ghana, Small and Medium Enterprises contribute about 70 percent of Ghana's GDP and provides about 85 percent of employment in the manufacturing sector (Abor and Quarter, 2010). These enterprises have been touted to be the engine of Ghana's economic growth (Abor and Quartey, 2010; Ntiamoah et al., 2014). The Ghana Statistical Service (2017) opined that about 70 percent of Ghana's economy is made up of the informal sector which is largely dominated by small to medium enterprises. According to Awal (2018), Ghana's development and economic growth are largely dependent on how the country nurtures and supports enterprises to enhance their contribution to GDP, job creation, and exports. This assertion augments the significant role of enterprises in Ghana's economy.

Nonetheless, the process of managing and growing these enterprises to be competitive in Ghana is often inhibited by inadequate resources despite their input to economic growth (Acheampong & Esposito, 2014). This phenomenon is evident in many countries, both developing and developed, across the globe. According to Knight (2000) and Hollenstein (2005), small to medium enterprises are typically regarded as resource-constraint when compared to larger enterprises. Small to medium enterprises are usually constraint in finance, equipment, technology, managerial capabilities, and regulatory issues (Acheampong, 2018; Abor and Quartey, 2010). According to Van Burg, Podoynitsyna, Beck, and Lommelen (2012), resource-constraints enterprises are unable to access the required human and capital resources, thereby reducing their ability to be competitive. This assertion augments Singh, Garg, and Deshmukh (2008) claim that resource scarcity constraints some enterprises in meeting the challenges of competitiveness. According to Arnold (2000) competition has forced most enterprises to look for unique alternatives for enhancing performance and achieving sustainable competitiveness. To bridge the gap created by resource constraints, some enterprises adopt an action orientation to problem-solving that is characterized by experimentation and the use of available skills, existing contacts, and resources to develop

solutions (Baker & Nelson, 2005). By doing so, these enterprises become bricoleurs, a term that describes a person or an entity that engages in bricolage, since they make do with whatever is at hand (Baker & Nelson, 2005). Ciborra (2002) defined bricolage as "the combination of resources at hand, and the invention of resources from existing materials to solve a problem".

Bricolage has become increasingly prominent in entrepreneurship research despite its usage in several theoretical fields such as information technology (Ciborra, 1992; Tsilika, 2020), social psychology (Weick, 1993; Tsilika, 2020), and innovation studies (Garud and Kamoe, 2003). According to Baker and Nelson (2005), bricolage tackles the challenge of how firms are able to create 'something from nothing' to achieve growth, and also how firms are able to develop significant economic gains irrespective of resource constraints. Baker and Nelson (2005) have indicated that leveraging on bricolage may produce brilliant results or performance stagnation. Berchetti and Hulsink (2006) also posited that bricolage solutions are not good enough to achieve sustainable firm performance and they become difficult to manage over time. According to Davidson et al. (2008), bricoleurs utilize and combine available limited resources in a way that generates competitive advantages over firms that opt to seek resources when faced with the same resource constraints. These diverging scholarly views require more probing to identify whether bricolage positively or negatively affects enterprise competitive performance in an emerging market context, and also whether the relationship can be strengthened, diminished, or negated by innovation capability.

A firm's innovation capability describes its ability to continuously develop innovations as a response to the changing environment (Olsson, Wadell, Odenrick, and Bergendahl, 2010). According to Yang (2012), enterprises that have developed innovative capabilities are able to identify new ideas that translate into improved processes, products and services. Additionally, firms that possess innovative capabilities 'make do' with available resources to solve pressing

challenges. Similarly, Sher and Yang (2005) observed that innovation capability could positively influence the competitive performance of firms. Consequently, several researchers have used innovative capability as a moderator in enterprise performance-related research studies (Yang, 2012; Dhewanto, Prasetio, Ratnaningtyas, Herliana, & Chaerudin, 2012; Menguc, Auh & Yannopoulos, 2014). Notwithstanding, extant research studies have focused on moderating the relationship between bricolage and firm performance (Senyard, Baker & Steffens, 2010; Senyard, Baker & Steffens, 2015; Wu, Liu, & Zhang, 2017). Thus, an avenue for this research study to explore.

1.2 Problem Statement

In view of the significant role of enterprises towards national development, various governments in Ghana have supported and introduced policies to sustain the operations of enterprises and to further make them more competitive (Ntiamoah, Li & Kwamega, 2016**).** Policies and initiatives such as the Coronavirus Alleviation Programme Business Support Scheme (CAPBuSS) and Ghana Enterprise Agency Grant Fund amongst others have been developed to support the growth of enterprises in Ghana (Ministry of Trade and Industry, 2021). Also, statutes have been enacted to establish trust funds dedicated solely to SME's in Ghana. This includes the Venture Capital Trust Fund (VCTF) that emanated from the Venture Capital Trust Fund ACT 2004 (ACT 680). Notwithstanding, Ntiamoah et al., (2014) have argued that government support is inadequate and these enterprises continue to struggle with resources. These scenarios playing out compels entrepreneurial enterprises to become bricoleurs, but the utmost question is can these enterprises depend on bricolage to survive and achieve competitive performance in today's dynamic business environment?

Empirical evidence about the impact of bricolage on enterprise competitive performance appears to be mixed (Baker & Nelson, 2005; Guo, Zhang & Gao, 2018). According to Baker and Nelson (2005), bricolage can create a permissive climate that retards the growth of a

firm. According to Desa and Basu (2013), bricolage is not always effective and thus enterprises should select resourcing strategies in response to their peculiar environment. According to Senyard et al. (2010), "young enterprises that combine bricolage with higher levels of innovation will attain lower enterprise performance". Senyard et al. (2010) further argued that the positive effect of bricolage on venture performance becomes stronger for enterprises that produce less innovative offerings. Fisher (2012) also indicated that bricolage activities can aid entrepreneurial enterprises to overcome resource constraints, nevertheless, bricolage can also lock the enterprise into a self-reinforcing cycle of activities that limit firm growth. On the flip side, Wyne and Hafeez (2019) identified that there is a significant relationship between bricolage and SMEs performance when positively moderated by the business environment. Their assertion augments Davidson, Baker and Senyard (2017) who revealed that bricolage results in high SMEs performance. In all, the lack of consensus among scholars on the effect of bricolage on enterprise competitive performance provides a clear scope for further research studies in varying contexts. (Senyard et al., 2010; Fisher, 2012). According to Wyne and Hafeez (2019), more research studies should be undertaken in different geographical contexts to provide more evidence on the relationship between bricolage and enterprise performance. This study seeks to respond to these calls.

Again, since the relationship between bricolage and enterprise competitive performance varies, there is the need to moderate this relationship with a variable that can influence the strength and or direction of the relationship. This is consistent with Baron and Kenny's (1986) and Hayes's (2015) claims regarding the use of a moderator variable. According to Baron and Kenny (1986), a moderator variable is desirable when the moderator is uncorrelated to both the predictor and criterion variables. Accordingly, this creates an interaction term that can clearly be interpreted. Furthermore, several research scholars (Senyard, Baker and Steffens, 2010; Senyard, Baker and Steffens, 2015; Wu, Liu, and Zhang, 2017) have posited that future

research should empirically test the strength or the relation between bricolage and firm performance a third variable.

Likewise, Vanevenhoven et al. (2011) posited that further research studies should be undertaken to examine the role of internal and external bricolage in the entrepreneurial process since each type is vital to the success of an enterprise. The extant research studies (Baker and Nelson, 2005; Senyard et al., 2010; Fisher, 2012; Davidson et al., 2017; Wyne and Hafeez 2019) on entrepreneurial bricolage have mostly focused on the external aspect of bricolage (physical, social and institutional) and this is consistent with how Levi-Strauss (1967) described the bricoleur by likening the bricoleur to the 'handyman'. Notwithstanding Levi-Strauss(1967) posited that the bricoleur "possesses a set of odds and ends which may be physical artifacts, skills, or ideas that are accumulated". This implies that internal bricolage is equally significant as external bricolage, and thus reinforcing the call made by Vanevenhoven et al. (2011) for future empirical studies on the respective impact of internal and external bricolage on firm performance. This study seeks to fill this gap by directing its focus to the elements associated with internal bricolage.

In addition, several studies on SMEs in the Ghanaian context have focused on highlighting the challenges of SMEs and their contribution to the growth of the Ghanaian economic (Abor and Quartey, 2010; Farzin, 2017). Nonetheless, extent studies have focused on how SMEs can develop innovative capabilities that enables them to make use of the limited resources at their disposal (Afutu-Kotey and Gough, 2019). This further creates a contextual gap for this study to explore.

1.3 Research purpose

The study seeks to determine the impact of bricolage on the competitive performance of SMEs in Ghana. The study further seeks to examine the moderating effect of innovation capability on the relationship between bricolage and enterprise competitive performance.

1.4 Research Objectives

a) To determine the impact of bricolage on enterprise competitive performance
b) To determine the impact of innovation capability on enterprise competitive performance.
c) To examine the moderating effect of innovation capability on the relationship between bricolage and SMEs competitive performance.

1.5 Research questions

a) What is the effect of bricolage on enterprise competitive performance?
b) What is the effect of innovation capability on enterprise competitive performance?
c) What is the moderating effect of innovation capability on the relationship between bricolage and enterprise competitive performance?

1.6 Significance of the research

The merits of this study come in two strands namely; research and practice.

For research, the study contributes to the theory of entrepreneurial bricolage by extending the understanding of the various types of bricolage and their contribution to enterprise competitive performance. The study also presents novel information on the effect of innovation capability on enterprise performance. Furthermore, the study presents new information on how innovation capability interacts with bricolage and firm performance by examining the moderating effect of the moderator variable on the predictive and criterion

variables. From the foregoing arguments, it is evident that this study greatly adds to the empirical literature discussions on bricolage and firm performance.

In practice, the study provides managers of enterprises with information on the benefits of utilizing internal resources that are readily available to achieve business objectives. The study reassures managers of enterprises in Ghana that they can still thrive in a resource-constraint environment by providing empirical evidence on the concept of bricolage and its effect on enterprise performance. The study will also augment the Government of Ghana's efforts in encouraging SMEs to do more with less by providing more insights about entrepreneurial bricolage

1.7 Chapter disposition

The research study has been structured in six episodes. The first episode or chapter presents a detailed introduction to the research by profiling the background of the study. The chapter also highlights the research problem, the research objectives, the research questions, and the significance of the study.

The second chapter presents the discussions on the context of the research, specifically, SMEs. The study provides information on the classification of enterprises and their contribution to the global and local economies. The chapter also highlights the major challenges encountered by these small to medium enterprises, government support to the sector as well other developmental activities geared towards the growth and survival of these enterprises. The chapter further provides a justification for the study's location.

In chapter three, the theoretical and empirical literature regarding bricolage, enterprise performance, and innovation capability are reviewed. The chapter also presents the study's conceptual framework and hypothesis formulated.

Chapter four describes the study's methodological approaches. The philosophical assumptions on which the study is based, as well as the research paradigm, are all presented in the chapter. In addition, the research design strategy, sample procedure, data collection methods, and instrumentations utilized are further highlighted in the chapter. In the final section of chapter four, the mode of analysis and ethical considerations are discussed.

The fifth chapter presents the data analysis and discussions pertaining to the findings of the study. The final chapter provides a summary of the study's findings, conclusions and recommendations. The study closes out with references and appendices.

1.8 Chapter summary

In this chapter, the research background and the problem statement were highlighted. Also, the chapter provided information on the purpose of the study, the research objectives and questions. In addition, the significance of the research study was explained, and the chapter organisation was also presented in the final part of the chapter.

CHAPTER TWO

CONTEXT OF THE STUDY

2.0 Introduction

This chapter gives an overview of the small to medium enterprises sector. The chapter defines enterprises from a broader perspective and narrows it to the Ghanaian context. The classification of enterprises, the performance of enterprises across various industries, and their contribution to economic development are also discussed. The chapter further examines enterprise support and development activities as well as the challenges encountered by these enterprises.

2.1 Definition of Enterprises

A venture does not have to be on the scale of Microsoft, MTN, or Amazon before it can be referred to as an enterprise (Dayton, 2019). An enterprise can be a small company with a handful of employees. Enterprises are usually for-profit ventures that provide customers with products or services (Dayton, 2019). An enterprise is "any entity engaged in an economic activity irrespective of its legal form" (European Commission, 2016). This implies that family firms, self-employed, associations, partnerships and any other entity engaged in economic activity can be considered as an enterprise. According to Kayanula and Quartey (2000), many authors have tried to provide a "working definition of what kind of businesses can be classified as small, medium, or large enterprises". Similarly, the European Commission posited that the size (in terms of turnover, employees, balance sheet) of an enterprise should not be the only factor that is taken into consideration in determining whether or not an enterprise is an SME since an enterprise may be very small in these terms but may have significant additional resources, that is owned or linked to a larger enterprise (European Commission, 2016). Carson and Gilmore (2000) have cited that SMEs are mostly defined by resources, management structure, and access to international markets

In the UK, SMEs are defined based on turnover, employees, and balance sheets (Gilmore, McAuley, Gallagher, Massiera & Gamble, 2013). Accordingly, the UK government defines a small enterprise as an enterprise with not more than 50 employees and a turnover which is ≤ £5.6 million, and a balance sheet which is ≤ £2.8 million. On the other hand, an enterprise with a turnover of ≤ £22.8 million, and a balance sheet of ≤ £11.4 million, and not more than 250 employees is regarded as a medium enterprise (Gilmore et al., 2013). Likewise, the European Union (EU) specifies that a small enterprise should have not more than 50 employees, a balance sheet of ≤ € 10 million, and a turnover ≤ € 10 million (European Commission, 2016). Also, a medium enterprise should have a turnover of ≤ € 50 million, employees not more than 250, and a balance sheet of ≤ € 43 million. The EU further defined a micro-enterprise as one with a turnover of ≤ € 2 million, a balance sheet of ≤ € 2 million, and employees numbering not more than 10 (European Commission, 2016). In Australia, small enterprises are defined as enterprises employing between 0-19 employees, and medium enterprises as those that employ between 20-199. Similarly, larger enterprises are defined as enterprises with 200 or more employees (DIISR, 2011).

In Ghana, the Ghana Statistical Service (GSS) defined micro-enterprises as any enterprise that employs between 1-5 workers, and small enterprises as enterprises that employ between 6-30 workers, medium scale enterprises as those that employ between 31 and 100 workers, and large enterprises as those with workers exceeding 100 (GSS, 2016). In contrast, the Ghana Enterprise Agency (GEA), formerly known as National Board for Small Scale Industries (NBSSI), defined an enterprise based on the number of employees and fixed assets. According to GEA, "micro and small enterprises are those enterprises employing 29 or fewer workers. Micro enterprises employ between 1-5 people and have fixed assets not exceeding $10,000 excluding land and building. Small enterprises employ between 6 and 29 workers and have fixed assets not exceeding $100,000 excluding land and building". Furthermore, the

Venture Capital Fund Act 2004 (Act 680) of Ghana defines SMEs as "an enterprise, an undertaking, or an economic activity which employs not more than 100 workers and whose total asset does not exceed the cedi equivalent of $ 1 million, excluding land and building". It is evident from this overview that there is no consistency in the definition of enterprises, particularly SMEs.

2.2 Overview of Small and Medium Enterprises in Ghana

The exact number of small to medium enterprises in Ghana cannot be ascertained and this is because many of these SMEs are unregistered, with several SMEs operating in the informal sector. According to Mensah (2004), the Registers General's Department data indicates that about 90% of registered enterprises fall within the SME class. The cause for the lack of reliable data on SMEs operating in Ghana can be attributed to the absence of a unified definition of SMEs, the segregation of some SMEs from the formal economy, and the gargantuan cost associated with industrial research (United Nations Conference on Trade and Development- UNCTAD, 2005).

SMEs operating in Ghana are known for their low involvement and participation in international and local capital markets. Most SMEs in Ghana trade their products and services in the local markets with few SMEs trading across the borders of Ghana. According to Ackah and Vuvor (2011), SMEs over-dependence on the local market can be attributed to huge capital demand for export trade, poor innovation mindset, and inadequate education. Interestingly, most of the SMEs operate with inadequate technology and are labour intensive as well. Ackah and Vuvor (2011) posited that in Ghana, most SMEs are family owned and as a result, there is a limited separation of the owners' financial stance from the business. Accordingly, Mensah (2004) also observed in his study that SMEs in Ghana are mostly owned by individuals with limited formal education and such individuals are the ones authorized to make key business decisions. Likewise, Ackah and Vuvor (2011) also observed

that in Ghana, some SMEs are growth-oriented and innovative whilst others are satisfied remaining small.

According to Kayanula and Quartey (2000), SMEs comprise varied businesses which include; retailing and provisions, restaurant and food vendors, shops and supermarkets, barbering and hairdressing saloons, tailoring and clothing, furniture and carpentry, and assorted items manufacturers. Abor (2007) categorized SMEs into agriculture, manufacturing, construction and mining. Abor (2007) further indicated that other categories include; hotel and hospitality, pharmaceuticals and medical services, information and communication, wholesale and retail trade, and general business services. Accordingly, Agyapong and Attram (2019) grouped SMEs into manufacturing, retail services, food vending, beauty and cosmetics, and petty trading activities. In defining the classification of SMEs, Fasua (2006) categorized small enterprises as follows; packaging of food items, firewood supply, plantain production, meat retailing, restaurant service, poultry, home service. Fasua (2006) further grouped medium enterprises into manufacturing and production, professional services, and education.

2.3 SMEs contribution to economic growth and development

Enterprises, particularly, SMEs have contributed immensely towards national development and growth. Arguably, SMEs can be considered to be the backbone of Ghana's economic development. Literature suggests that the central pillar of most countries, both advanced and developing, is the SMEs sector (Farzin, 2017). According to Willis (2011), SMEs have the advantage of being dynamic in the face of uncertainties, particularly the ever-changing business environment. Willis (2011) posited that SMEs' flexibility empowers them to quickly adjust to the changing business needs of their customers. Likewise, several studies have indicated that economic growth and development are linked with the development and growth of SMEs (Ayyagari, Demirguc-Kunt, & Maksimovic, 2011; Maxwell &Stone, 2004;

Mahmood, 2008). Accordingly, Ayyagari et al. (2011) stated that globally, enterprises with less than 250 employees were the engine of economic growth. Likewise, Okpara (2011) suggested that SMEs are significant to the growth of the macroeconomy, and thus the rise in the number of SMEs on the African continent. The Global Entrepreneurship Monitor (2010) revealed that Ghana ranks highest in established owned businesses in Africa, and thus the impact of SMEs on the Ghanaian economy cannot be underrated.

2.3.1 Job creation

According to Ayyagari et al. (2011), SMEs are the major contributors to total job creation and employment in developing nations, accounting for 71 percent of jobs in transitional economies. SMEs generate new jobs and employ the largest number of people in Ghana, and thus the promotion of these enterprises fosters employment creation and poverty alleviation. Beck, Demirguc-Kunt, and Levine (2005) opined that developing countries, in particular, are witnessing a surge in the number of jobs being created by SMEs. Likewise, Stein, Goland, and Schiff (2010) identified that SMEs account for 45 percent of employment and 33 percent of GDP in developing countries. Similarly, Bouazza (2015), examined SMEs and opined that these enterprises offer an enormous share of jobs in industrialized nations.

In Ghana, SMEs employ a significant percentage of the working populace dwelling in both rural or urban communities. SMEs aid in the utilization of resources by redefining raw materials for other productive purposes through innovation and creativity. According to the Ghana Statistical Service (2016), 92 percent of enterprises in Ghana are SMEs and this justifies the reason why the sector is able to create more job opportunities for the citizenry. Also, SME's service and product offerings cut across both formal and informal sectors, thereby, providing more employment avenues for the Ghanaian populace.

2.3.2 Contribution to the economy - Output of goods and services

Across the globe, SMEs have been recognized as a tool for economic growth. According to Schaper (2002), the rapid economic growth in North America and Asia can be associated with SMEs. Likewise, Abor and Quartey (2010) posited that SMEs play an enormous role in the economies of both developing and developed countries and thus, the argument that SMEs occupy an important strategic stance in the economic growth and development of all nations. Furthermore, Abor and Quartey (2010) stated that SMEs drive innovations and contribute towards the growth of national economies through investment, exports, and entrepreneurial activities.

In Ghana, SMEs turns out to be a substantial contributor to the GDP and national income. According to Abor and Quartey (2010), over 70% of the GDP of Ghana is sourced from small to medium enterprises. SMEs are regarded as a major national revenue stream due to the fact that about 92 percent of registered enterprises in Ghana fall within this category. SMEs provide value-added manufacturing products and services to various market segments and customers (Abor and Quartey, 2010; Gumede, 2000).

2.5.3 Development of skilled and semi-skilled workers

SMEs contribute to the development of skilled and semi-skilled workers through on-the-job training and self-directed learning (Edwards, 2010). According to Edwards (2010), activities such as job rotation, study visits, mentoring programmes, and learning cycles are commonly used by European SMEs, thereby, shaping the skills of these workforces. Accordingly, Edwards (2010) identified that SMEs are inclined towards less formal training activities when compared to larger firms.

In Ghana, the Ghana Enterprise Agency (GEA) collaborates with both local and international agencies to train SMEs. SMEs in Ghana enjoy other business advisory services from the

GEA, thereby boosting their skills level. Japan International Cooperation Agency (JICA), Korean International Cooperation Agency (KOICA), and the German Agency for International Cooperation (GIZ) are recognized partners in SME training in Ghana (GNA, 2O21). More recently, GIZ in collaboration with DHL Ghana organized and trained some selected SMEs on how to utilize e-commerce to increase their clientele base (GNA, 2021). These training and development activities support the skills set and knowledge base of the SMEs workforce.

2.3.4 Provides opportunities for new technology development and adoption

According to Rondi, De Massis and Kotlar (2019), SMEs generate the technical innovation required to move the economy. These SMEs can take on high risks to explore or discover potential opportunities that lead to technological breakthroughs. SMEs occupy an active and significant role in the process of innovation and this is evident by their investment in new areas, the sharing and transfer of technology among themselves (Rondi et al., 2019). Likewise, Bouazza (2015) observed that SMEs' contribution to innovation dynamics has increased more than ever as income grows, niche market demand increases, and technologies evolve.

The Organization for Economic Cooperation and Development (2017) indicated that “SMEs are often the driving force behind the type of radical innovations that are significant for economic growth, and this is because they possess the ability to work outside dominant paradigms, exploit commercial or technological opportunities that have been deserted by larger institutions”. According to Baumol (2002), SMEs aid the commercialization of knowledge that would otherwise not be commercialized in research organizations and universities. For example, SMEs account for about 20% of patents in biotechnology-related fields in Europe (Eurostat, 2014). SMEs also contribute to value creation by adopting

innovation generated elsewhere, and adapting it to different contexts through incremental changes.

2.4 Challenges of SMEs in Ghana

In both emerging and established countries, small to medium-sized firms face a variety of obstacles posed by multifarious and multi-dimensional variables (Stephanou & Rodriguez, 2008). SMEs, particularly those in developing countries, face a variety of challenges, including; lack of credit and working capital, increased competition, sluggish demand, insufficient supply of business inputs such as equipment, raw materials, machines, electricity, fuel, and issues relating to the business environment (Seibel, 1996). Similarly, Baah-Nuakoh (2003) and Kayanula and Quarter (2010) identified some key barriers to SMEs' development and suggested that access to capital and infrastructure challenges were some major challenges of enterprises in Ghana.

2.4.1 Lack of Access to Credit

In small business literature or domains, the presence of a funding gap for SMEs is widely documented (Stephanou & Rodriguez, 2008). Several empirical studies have discovered evidence of a funding deficit for SMEs in both developed and developing nations, according to Beck and Cull (2014). Similarly, the World Bank Enterprise Surveys-WBES (2013) opined that the most significant restriction for SMEs is access to capital. Beck and Cull (2014) utilized cross-country data on SME financing from Sub-Saharan African countries and discovered that more than 25% of African companies consider the cost and availability of credit to be the greatest significant impediments to their survival and growth. In Ghana, empirical research based on a sample of 133 companies indicated that access to financing is the most important barrier to enterprises' future expansion and growth (Aryeetey et al., 1994). Aryeetey et al. (1994) also identified that about 60% of the firms surveyed saw finance as their most crucial difficulty. The researchers further discovered that on the challenges

confronting enterprises, smaller businesses emphasized access to credit as a challenge when compared to larger firms. Similarly, Abor and Quartey (2010) observed that access to capital is the most commonly reported difficulty affecting all enterprises and sectors in Ghana when he surveyed 200 manufacturing firms.

2.4.2 Lack of Access to Qualified Labour Force

The scarcity of skilled workers is also a hindrance to SMEs expansion. In Ghana, only a small number of SMEs are able to provide on-the-job training to their employees. This practice exacerbates the problem associated with the highly skilled workforce. According to Kayanula and Quartey (2000), the scarcity of competent workers may limit specialized options, raise prices, and reduce operational flexibility. According to Aryeetey et al. (1994), 7% of enterprises have trouble hiring competent workers, while only 2% have trouble finding unskilled labour.

2.4.3 Equipment and Technology

In addition, SMEs lack access to relevant technology and knowledge on available manufacturing processes. Consequently, many of them are forced to rely on basic equipment. For 18 percent of the sampled enterprises, outmoded equipment is one of the key hurdles to expansion, according to Aryeetey et al. (1994). According to Yu and Schweisfurth (2020), SMEs innovation activities can be aided through the installation of new technologies into their processes. Likewise, Robertson (1992) asserted that the acquisition of equipment and technology is one of the ways through which firms can grow. Nonetheless, financial and technological constraints quench the desire of SMEs to acquire modern technology and equipment. In Ghana, most SMEs lack the requisite technology and equipment that can make their operations simpler and faster. They resort to old technologies which subsequently reduces their productivity.

2.4.4 Low Level of Domestic Demand

A fundamental difficulty for many SMEs is the lack of demand for their products and services. According to Baah-Nuakoh (2003), after access to capital, the lack of local or domestic demand is another serious constraint affecting small to medium-sized businesses. Mensah (2012), after examining 85 manufacturing firms concluded that low demand for domestic goods is an overriding factor that constrains SMEs to access markets.

Opoku and Akorli (2009) examined the attitude of Ghanaians towards locally produced goods and goods with foreign origins in their study. The researchers observed that the Ghanaian consumer considers the country of origin to be significant than other product attributes. Opoku and Akorli (2009) further identified that Ghanaian consumers views locally produced goods to be of low quality relative to foreign goods. This and many more may account for the low demand for domestic goods, which ultimately affects the operations of SMEs in Ghana.

2.4.5 Competition from the International Markets

As a result of the many alternative items brought into the country, SMEs face strong competition from foreign businesses. Some of these foreign firms access raw materials cheaply in their home nation and are able to cut down costs, thereby, offering low-priced products to the detriment of local firms who do not have access to cheap raw materials. Furthermore, SMEs are hampered in their development into foreign markets due to the lack of international marketing expertise, inadequate quality control, non-standardization of products, and restricted access to international partners (Kayanula and Quartey, 2000).

2.4.6 Trade regulations and Customs

SMEs may confront regulatory and legal challenges. WBES (2013) postulated that SMEs consider the time-consuming processes of establishing and starting a firm as a major barrier. Some SMEs, particularly in underdeveloped nations, find the procedure prohibitively

expensive. In addition, SMEs' access to foreign innovations is hampered by a lack of intellectual rights protection (Kayanula and Quartey, 2000). The payment of taxes is another regulatory duty of the corporate world. Companies are dissatisfied not only with tax rates but also with how the tax system is administered in general (WBES, 2013). SMEs, particularly, industrial enterprises that import inputs for production purposes, or export their outputs confront barriers associated with customs and trade laws. In another vein, the time taking to clear direct imports and exports via customs is another challenge associated with trade regulations and customs (WBES, 2013). In all, these regulatory complexities create challenges for SMEs, which may subsequently affect their operational activities and success.

2.4.7 Infrastructure

Most Ghanaian businesses face severe challenges with electricity, water, and transportation. When businesses apply for power and water, it takes longer for them to get connected. In addition, most businesses have regular power outages and water shortages. Electric outages cause losses for certain businesses, while transportation and electricity are key limitations for others, according to the WBES (2013).

According to World Bank (2010), the most pressing infrastructure challenge of Ghana has to do with roads, power, transport, and water services. Power supply in Ghana is often subject to reliability challenges and this stems from over-aged transmissions and distribution machinery (World Bank, 2010). These infrastructure challenges have been recognized to hamper the growth and survival of SMEs. For example, in the year 2017, the Daily Graphic reported that 885 SMEs lost about GH₵ 250 million during the peak of power outages which lasted for close to four years. (Daily Graphic, 2017)

2.4.8 Managerial Constraints

SMEs may not have enough skilled employees and managers to run their businesses. Although support services are available, Kayanula and Quartey (2000) argued that such support services are expensive and that SMEs may be unable to make use of such expensive services. Likewise, Abor and Quartey (2010) cited managerial constraint as a major challenge for SME growth and expansion. Similarly, Aliyu (2020) examined 58 small-scale businesses in Bauchi state in Nigeria and concluded that inadequate managerial prowess is among the factors that inhibit the growth of SMEs.

2.5 SMEs sector support and development.

The important role of SMEs in economic development has fostered many countries to implement policies that strengthen or promote the growth of these enterprises (UNCTAD, 2005). According to Holten, McCann, Prendergast, and Purdue (2013), enterprises encountering credit limitations are not likely to partake in growth-oriented acts such as exporting, hiring, marketing and investment. Similarly, UNCTAD (2005) emphasized that various market failures prevent domestic enterprises from developing capabilities, thus, their inability to access finance, market, information, and technology. Accordingly, there is the need to develop specific programmes and policy frameworks that can help SMEs to overcome these challenges or failures. According to IFC (2011), government measures geared towards the growth and promotion of SMEs aim at ensuring market efficiency, and the provision of incentives for these enterprises to thrive. Similarly, governments across the globe have initiated and implemented varying programmes aimed at enhancing SME lending and support. These supports come in various forms such as interest rate subsidies, and credit guarantee systems (Stephanou & Rodriguez, 2008).

In Ghana, past and present governments have financed several programmes through banking and non-banking institutions, with the intent to reduce funding constraints of SMEs,

according to Amonoo et al. (2003). Additionally, these assistance programmes are mostly granted to high-performing enterprises with competent workers and promising prospects (Baah-Nuakoh, 2003). The Government of Ghana has undertaken many lending initiatives for SMEs, as Mensah (2004) points out. These lending activities are usually directly from government coffers or outsourced from donor organizations. Examples of such programmes include CAPBuSS and the Ghana CARES Obaatan Pa Programme.

To add up, the Government of Ghana, through the Ministry of Finance created the GH₵ 100 billion Covid-19 Alleviation and Revitalization of Enterprises Support (CARES) programme in 2021, with the aim of mitigating the impact of the Covid-19 pandemic on the livelihoods of Ghanaians, and to ensure that Ghanaians quickly resurrect from the pandemic with a robust and more resilient economy. Similarly, the Corona Virus Alleviation Programme Business Support Scheme (CAPBuSS) was launch by the Government of Ghana with a sum of GH₵ 600 million (MoF, 2021). The scheme was meant to support SMEs and forms part of the GH₵1.2 billion Coronavirus Alleviation Programme approved by the Parliament of Ghana to address the disruption in economic activities caused by the covid-19 pandemic (MoF, 2021). The Ghana Enterprises Agency was subsequently authorized by the government to collaborate with trade associations and some selected commercial and rural banks to roll out a loan scheme with a one-year moratorium and a repayment period of two years. These interventions by the government are geared towards developing the capacities of Other examples of such programmes include the Non-Project Japanese Grants (1987-2000) and the Austrian Import Program (1990).

Aside from the recent government intervention and support to SMEs, various programmes have been initiated and implemented by past governments (Ntiamoah, Li & Kwamega, 2016). Examples of such programmes include the Ghana Regional Appropriate Technology Industry

Service (GRATIS) and the Rural Enterprise Project (REP). GRATIS was declared as a project under the Ministry of Environment, Science, and Technology by the Ghanaian government in 1987. It aided small businesses by creating Intermediate Technology Transfer Units (ITTUS) across the country. By updating and sharing technology, it aimed to improve employment prospects, income levels, and the expansion of small-scale enterprises at the grassroots level (Ntiamoah, Li & Kwamega, 2016). Similarly, the REP was an initiative that attempted to enhance people's living standards in rural areas while also promoting SME development. REP, particularly, focused on improving the income levels of the vulnerable people, particularly women and the disabled in the society. Accordingly, some SMEs received a varying degree of services from the REP initiative, The services were rendered in the form of rural financial services, technology transfer, and apprenticeship training support. Due to its impact in rural areas, the International Fund for Agricultural Development (IFAD) supported the project by collaborating with NBSSI, Rural Banks, GRATIS, District Assemblies, and other organizations to promote the development of SMEs in rural areas.

2.6 Chapter summary

This chapter placed the study in context. The introduction section of the chapter explained the varying meaning of an enterprise as defined by scholarly researchers. The subsequent section provided an overview of the SMEs sector in Ghana. Additionally, the contribution of SMEs to national development and the challenges these firms encounter were highlighted. The final section of the chapter looked at SMEs sector support and development.

CHAPTER THREE
LITERATURE REVIEW

3.0 Introduction

In this chapter, literature pertaining to the key concepts and variables in the study are discussed. According to Boote and Beile (2005), significant research cannot be undertaken without first understanding what other researchers have identified in the field of study. An empirical literature review helps to determine critical research gaps (Boateng, 2016). The empirical literature review for this study entails the review of articles on bricolage, enterprise performance, and innovation capability. The articles were obtained from scholarly databases such as Emerald, Science direct, google scholar, research gate, Taylor and Francis, and Sage Journals. The first section explains the nature and key concepts of bricolage, enterprise performance, and innovation capability. The second section looks at the analytical and some methodological gaps in previous research studies. Likewise, the next section deliberates on the theoretical background by examining the three theories underpinning the study The subsequent section in the chapter presents the conceptual framework, the hypothesis formulated, control variables, and the last section provides a chapter summary.

3.1 Nature and definition of Bricolage

According to Vanevenhoven, Winkel, Malewicki, Dougan and Bronson (2011), a consistent definition of bricolage has been elusive just like many concepts in entrepreneurship and small business research. Vanevenhoven et al.(2011) posit that organizational scholars have defined bricolage "loosely as making do with whatever is at hand". For instance, Weick (1993) and Miner, Bassoff and Mooman (2001) briefly defined bricolage as making do with resources available to perform whatever task one encounters. Similarly, Ciborra (2002) and Cunha (2005) explained bricolage as the combination of resources at hand, and the invention of resources from existing materials to solve unanticipated problems. Likewise, bricolage is

considered as the "recombination and transformation" of resources available in a firm (Fisher, 2012; Senyard et al., 2014). Senyard et.al (2009) further opined that bricolage may be considered as an "action oriented or hands-on approach that refuses to accept limitations on known existing resources and their uses". Baker and Nelson (2005) extended the definition of bricolage to include improvisation. According to Baker and Nelson (2005), bricolage and improvisation have to do with the strategy of making do with resources at hand. Baker and Nelson (2005) argued that improvisation and the act of 'making do' are processes that involve the recombination of resources to provide solutions to operational limitations in organizations. Similarly, bricolage has been defined as the creation of something new through the recombination and transformation of resources existing in a firm (Fisher, 2012; Senyard et al., 2014; Bacq et al., 2015). Also, Baker and Nelson (2005) further indicated that three central elements or themes run through the definition of bricolage. These themes include; 'making do, resources at hand, and the recombination of resources for a new purpose. Accordingly, these elements are discussed in the subsequent section of this study.

3.1.1 Making do

Baker and Nelson (2005) postulated that making do has to do with the active engagement with problems or opportunities rather than thinking over questions such as, can a workable outcome be created from what is available?. 'Making do' assumes three distinct forms in entrepreneurship activities (Baker and Nelson, 2005). The first is creating something from nothing. The second is the use of discarded, disused or unwanted resources for new purposes, and the third involves the engagement of hidden and unexploited local resources which others fail to recognize or value. Accordingly, Baker and Nelson (2005) also asserted that making do has to do with a refusal to enact limitations when they consistently observed in their research study a conscious tendency of firms to insist on trying out solutions, observing and dealing with results instead of accepting the limitations that are commonly associated with

material inputs and standard practices. Das (2008) stipulated that firms that 'make do' halt the combination of resources when the desired arrangement is achieved, that is when the outcomes are typically good enough.

3.1.2 Resources at hand

Stinchfield et al. (2013) advanced that resources at hand include resources owned by a firm or what the firm has searched for within known resource environments. These resources, located within the firm's environment, could be freely available or cheaply acquired (Baker & Nelson, 2005; Stinchfield et al., 2013). Also, the resources at hand can be available in the form of social myths and or fragments such as materials for the construction of new ideologies (Chao, 1999). In addition, the resources at hand can be existing firm models, analogies, conventions and concepts (Campbell, 1997; Lanzara 1998). According to Hatton (1995), resources at hand may be learned skills and coping mechanisms for dealing with challenging situations. Likewise, Phillips and Tracey (2007) described resources at hand to include both material and non-material resources that can be identified within the bricoleur's trove, which are mainly; objects, tools, ideas, knowledge, and skills.

3.1.3 Recombination of resources for a new purpose

According to Bitar and Hafsi (2007), bricoleurs recombine resources at hand and use them in ways that differ from what they were originally designed for. Bitar and Hafsi (2007) argued that bricoleurs recombine resources through tinkering and experimentation of existing resources in an unorthodox manner by defining resources by what they could do versus what they should do. This assertion has been supported by Baker and Nelson (2007) who postulated that defining resources by what they could do creatively disregard their prior use or design specification and this aids the bricoleur to achieve a specified intended outcome. Additionally, the literature suggests that two approaches, namely improvisation and 'just a sketch', can be used to examine how bricoleurs combine and recombine resources at hand.

Improvisation has been described as a creative and intuitive way of combining and recombining resources to adapt to changing market situations as a reaction to crisis (Weick, 1993), and unexpected events or activities (Bechky & Okhuysen, 2011). Accordingly, Duxbury (2014) indicated that improvisation as a practice does not conform to the orthodox style of careful planning or strategizing in a business context but rather, deals with actions that are simultaneously devised and executed. On the other side, Cunha et al.,(2014) described 'just a sketch or more planned' approach as a discrete behaviour relative to improvisation. Their arguments are based on Lanzara (1999) assertion that bricolage involves a "loose coupling between intentions, plans, actions, and outcomes". Notwithstanding, Baker and Nelson (2007) have argued that more planned bricolage is an exception to the norm.

3.2 Domains of Bricolage - Parallel versus Selective Bricolage

Baker and Nelson (2005) indicated that there are two forms of bricolage namely; parallel and selective bricolage.

According to Baker and Nelson parallel bricolage utilizes self-taught skills to create new opportunities outside institutional and regulatory environments with diverse resources usually not intended for use by others. Baker and Nelso (2005) posited that bricoleurs practicing parallel bricolage make something from nothing by making do with physical inputs, labour, skills, customers, and the institutional environment. According to Senyard et al. (2014), firms practicing parallel bricolage often exhibit bricolage in all activities of the firm's operation, and that such firms further engage in bricolage activities even when projects have been completed. Baker and Nelson (2005) further observed that parallel bricolage sometimes appeared essential to sustaining the process of making do with the resources at hand, particularly, when the resources at hand become temporarily inadequate to continue the pursuit of a specific project. Also, Baker and Nelson (2005) indicated that the diversity of tasks in parallel bricolage encourages the accumulation of a broad range of resources,

although, most of the resources are idle at a given point in time. Parallel bricolage enables bricoleurs to make do with resources at hand in large sections by creating a substantial amount of slack resources that are unrelated to the project being undertaken (Baker & Nelson, 2005).

In contrast, selective bricolage can be associated with firms that use parallel bricolage during some period and reject it at a later phase once the business is established. Bricoleurs practicing selective bricolage make do with existing resources in few aspects of the firms' operation, thereby, avoiding constraints imposed by the demands of embedded ties associated with bricolage. According to Senyard et al. (2014), firms practicing selective bricolage generate innovative solutions through bricolage and thereafter, advance those solutions by rejecting the further use of bricolage to adopt a more standard approach or practices. Selective bricoleurs combine resources at hand to provide inputs for the next task in a series of interconnected episodes of bricolage (Baker & Nelson, 2005). Bricoleurs engaged in selective bricolage attempt to keep working on portions of the project at hand even when they lack some skills, tools, or materials. These bricoleurs accumulated resources as they became cheaply available or free.

3.3 Types of Bricolage

According to Vanevenhoven et al. (2011), bricolage takes two distinct forms namely; internal and external. Likewise, Tasavori, Kwong and Pruthi (2018) posited that two types of bricolage have been identified in the entrepreneurship literature and these are internal and external (network) bricolage. Entrepreneurial literature suggests that each type of bricolage serves a distinct function in the entrepreneurial process (Vanevenhoven et al., 2011). Accordingly, Yu et al. (2020) have asserted that existing studies indicate that the different kinds of bricolage may have diverse effects on the efficiency and performance of firms. Literature reveals that there are other categories or types of bricolage which include input

bricolage, institutional bricolage, and market bricolage (Baker and Nelson, 2005; Desa and Basu, 2013; Ronkko et al., 2013). However, this study limits the types of bricolage to those proposed by Vanevenhoven et al. (2011) and Tasavori et al., (2018).

3.3.1 Internal Bricolage

Internal bricolage is often idiosyncratic predicates that are associated with specific individuals (Vanevenhoven et al., 2011). Internal bricolage refers to activities that make use of an individual or a firm's internal predicates. The components of internal bricolage include life, work experiences, skill sets, professional and educational attainments, etc. which constitutes unique bundles of resources that can be claimed as a basis for the legitimacy of the entrepreneur or firm to control other resources and to guide the venture through uncertainties and risks of venture creation (Vanevenhoven et al., 2011). Vanevenhoven et al. (2011) description of internal bricolage can be linked with human capital resources due to the emphasis on professional, educational, credentials and life experiences. According to Vanevenhoven et al. (2011), these internal resources can be used, improvised, manipulated, and deployed in the firm's operation and management processes to achieve increased performance. Vanevenhoven et al. (2011) augmented his assertion by citing Gray and Goregaokar (2010) who revealed in their study how managers who became unemployed in the later part of their careers revised and recombined narratives about previous employment experiences in order to obtain new positions. Vanevenhoven et al. (2011) further asserted that these activities by the managers is akin to the sense from which the notion of bricolage emerged.

Likewise, Baker and Nelson (2005) in defining resources at hand included physical objects and people, and this is consistent with Levi-Strauss (1967) assertion that "the bricoleur possesses a set of odds and ends, which may be physical artifacts, skills or ideas". In that regard, internal bricolage can be akin to human and material resources that are readily

accessible and completely under a firm's control. Additionally, the literature on entrepreneurship reveals a variety of internal resources, including physical assets (Farjoun, 1998), slack capital (Combs & Ketchen, 1999), technological resources (Ray et al., 2004), reputation (Rothaermel & Deeds, 2006), technological competencies or capabilities (De Carolis, 2003), patents (Mowery, Oxley, & Silverman, 1996), and marketing (De Carolis, 2003). According to Armstrong and Shimizuv (2007), different resources are required to establish meaningful relationships with firm performance, and these resources should be idiosyncratic as emphasized by RBV.

3.3.2 External bricolage

According to Vanevenhoven et al. (2011), "external bricolage involves activities that exploit the pool of potential resources available to a firm in its external environment". Vanevenhoven et al. (2011) argued that these resources can be social or physical.

According to Baker, Miner and Eesley (2003), *social resource* is made up of the web of social relations in which an enterprise is surrounded. Social resources are entrenched in one's social ties and social network. Accordingly, resources embedded in social connections occupy a significant role in the interaction between social structure and the firm. Lin (2001) explained social resources as "resources that can be accessed through ties in a network". Additionally, social resource is seen as the network of strong personal relationships developed through trust and cooperation that provides a significant contribution to the survival of an enterprise, according to Lin (2001).

On the other hand, *physical resources* comprise the collection of tangible inputs like machines, raw materials, parts, buildings, financial and land, etc. from the external environment (Ma, 1999; Vanevenhoven et al., 2011). Gaining access to external physical resources enhances a firm's operational activities. For example, a firm may develop a

prototype but may not have the requisite equipment and technology to produce and may have to rely on external support or resources. According to Vanevenhoven et al. (2011), external resources play a critical role in the bricolage process.

3.4 Enterprise performance

The concept of performance is at the heart of strategic management in the literature, and it is frequently applied empirically to investigate various strategy content and process difficulties (Al-Matari, Al-Swidi & Fadzil, 2014). Firm performance has often been analyzed from the perspective of the stakeholder theory (Harrison & Wicks, 2013). According to Taouab and Issor (2019), due to the absence of an operational definition of performance, its definition has been abstract, general, unclearly defined, and diversely interpreted by scholars.

Peterson, Gijsbers and Wilks (2003) indicated that enterprise performance has to do with the ability and capability of an enterprise to efficiently exploit available resources to achieve accomplishments that are consistent with the established objectives of the enterprise. Enterprise performance has been argued to be the result obtained from operational activities that give the characteristics of competitiveness, effectiveness, and efficiency to a firm's structural and procedural components (Taouab & Issor, 2019). Lebans and Euske (2006) asserted that "performance is a set of financial and nonfinancial indicators that offer information on the level of accomplishment of objectives and results". Additionally, Lebans and Euske (2006) argued that firm performance is dynamic, and its understanding may vary depending on the assessor.

3.4.1 Measuring Enterprise performance

Enterprise performance has been investigated extensively in the literature (Watson, Newby & Woodliff, 2000; Rodsutti & Swierczek, 2002; Odoom, Anning-Dorson & Acheampong, 2017). However, the issue of how to measure performance against goals and from what

perspectives remain debatable in literature. According to Jarvis, Kitching, Curran, and Lightfoot (2000), most accounting and organizational theories are stirred by classical economic theory, and modeled on large enterprises generalize the concept of performance without recourse to the varying goals of businesses. Jarvis et al. (2000) further indicated that management control and the separation of ownership associated with large firms consider profit maximization as a performance goal which can be measured by indicators such as Return on Equity (RoE).

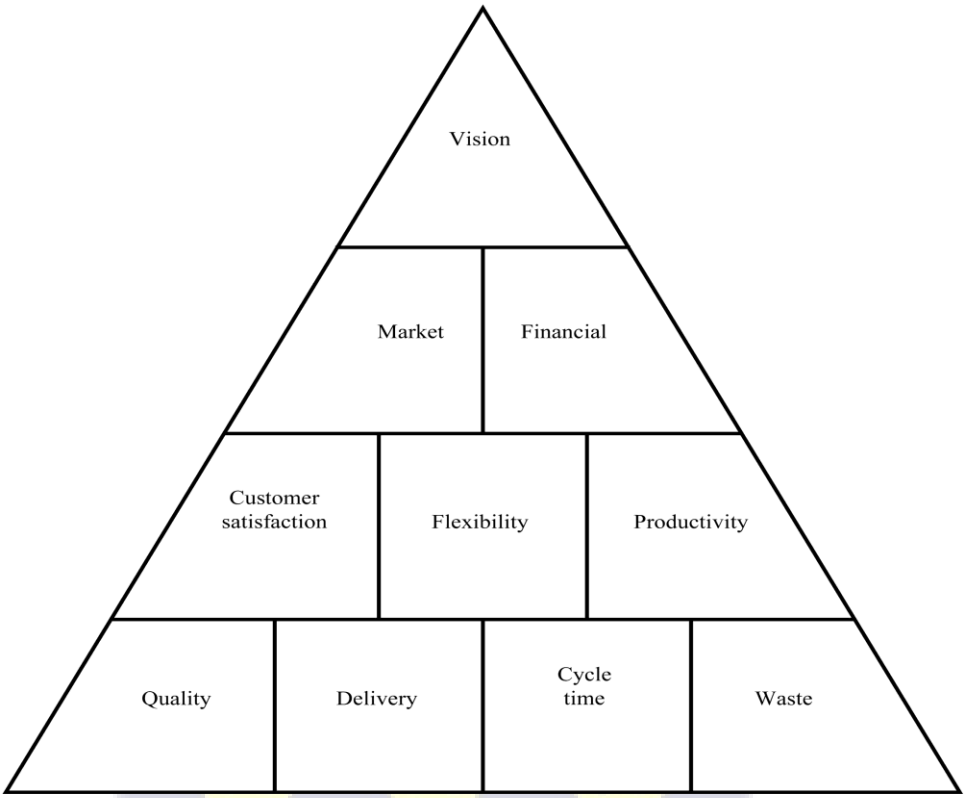
Nevertheless, the situation is distinct in enterprises where management, control, and ownership are usually vested in the owner-manager who dictates the goals of the enterprise as well as how these goals are pursued and measured (Watson et al., 2000). Watson et al. (2000) argued that it is essential to understand the major goals of SMEs before performance can be assessed. Accordingly, the performance assessment of SMEs should consider both financial and non-financial performance metrics (Watson et al., 2000). Ankrah and Mensah (2015) focused their research study on performance measurement systems used by SMEs in Ghana and identified that 15% of SMEs used financial performance metrics whilst 75% utilized other non-financial performance metrics such as customer satisfaction, process management, and strategy. Performance measurement, according to Amaratunga and Baldry (2002), provides the foundation for an organization to identify areas of weakness and strength, as well as progress toward achieving organizational goals. According to Demirbag and Tatoglu, Tekinus and Zaim (2006), measuring enterprise performance is essential for effectively managing any enterprise or firm. Similarly, Demirbag et al., (2006) argued that performance measurement enables an enterprise to identify the level to which organizational resources impact business growth and advancement. Accordingly, the success of an enterprise is largely explained by its performance over a certain period of time. Measuring enterprise performance entails the use of a concise and defined set of measures, financial or non-

financial, to support the decision-making process of an organization by collecting, processing, and analyzing quantified data (Gimbert et al., 2010). Likewise, Simons (2000) posited that performance measures communicate the strategic priorities of an enterprise and the performance drivers crucial to achieving established priorities. Performance measures establish benchmarks that identify areas of weakness, prompt operational improvements, and manages the tension between financial performance and growth opportunities (Simons, 2000). Some scholars (Lynch & Cross, 1992; Neely, Adams & Kennerley, 2002; Kaplan & Norton, 2007) have proposed models that can be used to measure enterprise performance. These models include the balanced scorecard, performance prism, and performance pyramid.

3.4.1.1 The Performance Pyramid Model

Cross and Lynch (1991) proposed the performance pyramid model. The model aims to link the strategy of an enterprise with its operations by translating objectives from the top down and measures from the bottom up (Tangen, 2004). The performance pyramid contains four levels of objective which affects the external and internal effectiveness of the enterprise. The first level entails the translation of corporate vision to individual business units; the second level identifies short term goals of cash flow, profitability, long term targets of growth, and market position; the third level contains everyday operational measures; and the last level indicates the four key performance measures namely quality, delivery, cycle time and waste. Figure 3.1 shows the performance pyramid model.

Figure 3.1 Performance Pyramid Model



Source: Cross and Lynch (1991)

3.4.1.2 The Performance Prism Model

Neely et al. (2002) developed the performance prism model through their research study. According to Neely et al. (2000), performance prism describes a comprehensive measurement system that addresses the main business issues to which enterprises can relate. Performance prism is regarded as an innovative second-generation performance measurement system and management framework that takes into account the wants and needs of the stakeholders of an enterprise and also, what the enterprise requires from its stakeholders in that reciprocal manner. The performance prism shows five facets (stakeholder satisfaction, strategies, processes, capabilities, and stakeholder contribution) that can be used in performance measurement designs. Figure 3.2 shows the performance prism model

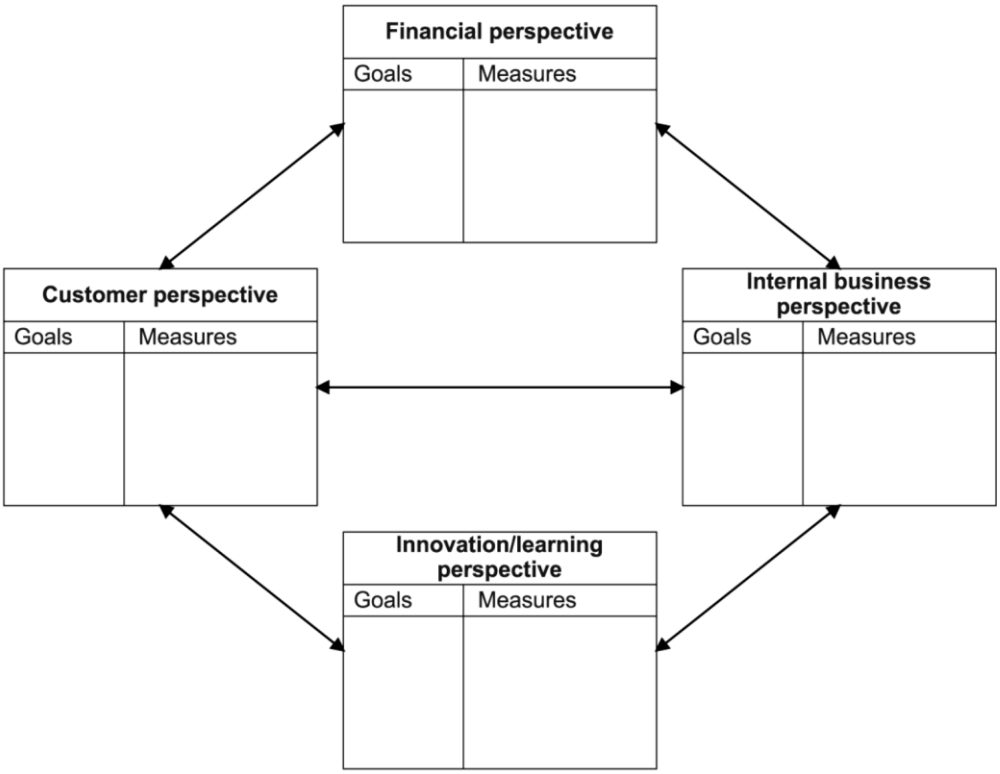
Figure 3.2 Performance Prism Model

Source: Neely et al. (2001)

3.4.1.3 The Balanced Score Card

The balanced scorecard, according to Kaplan and Norton (2001), integrates the organization's mission and strategy into a set of performance indicators that serves as a model for the performance assessment system. The Balanced Scorecard methodology evaluates an organization's performance from four angles: financial, customer, innovation/learning, and internal processes. Each of these perspectives has a set of goals and measurement indicators for measuring outcomes. For example, from the financial perspective, an enterprise pursuing growth goals will have increased market share and Return on Equity as measurement indicators. Figure 3.3 shows the balanced scorecard

Figure 3.3 Balance Score Card



Source: Kaplan and Norton (1992)

3.4.1.4 Accounting and Marked Based Measurements

Al-Matari et al. (2014) categorized enterprise performance measurements into accounting-based measurements and marketing-based measurements. Al- Matari et al. (2014) indicated that accounting-based measurements are good indicators of enterprise profitability despite its criticism of backward-looking and partial estimation of future events in terms of depreciation. Accounting-based performance measures include; Return on Assets, Return on Investments, Return on Equity, and Return on Sales amongst others (Al-Matari et al., 2014). Market-based performance measures are characterized by their forward-looking nature and reflection of shareholder expectations regarding an enterprise's future performance (Shan & McIver Ron, 2011). Market-based measures include; Dividend Yield (Brown & Caylor, 2004), Price Earnings Ratio (Valenti, Luce & Mayfield, 2011), and Tobin-Q (Kang & Kim, 2011), etc.

3.5 Innovation capability

Innovation capability is considered to be a multi-faceted construct. According to Neely et al. (2001), "an organization's innovation capability can be described as its potential to generate innovative outputs". Similarly, Lawson and Samson (2001), explained innovation capability as a "theoretical framework aiming to describe the actions that can be taken to improve the success of innovation activities". Innovation capability has further been described as the factors that influence an organization's capability to manage innovation (Saunila & Ukko, 2013). In defining innovation capability, several scholars have made reference to the following; knowledge transformation, idea generation, learning, and processes (Wang & Ahmed, 2004; Saunila & Ukko, 2013). Accordingly, Iddris (2016) described innovation capability as a "firm's ability to generate innovation through continuous learning, knowledge transformation, creativity, and exploitation of internal and external resources available to the firm". Iddris (2016) further argued that innovation capability is influenced by external and internal factors that are mainly explanatory factors of firms' innovation process and or the outcome of the process.

3.5.1 Dimensions of innovation capability

According to Iddris (2016), 233 dimensions of innovation capability has been identified in literature. That notwithstanding, Bjorkdahl and Borjesson (2012) mentioned the following dimensions in their study; strategy for innovation, idea management, external environment and linkages, culture, prioritization, implementation, systems, and decision rules, organizational context, and learning systems. Iddris (2016) through a systematic literature review calculated the weighted percentage of the various dimensions of innovation capability and provided eight innovation capability dimensions namely; knowledge management, organizational learning, organizational culture, leadership, collaboration, creativity, idea

management, and innovation strategy. This study expounds on the dimensions mentioned by Iddris (2016).

3.5.1.1 Knowledge management

The ability of the firm to leverage its knowledge, according to Kogut and Zander (1992), promotes growth, survival, and innovation. As a result, Bell and Figueiro (2012) asserted that growing innovation aptitude necessitates knowledge acquisition from both internal and external sources. Swink (2006) claims that a firm's ability to leverage external networks and knowledge is critical to its innovative success. Knowledge management systems of firms generate, store, and share knowledge and information that can support enterprise innovation activities. Yusr, Othman, Mokhtar and Don (2014) concluded that a firm's ability to manage knowledge processes significantly enhanced its innovation capability.

3.5.1.2 Organizational learning

Bessant et al. (2012) and Calantone et al. (2002) have cited learning as one of the most important dimensions of innovation capability. The influence of learning in innovation management literature has been widely documented (Assink, 2006). According to Calantone et al. (2002), organizational learning facilitates the implementation of innovation processes in an organization. Commitment to organizational learning and development requires a firm to seek a full understanding of its environments including customers, competitors, suppliers, etc. (Calantone et al., 2002). Furthermore, organizational learning includes regeneration which reflects a firm's ability to learn from earlier experience and to use that experience to create innovations that promote operational success.

3.5.1.3 Organizational culture

Organizational culture has been recognized by several scholars (Cakar and Erturk, 2010; Martins and Terblanche, 2003; Lawson and Samson, 2001) as a driving force for innovation

capability. A firm whose culture promotes employee empowerment, tolerance, effective communication, and a positive attitude can be seen to promote an innovation culture. According to Bjorkdahl and Borjesson (2012), innovation culture can be seen as a firm's attitude towards exploring and implementing ideas that facilitate the firm's innovative thinking and activities. Cakar and Erturk (2010) concluded in their research study that organizational culture positively influences innovation capability through the mediation of employee empowerment and open communication.

3.5.1.4 Leadership

Saunila, Pekkola and Ukkoet (2014) have posited that leadership plays a key role in supporting and stimulating innovation through the creation of a conducive environment. The extent to which a firm creates and sustains innovation behaviour is dependent on the support and direction of the firms' leadership (Bessant et al., 2003). O'Connor et al. (2019) established through their research study that a strategically orchestrated support from a company's leadership to a group of workers who were responsible for making radical innovation led to positive results. Likewise, Samson and Gloet (2004) demonstrated through their research study that strong leadership and mentoring drove innovation capability among manufacturing firms that were investigated. A leadership style that encourages employee work participation and the generation of ideas, augmented with reward systems can significantly contribute to the development of innovation capability (Samson et al., 2017).

3.5.1.5 Collaboration

Swink (2006) reiterated the importance of collaboration in building innovation capability. According to Van Winkelen and Tovstiga (2009), both internal and external collaboration are factors that contribute towards the development of innovation capability. Through collaborations, firms can share information and knowledge among interacting parties. According to Soosay et al. (2008), firms that engage in collaborative initiatives experience

both incremental and radical innovations. Faems et al. (2005) suggested that there is a positive relationship between a firm's innovation performance and inter-organizational collaborations. Accordingly, Huang and Yu (2011) also identified that both competitive and non-competitive collaborations positively influence a firm's innovation performance.

3.5.1.6 Creativity

Hotho and Champion (2011) posited that innovation resides in the creative capability of people. According to Loewenberger (2013), creativity has been identified as a significant dimension of innovation capability. Creativity differs among groups, organizations, and cultures. Creativity has been explained by Amabile (1983) as "a novel and appropriate, useful, correct, or valuable response to the task at hand, and the task is heuristic rather than algorithmic". The creative process is the interrelationship among three elements namely; person, task, and organization (Kao and Liang, 2001). Creativity is most likely to occur when people's skills overlap with their strongest intrinsic interest and deepest passions (Amabile, 1996). Saunila and Ukko (2012) identified in their research study that creativity as an element of innovation capability influences business performance. Saunila and Ukko (2012) further asserted that individual creativity influences an organization's innovation capability.

3.5.1.7 Idea management

According to Bjorkdahl and Borjesson (2012), "a firm's ability to convert ideas into new and improved services, products or ways of doing things is considered as a major contributor to innovation capability". Boeddrich (2004) and Brem and Voigt (2007) posited that for effective idea management activities, an organization should establish strategic guidelines for innovations and further install broad idea-collection points. Idea management encompasses providing feedback and reward for innovative ideas, encouraging employee idea contribution, generating ideas from the bottom-up, and across functional decision-making processes. Idea

management has to be integrated into the overall firm strategy and structure to aid the development of innovation capability (Bjorkdahl and Borjesson, 2012).

3.5.1.8 Innovation strategy

Mckeown (2019) described strategy as what to do, where to go, why, when, and how to go about it in order to achieve desired organizational outcomes. According to Gilbert (1994), "innovation strategy designates to what extent and in what way an organization uses innovation to perform its business strategy and to develop its performance". Lawson and Samson (2001) have argued that without a strategy for innovation capability, innovation success cannot be achieved. Innovation strategy determines the degree to which a firm mobilizes available resources to achieve established organizational goals in the face of uncertain marketing environments. Wang and Ahmed (2004) posited that an innovation strategy facilitates a firm's ability to identify external opportunities that match with internal capabilities to explore and deliver innovative products and services. Börjesson and Elmquist (2012) concluded their research study by stating that innovation capability effort requires clear strategic initiatives to be successful.

3.6 Methodological and analytical gaps in previous research

Extant research studies have examined issues pertaining to bricolage, innovation capability and enterprise competitive performance. Beltagui, Sesis and Stylos (2021) identified in their research study that bricoleurs combined whatever resources are at hand to generate innovations that otherwise may not be realized. Beltagui et al. (2021) further ascertained that bricolage restricts commercial growth such that a need for more structured processes becomes necessary. Beltagui et al. (2021) adopted a qualitative research method, specifically, ethnographic research approach to investigate how and why makerspace members use 3DP to innovate. The researchers collected their data from makerspace members through the combination of participant interactions and observations. Their findings add up to the

literature on bricolage by presenting makerspaces as a route to innovation in resource constraint environments. However, Beltagui et al. (2021) focused on bricolage and innovation. This research study focuses on internal elements of bricolage, enterprise competitive performance, and innovation capability.

Tindiwensi, Abaho, Munene, Muhwezi, and Nkote (2020) examined how "entrepreneurial bricolage empowers smallholder commercial farming from a family business perspective". Tindiwensi et al. (2020) employed multiple case study design to analyze entrepreneurial bricolage among smallholder commercial farming in Uganda. Through content analytical techniques, the researchers identified that entrepreneurial bricolage empowers smallholder commercialization through resource reallocation, improvisation, interconnectedness and self-reinforcing bricolage. Their research findings provided evidence of how smallholder farms may not enact institutional limits and constraints imposed by their resource environments. Although the study undertaken by Tindiwensi et al. (2020) deepened the understanding of bricolage in its entirety, their methodology and study context was distinct. Also, less emphasis was placed on the effect of bricolage on firm performance, thus, providing a clear direction for future research studies.

Wyne and Hafeez (2019) conducted a research study titled ' Do strategic resources influence SME's performance' and identified that business environment influences the relationship between strategic resources and firm performance. Wyne and Hafeez (2019) examined the variables of bricolage, firm performance, and innovation capability in their research study. The researchers collected data from 67 SMEs in the sports industry to examine how bricolage and innovation capability lead to SMEs success when moderated by the business environment. The researchers identified that there is a positive relationship between innovation capability and SMEs performance. Also, Wyne and Hafeez (2019) ascertained that the business environment positively moderates the relationship between bricolage and

SME performance. Just like many bricolage researchers, Wyne and Hafeez (2019) called for more research on the variables understudy to confirm their findings since his study was limited to SMEs in the sports industry. Although the variables in this study are similar to that of Wyne and Hafeez (2019), the level of analysis, the direction of the research, and the issues discussed are distinct. Again, Vanevenhoven et al. (2011) posited that further research studies should examine the role of internal and external bricolage in the entrepreneurial process since each type is vital to the competitive performance of an enterprise. This study responds to this call by focusing on internal bricolage.

Witell, Gebauer, Jaakkola, Hammedi, Patricio, and Perks (2017) ascertained that four critical bricolage capabilities (namely; making do with what is available, addressing resource scarcity, improvising when recombining resources, and networking with external partners) influence service innovation outcomes. Witell et al. (2017) employed empirical illustrations from five organizations to substantiate their conceptual development. The researchers identified that in resource-constrained environments, a new service development process could be counterproductive and a bricolage perspective better explains service innovation in such environments. Witell et al. (2017) suggested that more research should be undertaken in resource-constrained environments in order to advance their propositions regarding the concept of bricolage. The conclusion of their study reemphasizes the need to critically examine the impact of bricolage on enterprise competitive performance in resource-constrained environments.

Senyard et al. (2010) utilized a survey measure to theorize and test the moderating effects of firm strategic change and innovativeness on bricolage and firm performance. Senyard et al. (2010) identified that changes in the core elements of the business and degree of innovation reduce the positive effects of bricolage in young firm performance. Senyard et al. (2010) further suggested that due to the mixed reactions associated with the effect of bricolage on

firm performance, it is crucial to test particular behaviour or actions that might undermine the benefits of bricolage. This study responds to the call by moderating the relationship between bricolage and firm performance with innovation capability.

3.7 Theoretical background

According to Bacharach (1989), a theory is " a system of constructs and propositions that conjointly demonstrates a logical and yet systematic and coherent account of a phenomenon bounded by some assumptions". A theory presents a way of studying concepts or variables concerning a phenomenon in order to investigate the solution to a research problem. The study is informed by the theory of entrepreneurship bricolage. The theory of entrepreneurship bricolage is the fundamental theory through which the concept of bricolage emerged. In addition, the study is further informed by the knowledge base theory of the firm due to its ability to explain the constructs underlying the moderator variable. Lastly, the study is also guided by resource orchestration theory. These three theories bundles to be the theoretical foundation underpinning the research study.

3.7.1 The Theory of Entrepreneurship Bricolage

The theory of entrepreneurship bricolage is an emerging entrepreneurship theory that has come to the fore in recent times. Since its conception, the theory has been applied in different domains and varying phenomena which includes institutional building (Lanzara, 1998), innovation (Garud and Karnoe, 2003), nascent firm growth (Baker et al., 2003), and market creation (Baker and Nelson, 2005). The theory originated from the works of the anthropologist Levis – Strauss in 1966. Levis – Strauss (1966) aimed to distinguish between the actions of an engineer and that of the handyman. Levis – Strauss (1966) argued that while the engineer focused on gathering materials and tools for an intended design, the bricoleur opts to make do with whatever material is at hand. Levis – Strauss (1966) further illustrated that the engineer will require wooden boards, sandpaper, wood screws amongst

others in order to design a table. In contrast, the bricoleur would look around the workshop and create a table from discarded wooden boards or improvise table legs from metal poles to achieve the desired project.

In developing the bricolage construct, Levis-Strauss (1966) cited two phenomena namely 'ideational' and 'material' bricolage. According to Levis-Strauss (1966), 'ideational' bricolage occurs when new myths serving new functions are built from fragments of the past. Levis-Strauss (1966) further argued that 'material' bricolage occurs when available raw materials or tools are used to make do with whatever is at hand in order to perform a large number of diverse tasks.

Furthermore, the theory of entrepreneurial bricolage proposes that when entrepreneurs are confronted with a penurious environment, that is an environment that presents new challenges without corresponding resources, the following options become available; *seeking resources* from domains external to the firm, *avoiding the new challenge* by remaining inert and *enacting bricolage* by recombining resources at hand to the new challenge (Baker and Nelson, 2005). According to Baker and Nelson (2005), the theory of entrepreneurial bricolage is based on the concept of social construction, thus, creating the allowance for specific social and organizational mechanisms to facilitate the creation of something from nothing. The theory further assumes that the resource environment is idiosyncratic to the uses firms make of it (Baker and Nelson, 2005). This explains the distinctiveness in how entrepreneurs or firms interpret their environment and their ability to prosper and survive when given similar resource constraints.

Fisher (2012) postulated that the theory of entrepreneurial bricolage is bounded by some conditionality. According to Fisher (2012), the theory is relevant when entrepreneurs or firms need to confront resource constraint environment while still having access to some resources

that can be used to make do. As a result, Fisher (2012) indicated that the theory is most relevant to firms or entrepreneurs operating in a penurious environment. Accordingly, the theory will best explain the behaviour of enterprises in Ghana towards the achievement of competitive performance. Small and Medium Enterprises in Ghana are characterized by limited resources (Quaye & Mensah, 2019). These enterprises challenge the status quo of their operational limits to make do with whatever they have in order to survive and grow (Quaye & Mensah, 2019). The practices of these enterprises in making do, coupled with their resource and the penurious environment they operate can be associated with the concept of bricolage. Thus, the application of the theory of entrepreneurial bricolage as the fundamental theory underpinning the research study.

3.7.2 Knowledge Base Theory of the firm

According to Grant (1996), "theories of the firm are conceptualizations and models of business enterprises which explain and predict their behaviour and structure". The Knowledge Base Theory (KBT) of the firm can also be referred to as Knowledge-Based View of the firm or Knowledge-Based Perspective of the firm. According to Alavi and Leidner (2001), KBT emerged in the strategic management literature and it stems from the theorization of why firm performances differ. Grover and Davenport (2001) asserted that KBT originates from two standpoints namely the transaction cost economics and the resource-based theory. Additionally, literature suggests that KBT has been embraced to a greater extent as an extension of the firm's Resource-Based View (Balogun & Jenkins, 2003). The understanding of knowledge as a resource, according to Ariely (2003), establishes the theoretical relationship between KBT and RBV. Although RBV recognizes the importance of knowledge in achieving competitive advantage, it sees knowledge as a general resource that does not distinguish between resources and capabilities. Knowledge, according to KBT proponents, is the firm's most strategically important resource because of its unique

quality of being difficult to copy. According to Barney (1991), “a firm’s heterogeneous knowledge base and capabilities determine its sustained competitive advantage and superior performance”.

More recently, KBT has evolved toward a dynamic perspective that encompasses a theoretical configuration that is more fit to the value creation concepts of the firm (Nonaka and Tayoma, 2005). Nonaka and Tayoma (2005) argue that the firm should be viewed as an institution for integrating information and investigating how the processes for integration help to generate flexible response capacities in hypercompetitive markets. Furthermore, proponents of KBT say that tangible resources are integrated to generate products or services that are subject to the firm's know-how and that this know-how is entrenched in workers, organizational culture, routines, policies, systems, and documentation. They further assert that these knowledge assets may produce a long-term sustainable competitive advantage for the firm since knowledge-based resources are difficult to imitate and socially complex to understand (Nonaka et al.,2006). Nonetheless, for this study, knowledge available at any one time is insufficient to provide a foundation for long-term competitive advantage. Strategically, a firm's ability to effectively utilize existing knowledge to produce new information and to take the necessary actions form the basis for obtaining sustainable competitive advantage from knowledge-based assets.

According to Kaplan, Schenkel, Von Krogh and Weber (2001), KBT has five defining constructs which guide its existence as a theory of the firm. Kaplan et al., (2001) posit that as a theory of a firm, KBT should; explain the existence of firms (Grant, 1996), illustrates the effects of knowledge on the boundaries of the firm (Grant, 1996), show the effects of knowledge on the firm’s structure (Grant, 1996), elucidate the effects of knowledge on the behaviour of the firm (Barmey, 1991), and further demonstrate the effects of knowledge on the firm’s performance (Williamson, 1999).

Accordingly, KBT has been applied in this study due to the fact that before an enterprise can effectively combine or reconstruct resources, the enterprise, its systems, leaders, or employees must possess some level of knowledge on the intended outcome. This describes what the proponent of KBT opined, that is, resources are combined to create services or products subject to the enterprise's know-how. Additionally, the literature suggests that the possession of adequate knowledge by employees, managers or an enterprise strengthens its innovation capability (Lin, 2007). The theory is being applied in this study to further describe the possession of adequate knowledge of enterprises in their respective operational fields. Similarly, enterprises that possess adequate knowledge about their operational activities may effectively reconfigure, restructure and recombine available resources (Nonaka and Tayoma (2005).

3.7.3 Resource Orchestration Theory

According to Sirmon et al. (2011), Resource Orchestration (RO) theory is an extension of RBV which adopts a capability-based approach to resource management. The theory evaluates a leader or managers' action to effectively structure, bundle, and leverage available firm resources. The resource orchestration theory defines and evaluates resource processes as follows;

i) Structuring- the management of a firm's resource portfolio

ii) Bundling- the combinations to construct or alter a firms' capabilities

iii) Leveraging- the application of a firm's capabilities to create value.

Resource orchestration theory, according to Carnes et al. (2017), tends to emphasize on the independent roles that resource bundling and a manager's resource management competencies play in a firm's success. Resource orchestration theory, according to Hitt, Ireland, Sirmon, and Trahms (2011), describes and examines the roles of managerial actions

in the process of structuring a firm's resource portfolio, bundling resources to build relevant capabilities, and leveraging these capabilities to realize competitive advantage.

The resource orchestration theory aids this research study by establishing a theoretical basis that determines why bricoleurs may or may not achieve competitive firm performance. Furthermore, the RO theory establishes the theoretical basis for the inclusion of innovation capability as a moderator variable. The Resource Orchestration theory helps the study to theorize how different enterprise managers orchestrate their firm's resources portfolio to consistently develop innovativeness, which eventually leads to the building of innovation capability. Literature suggests that resources must be managed effectively for the purposes of achieving innovation (Sirmon et al., 2011). According to Fleming (2001), "the ultimate source of novelty" emerges from the recombination of existing physical and conceptual materials, which is usually led by owner-managers. This suggests that the recombination and restructuring processes are necessary for enterprises to achieve continuous innovation and innovation capability, through the resource orchestration of enterprise managers.

3.8 Conceptual framework and hypothesis development

The conceptual framework for this study is based on the literature reviewed. The model indicated in figure 3.4 explains the relationship between the dependent and independent variables being affected by a moderating variable. The framework further shows how some variables are controlled. The rest of this section is dedicated to explaining the relationships among the variables in the model and how the hypothesis were formulated.

3.8.1 Bricolage and enterprise competitive performance

In order to compete with larger businesses, SMEs harness organizational resources to improve performance and develop a competitive advantage (McDowell et al.,2018). According to Vanevenhoven et al (2011), internal and external bricolage can help SMEs to

improve business performance. Internal bricolage pertains to internal resources, credentials, and knowledge which an organization or an individual appropriates, assembles, modifies, and deploys to achieve an intended purpose. Although extant studies have focused on examining the relationship between bricolage and firm performance (Hitt, 2003; Baker and Nelson, 2005; Wyne and Hafeez, 2019), some scholarly researchers have suggested that bricolage can positively influence the performance of an enterprise (Davidson, 2017; Wyne and Hafeez, 2019). Hitt (2003) has posited that resource-constrained SMEs can achieve a competitive advantage over resource-rich firms by exploiting physical, social, and institutional inputs that other firms have rejected or ignored. Hence, the following hypothesis is formulated

H1. There is a positive relationship between bricolage and enterprise competitive performance

3.8.2 Innovation capability and enterprise competitive performance

Hult et al. (2004) described a firm's capability to produce innovations as a crucial factor for its growth and success. According to Calantone et al. (2002), innovativeness is an important determinant of a firm's performance. Innovation capability allows a firm to integrate, build, and reconfigure internal and external competencies that promote growth and performance (Hult et al., 2004). Kim and Maubourgne (2005) and Calentone et al. (2002) have indicated that innovation plays an important role in determining the growth and competitiveness of any organization. Firms that innovate achieve higher levels of productivity and economic growth than those that do not innovate (Cainelli et al., 2004). In addition, Bowen et al. (2010) asserted that innovations are essential conditions for increasing a firm's value and performance. Innovation-oriented firms have better opportunities to succeed financially when compared with non-innovative firms (Saunila, 2013). Bowel et al., (2010) suggested that innovation capability can be linked to firm performance. Therefore, the following hypothesis is formulated;

H2. Innovation capability will have a positive influence on enterprise competitive performance

3.8.3 The moderation role of Innovation Capability

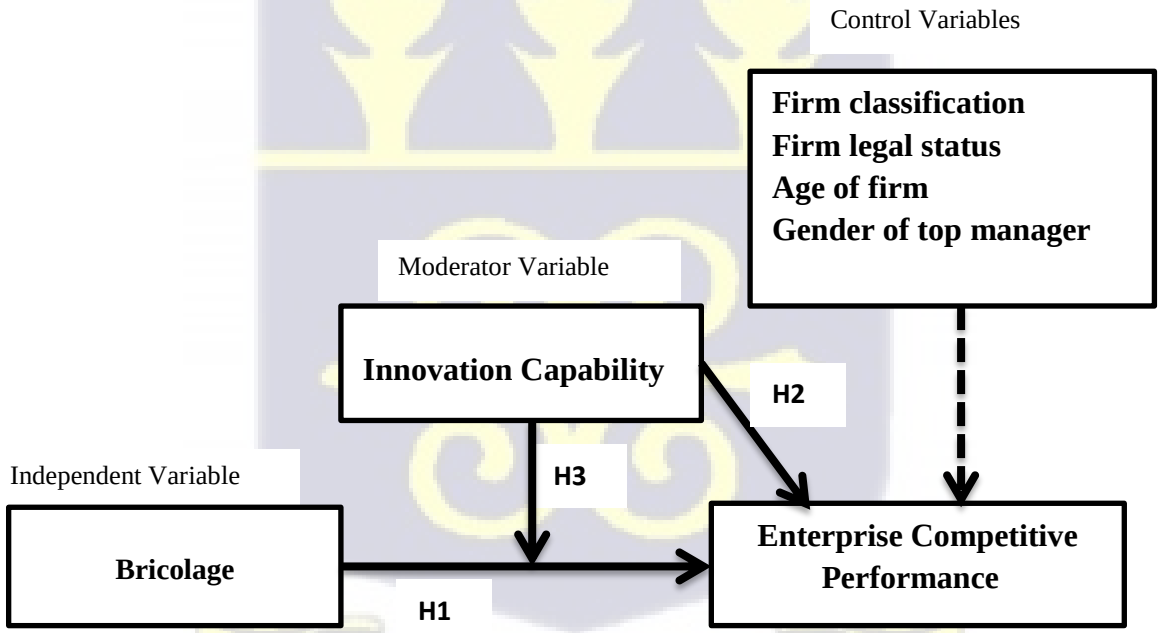
In today's high turbulent business environments, firms innovate with limited resources. Enterprises that considers resources limitations as an enabler rather than an inhibitor possess distinct innovative capabilities that reflect their ability to experiment through continuous learning. Prior literature indicates that bricoleurs are more likely to generate innovative solutions because of their quest to tinker and experiment with existing resources in novel ways. Bricoleurs break the rules to create unique solutions through permissive and flexible approaches to design. Through these actions, bricoleurs generate innovations via continuous learning and knowledge transformation. Saunila and Ukko (2011) described the factors influencing SMEs capability to manage innovations as innovation capability. Accordingly, Iddris (2016) have asserted that innovation capability is influenced by external and internal factors that are mainly explanatory factors of firms' innovation process and or the outcome of the process. Bicen and Johnson (2015) indicated in their research findings that firms that regard resource limitations as an innovation driver to creatively reconfigure and reallocate their limited resources possess a unique capability that can be termed as innovation capability.

Bicen and Johnson (2015) suggested that "innovation capability is a distinct capability which encourages bricolage behaviour". Bicen and Johnson (2015) backed their assertion with evidence suggesting that firms with a "positive relationship between low resource endowment and radical innovation are characterized by lean innovation capability and bricolage". Bicen and Johnson (2015) further argued that there is a virtuous cycle of innovation when resource-limited innovations are managed through the development of innovation capability. Likewise, Baker and Nelson (2005) posited that "bricolage capabilities

could help companies exploit and explore resources that may be expensive to pursue, thereby, bricolage encourages innovation in the context of resource scarcity". In furtherance, the relationship between innovation capabilities and firm performance has been investigated by scholarly researchers (Sahoo, 2019; Rajapathirana and Hui, 2018; Yang 2012) from varying dimensions and perspectives. Sahoo (2019) posited that Quality Management through a firm's innovation capability is indirectly associated with a firm's business performance. Rajapathirana and Hui (2018) confirmed through their empirical study that "the relationship between innovation capabilities, innovation efforts, and firm performance are significant". Based on the foregoing discussions, the following hypothesis is formulated.

H3. Innovation capability moderates the relationship between bricolage and enterprise competitive performance

Figure 3.4 Conceptual Model



Source: Author's construct

3.9 Control variables

In empirical research studies, control variables constitute a key element of the research since they help to avoid type 1 error, that is the false positives. According to Atinc, Simmering, and Kroll (2012), control variables can also be termed as covariates, confounding variables, nuisance variables, or controls. According to Stone- Romero (2009), confounding variables often covary with the hypothesized variables, thereby, limiting the causal inference and explanatory power of a model. Accordingly, it is significant to eliminate threats that can affect the extent to which the focal independent variables behave or influence the dependent variable. The introduction of control variables helps to control for extraneous variables that are theoretically important but are not a study's focal variable. Atinc et al., (2012) opined that researchers who do not pay attention to controls could have issues with the validity of inferences made about cause and effects.

This study identified and controlled some characteristics of firms that is likely to influence the causal effects. The variables include; firm classification, legal status, age of the firm, and the gender of the enterprise's top manager.

3.10 Chapter summary

This chapter reviewed literature and presented a thorough discussion on the concepts and theories associated with the study. Additionally, constructs underpinning the design of the study's conceptual framework were discussed. The chapter began with a review of literature on bricolage, innovation capability, and enterprise performance. Subsequently, the second section presented the methodical and analytical gaps to justify the need for the research study. The final part of the chapter presented the theories, the conceptual framework, the hypothesis formulated, and the control variables.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.0 Introduction

This chapter presents the philosophical and methodological issues underpinning the research study. The chapter further discusses the techniques and methods utilized to collect and analyze data for the purposes of addressing the objectives of the study. The chapter embodies the philosophical beliefs, various research paradigms, research design and strategy, data analysis methods, and ethical considerations.

4.1 Philosophical beliefs

According to Killam (2013), every research is entrenched in some sort of belief that pertains to values, assumptions, and concepts. These beliefs encompass the ontological, axiological, epistemological, and methodological assumptions of the researcher (Killam, 2013). Ponterrotto (2005) asserted that the philosophical beliefs and assumptions constitute "the conceptual roots undergirding the quest for knowledge". Likewise, Killam (2013) indicated that philosophical beliefs influence the organization of research, data collection and analysis. Therefore, it is important to examine the basic philosophical beliefs underpinning this research study.

4.1.1 Axiological Assumptions

In philosophy, axiology deals with the nature of ethical behaviour, and has been defined by the Merriam-Webster Dictionary (2013) as "the study of the nature, types, and criteria of values and value judgments especially in ethics". According to Killam (2013), axiology entails the ethical beliefs of the researcher, which enables the researcher to strike a balance between values and other ethical issues during a research undertaking.

4.1.2 Ontological Assumptions

Ontology encompasses the beliefs of the researcher concerning the "nature of reality" (Killam, 2013). Ontology, in research, defines the researcher's claims and assumptions about the nature of reality and what constitutes reality. According to Killam (2013), ontology deals with the "study of our existence and the nature of being". Accordingly, Killam (2013) stated that ontological questions include; what exists? what is true? and how can things be sorted out?. According to Killam (2013), ontology depicts three contrasting perceptions of reality, namely, realism, relativism, and critical realism.

4.1.2.1 Realism

Realism as an ontological belief sees the world as an organized and orderly abode managed by natural laws. The realist asserts that social phenomena, although an external reality, goes beyond the influence and reach of the social actors themselves. Similarly, Saunders et al. (2009) opined that the elements of social configuration, that is the rules, structures and regulations, constitute a reality that goes beyond the control of the social actors involved. Saunders et al. (2009) further argued that "realism presents an objective assessment of social phenomena since it decreases the bias and context-dependence of social research".

4.1.2.2 Relativism

Relativism deals with subjective epistemology in the constructivist research paradigm. According to Killam (2013), followers of relativism opine that truth dynamics are based on individual experiences and context. Relativists view the world as a creation of internal constructions premised on the shared experiences of the social actors involved (Saunders et al., 2009). For relativists, there should be active participation of social actors in the construction of social reality. Relativists argue that "context shapes the meaning attached to the truth, and that context cannot be separated from reality" (Saunders et al., 2009)

4.1.2.3 Critical realism

Critical realism is the "ontological belief that reality exists". Notwithstanding, critical realists opine that reality is not discovered perfectly due to the inconsistent approaches associated with discovering the truth (Lincoln, Lynham & Guba, 2011). Likewise, Killam (2013) opined that critical realists assert that "a plethora of means exist to assess reality, and that a perfect reality will not be achieved".

4.1.3 Epistemological Assumptions

Epistemology, according to Killam (2013), is "the study of how knowledge is discovered and the relationship between the researcher and the knowledge as it is discovered". According to Guba and Lincoln (1994), a researcher's ontological assumptions determine whether the relationship between knowledge and research is subjective or objective. A researcher's epistemology shall be objective if the researcher has the ontological conviction that reality exists and can be explored. That is, the researcher and the study's subject have no influence over each other and are thus separate entities. According to Killam (2013), objective epistemology requires the researcher to be separate from the subject of the study. This assures neutrality and avoids bias among researchers. In epistemology, researchers ask questions such as; "how is knowledge acquired?, and how do we know what we know" Killam (2013).

4.1.4 Methodological Assumptions

Killam (2013) explained methodology as "the systematic way researchers go about in discovering knowledge". A Methodology has been explained by the Merriam-Webster (2013) dictionary as " a set of methods, ideas, or rules that are important in a science or art: a specific procedure or group of procedures". Accordingly, the processes and procedures by which researchers methodically uncover knowledge can be referred to as methodology in research (Killam, 2010). Likewise, a methodology is the systematic analysis of a set of procedures and values relevant to a discipline of knowledge. The research paradigm,

theoretical model, and research methodologies, whether quantitative or qualitative, are usually included in the methodology. According to Killam (2013), a methodology is driven by the researcher's ontological and epistemological beliefs and this creates varying degrees of objectivity in how the researcher obtains knowledge.

4.2 Research Paradigm

Paradigms, according to Shannon-Baker (2016), can be explained as "a set of beliefs, values, and techniques that is shared by members of a scientific community, and which acts as a guide or map, dictating the kinds of problems researchers should address and the types of explanations that are acceptable to them". Research paradigms, according to Saunders et al. (2009), represent the researcher's opinions and viewpoints about the universe and reality. Furthermore, research paradigms influence the elements of knowledge in a certain field of study. Research paradigms, according to Shannon-Baker (2016), provide academics with criteria for monitoring research decisions and assist rookie researchers in locating their judgments within their principles. According to Guba and Lincoln (1994), a research paradigm is a set of core beliefs that governs researchers in their studies and the inquiry process. Research paradigms serve as the cornerstone for researchers undertakings, governing the researcher's ontological, methodological, epistemological, and axiological positions. Although research paradigms are mostly hidden in research, these paradigms greatly influence the practice of research, thus, there is the need for it to be identified (Creswell, 2014). Accordingly, Chan (2015) and Kim (2003) suggested that the four major paradigms used in social science research include positivism, constructivism, pragmatism and post-positivism. These paradigms are discussed in the subsequent sections

4.2.1 Positivism

According to Johnson and Duberly (2000), the positivism paradigm forms the base of contemporary management research. Positivism, according to Saunders et al. (2009), holds

that “reality exists and that it can be directly measured through objective means such as experiments rather than a subjective inference based on sensation, reflection, or intuition”. Researchers who embrace positivism emphasize the need to create distance between what is being researched and the researcher, and to further rely on strict processes and methods for data collection and analysis (Ponterotto, 2005).

Creswell (2009) emphasized that positivists utilize a quantitative methodology to explain a phenomenon by analyzing empirical data collected through observations. The quantitative approach allows data to be collected about a visible social reality, making it easier to spot abnormalities and causal relationships between variables. Proponents of positivism believe that knowledge is gained through a value-free process of systematic fact gathering and logical inference. As a result, they support the deductive development of testable hypotheses as a means of explaining social phenomena (Macionis & Gerber 2010). “Positivists are mainly interested in examining social behaviour through the development of numeric values of observation,” according to Creswell (2009).

4.2.2 Constructivism

According to Honebein (1996), the constructivism philosophical paradigm posits that people construct their own understanding and knowledge of the universe by experiencing and pondering on things. Much of what people learn is developed or constructed through experience (Cashman et al., 2008; Hein, 1991). The constructivist worldview is fundamentally opposed to positivism. Naturalistic or interpretivism are other terms for constructivism. Constructivism's axiology is based on numerous ethical codes, such as respect, beneficence, and justice. Constructivist upholds the principles of trustworthiness, justice, authenticity, rapport, reflexivity and reciprocity (Methens, 2010). Accordingly, constructivists uphold the assertion of participants' and their experiences to be reliable and repeatable.

According to Lincoln et al. (2011), the ontology of constructivism is premised on relativism but dependent on the "mental construction of realities that is influenced by experiences and social interactions". Relativists assert that reality cannot exist without context (Lincoln et al. 2011). Accordingly, Ponterotto (2005) indicated that "reality is time and context-specific, and how one interprets the world around them based on their particular experiences determines how one perceives reality". According to Saunders and Lewis (2012), constructivists believe that people's interpretation of their social interactions shapes how they view the world and their response to issues in the world. Constructivism is underpinned by subjective epistemology, where researchers emphasize interactions that yield deeper insights about reality.

4.2.3 Pragmatism

Pragmatism rejects the assumption that the mind's role is to describe, depict, or mirror reality, arguing that we can interpret the universe and examine occurrences in a variety of ways. Pragmatists believe that the mind is a tool for prediction, action, and problem resolution. As a result, pragmatism focuses on the research problem and the various methods or procedures for collecting and analyzing data in order to get a deeper knowledge and understanding of the phenomena (Kelemen & Rumens, 2008).

Creswell (2009) indicated that pragmatism allows for a wide range of worldviews and assumptions, which frequently leads to multiple data collection approaches, as evidenced by mixed-method studies. The most important aspect of pragmatism is to find the best approaches, whose combination delivers useful results that help to better understand and solve the research question at hand (Hoshmand, 2003). As a result, rather than adhering to a single approach, pragmatists consider a variety of methods for gathering and analyzing data. Pragmatists utilize both qualitative and quantitative methods for their research undertakings (Silverman, 1998).

4.2.4 Post–positivism

According to Creswell (2014), the post-positivism paradigm is more prevalent in quantitative than qualitative research. Researchers must adhere to the ethical ideals of respect, fairness, and beneficence which are the basic axiology of post-positivism (Mettens, 2010). According to Mettens (2010), while using the post-positivism paradigm, the optimal technique for answering a question is used. Intellectual honesty, prejudice suppression, and reliable data gathering and analysis are all pillars of post-positivism. According to Killam (2013), post-positivism views random experiments as ethical because they help to indicate cause and effect.

The ontology of post-positivism is critical realism. The post-positivist belief is that reality exists, however, it cannot be perfectly discovered as a result of the nature of the phenomena itself and the manner of discovery (Guba & Lincoln, 1994). Post positivism epistemology is premised on the assumption that objective reality exists in the world, and that it can carefully be measured and observed (Guba & Lincoln, 1994). According to Ponterotto (2005), post-positivist argue that external reality exists and that such reality cannot be perfectly understood and measured due to human's limited ability on issues of rationality. Therefore, post-positivist aim to provide a near accurate description of reality to ascertain the causes, effects, and outcomes of a phenomenon (Ponterotto, 2005). Creswell (2014) asserted that post-positivist usually research problems associated with causal relationships and mostly adopt quantitative research other than qualitative research. Table 4.1 summarizes prominent research paradigms and their philosophical assumptions

Table 4.1 Summary of Research Paradigms

Research Paradigm	**Positivism**	**Constructivism**	**Pragmatism**	**Postpositivism**
Axiology (has to do with the main ethical values)	"Integrity, honesty, and trust "	Balance viewpoints, develop community rapport, raising awareness,	Awareness, Justice, and power	Respect, justice and beneficence.
Ontology (it captures the nature of reality)	"Belief in realism. One reality exist and it can be discovered."	"Relativism. Realities must be co-constructed"	"Not dedicated to any single system of reality and philosophy."	Critical Realism: "Truth exists but it cannot be accurately detected".
Epistemology "focuses on knowledge and also the relationship that exist between the knower and the known"	"Dualist and objective. Independent entities (Researcher and the researched) Results are true, time and context-free and generalizations"	"Interactive and subjective with co-created findings. Understanding, social historical construction."	"Problem-oriented Pluralistic. Consequences of action."	"Cause and effect laws" "Modified dualist and objective – results are likely true" "Determination and reductionism"
Methodology (deals with the approach used for systematic inquiry)	"Quantitative; verifies research questions and hypotheses." Experiments that lead to context-free results.	"Qualitative; Interpretative Logical with well described context." Ethnographies and theory generation.	"Mixed-method. Real-world practice oriented"	"Quantitative; Modified experimental/survey. Empirical and theory observation"
Examples of Studies	Odoom 2016; Braimah 2015; Acheampong et al., 2017)	Jayasinghe & Ritson, 2012	Tashakkori and Teddlie (2010)	Neuman, 2014; Mertens, 2010

Source: Creswell (2014), Killam (2013)

4.3 Philosophical Stance of the Study

What influences the researcher's choice of a paradigm in every research study is mostly grounded in the ontological belief of the researcher. The researcher of this study believes that the relationship between bricolage and enterprise competitive performance is a reality that can objectively be quantified. As a result, the study's beliefs are based on positivist realism ontology. The study establishes an objective relationship between the researcher and the phenomenon under investigation, which guides how knowledge about the phenomenon is discovered. Accordingly, Odoom (2016), Braimah (2014), and Acheampong et al. (2007) emphasized the use of hypothesis testing and experiments to achieve deductive inference and verification. Also, since the research study embraces a positivism stance, the quantitative research approach has been adopted.

4.4 Research Approach

The strategy of inquiry is another name for the research approach. The research approach lays out explicit guidelines for data collection, processing, and interpretation (Denzin & Lincoln, 2000). According to the literature, there are three main research methodologies that researchers can use (Yin, 2009). Accordingly, quantitative, qualitative, and mixed methodologies approaches are considered as the three prominent research approaches (Yin, 2009; Denzin & Lincoln, 2011; Tillal et al., 2002; Creswell, 2014). Table 4.2 summarizes research approaches, their philosophical assumptions, analysis procedures, and inquiry tactics.

Table 4.2 Research approaches

	Qualitative	**Quantitative**	**Mixed Methods**
Philosophical assumptions	"Constructivist or transformative knowledge claims"	"Positivist/post-positivist knowledge claims"	"Pragmatic knowledge claims"
Strategies of inquiry and data collection	"Phenomenology, grounded theory, ethnography, case study and narrative Open ended questions, emerging approaches, text or image data"	"Survey and experiment design Close-ended questions, predetermined approaches and numeric data"	"Sequential, concurrent and transformative Both open and close-ended questions, merging and pre-determined approaches, text, image or numeric data"
Methods of analysis and interpretations	"Inductive analysis to derive concepts, themes and models Less emphasis on statistical analysis - thematic analysis"	"Deductive analysis to understand relationships among constructs Emphasis on statistical analysis - descriptive and inferential statistics"	"Both inductive and deductive analysis"

Source; Creswell (2013)

4.4.1 Quantitative Approach

According to Creswel (2012), natural and social scientists view quantitative research as a "systematic, procedural, and the empirical investigation of an observable phenomenon through statistical, mathematical, and computational techniques. Likewise, Saunders et al. (2009) explained quantitative methods as the means in which data gathering and analysis

techniques are employed to develop models, hypotheses, and theories that pertain to a phenomenon". Similarly, Creswell and Clark (2007) asserted that "quantitative research is a means for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured typically on instruments, so that numbered data can be analyzed using statistical procedures".

Creswell (2009) asserted that quantitative research "employs strategies of inquiry such as experimental and survey to collect data on predetermined instruments that yield statistical data". Quantitative research, therefore, "seeks explanations and predictions to establish, confirm or validate relationships and to develop generalizations that contribute to theory" (Leedy & Ormrod, 2001). Researchers apply a quantitative research approach when they aim to collect and analyze numerical data to explain a phenomenon, and to generalize the findings across subjects or groups of people. Accordingly, Odoom (2012) asserted that quantitative researchers analyses data to yield unbiased results which can be generalized to some larger population.

4.4.2 Qualitative Approach

Van Maamen (1983) explained qualitative research as "an array of interpretive techniques which seek to describe, decode, translate and otherwise come to terms with the meaning, not the frequency, of a certain more or less naturally occurring phenomenon in the social world". According to Yin (2009), qualitative research is undertaken to gain deeper insights and understanding of a complex occurrence or phenomenon. Similarly, Bryman (2006) described qualitative research as "an approach that studies the social world and seeks to describe and analyze the culture and behaviour of humans and their groups, from the point of view of those being studied".

Similarly, qualitative research, according to McGiven (2009), is concerned with obtaining detailed description, comprehension, and insight rather than measurement. In qualitative research, in-depth interviews or focus group discussions are frequently used to elicit information on participants' attitudes, behaviors, and experiences. Furthermore, data gathering and analysis based on large samples are not emphasized in qualitative research (Yin, 2009). The qualitative approach focuses on the research subject so as to obtain more information through interviews and other procedures. This allows researchers to decipher unusual information buried in the experiences of study participants.

4.4.3 Mixed Method Approach

According to Creswell (2014), " the mixed methods research approach to inquiry involves collecting both quantitative and qualitative data, integrating the two forms of data and using distinct designs that may involve philosophical assumptions and theoretical frameworks". This approach is appropriate in situations where the combined effect of both "qualitative and quantitative approaches provides a more complete understanding of a research problem than a single approach will do". According to Creswell and Clark (2007), and Boateng (2014), the mixed-method research has been classified in various ways such as triangulation (concurrent use of both quantitative and qualitative methods); embedded (one approach is supplementary to the other); explanatory (sequential use with quantitative proceeding qualitative); and exploratory (sequential use in the reverse order).

The study's positivist paradigm mandates the use of a quantitative technique. According to Creswell (2009), the quantitative research approach "employs strategies of inquiry such as experimental and survey to collect data on predetermined instruments that yield statistical data". Additionally, Leedy and Ormrod (2005) indicated that quantitative research "seeks explanations and predictions to establish, confirm or validate relationships and to develop generalizations that contribute to theory". The goal of this study is to collect and analyze

numerical data on bricolage, innovation capability, and enterprise performance, as well as to extrapolate the results from the sample to the entire population. In addition, the study used a quantitative technique because it allows the researcher to collect data from a larger number of people for analysis. Furthermore, Choy (2014) claimed that using a quantitative technique allows for a faster research study because responses can be collected and analyzed in less time than using a qualitative or mixed-method approach.

4.5 Research Design and Strategy

Malhotra and Birks (2007) explained research design as the blueprint or framework for conducting a research project. The research design aid the researcher in selecting the appropriate data collection strategy. Accordingly, Zikmund et al. (2003) indicated that the research design becomes a guide that describes the strategy of inquiry appropriate for particular research. Similarly, Zikmund, Babin and Griffin (2012) described research design as "a detailed blueprint that guides the implementation of a research study towards the realization of its objectives". Zikmund et al. (2012) description of research design also stresses the methods and techniques for assembling and analyzing data. Arguably, one can assert that research design is mainly about determining the appropriate research approach and or methodology to obtain data. Malhotra (1996) classified the research design into two broad categories, namely, exploratory and conclusive research. Malhotra (1996) asserted that "the objective of exploratory is to provide insights and understanding of the problem confronting the researcher, whereas conclusive research is designed to assist the decision-maker in determining, evaluating and selecting the best course of action to take in a given situation". Since the study employs the quantitative approach to research, two main research designs become available, that is, the experimental design and the survey design (Creswell, 2014).

4.5.1 Experimental design

An experimental approach is frequently used when the researcher has control over the samples, according to Saunders et al. (2011). As a result, McGiven (2006) said that the experimental technique is especially important when determining the existence of causal linkages, abandoning the effect of other variables, and constructing a chronological sequence of events. Experiment strategy is commonly found in laboratories and is used to address "how" and "why" questions in research (McGiven, 2006). Furthermore, according to Creswell (2014), the experimental design technique compares the scores of distinct experimental groups to determine the effect of certain activities on an outcome. This comprises both actual experiments in which individuals are assigned to treatment conditions at random and quasi-experiments in which the assignments are non-randomized (Creswell, 2014). Despite the concerns about its power in social science research, experimental procedures are very enticing to the natural sciences.

4.5.1 Survey Design

Creswell (2014) opined that survey designs provide “a quantitative or numeric description of trends, attitudes or opinions of a population by studying a sample of that population”. Groves et al. (2009) explained survey design as the “systematic method for gathering information from a sample for the purpose of constructing quantitative descriptors of the attributes of the larger population of which the entities are members”. According to Ghauri and Gronhaug (2005), survey strategy is very effective in sampling attitudes, opinions, descriptions, cause and effect relationships, and is seen as a commonly used strategy in most social science research. Saunders et al. (2011) asserted that survey strategy is used in answering the “who”, “what”, “where”, “how much” and “how many” questions in business and management research studies.

Additionally, Saunders et al. (2011) posited that the survey strategy is often linked to the deductive approach, thus, the ability of surveys to explain quantitative data when analyzed using descriptive and inferential statistics. Surveys include cross-sectional and longitudinal

studies utilizing structured interviews or questionnaires for data collection. Fowler (2013) stated that survey design enables the generalization of findings from a population sample. Robson (2011) noted that the survey design overcomes time and resource constraints associated with a case study design. The survey design can avoid the difficulties associated with collecting and managing large datasets that are characterized by case study design. Nonetheless, Podsakoff et al. (2003) observed that the issues of reliability and validity linked with self-reported questionnaires could limit the effectiveness of survey design.

The study adopts the survey design to collect data on the constructs under study. Data for the study was collected in a single-stage cross-sectional survey. This enabled data to be collected at one point in time from the representative sample.

4.6 Sampling Design

Hair et al. (2013) emphasized the need to develop a sample design. According to Hair et al. (2013), sampling design is a "framework that defines the target population essential for a study to be undertaken". Hair et al. (2014) further asserted that sampling design directs the procedural intricacies required to identify potential respondents and the appropriate sample size. Similarly, McDaniel and Gates (2010) posited that sampling design aid researchers to properly collect data from the target population.

4.6.1 Study population

The study population, according to Neuman (2005), "typifies the absolute set of units a study's outcome intends to generalize". In a similar vein, Leedy and Ormrod (2005) defined population as the target group for which a researcher is most interested in gathering data. Similarly, Malhotra (2007) defined population as a collection of pieces or objects that contain the information that the researcher is looking for and from which conclusions might be drawn. According to Fraenkel and Wallen (2007), sampling the entire population is highly challenging, hence a more closely differentiated population should be studied.

This study's target population is small and medium enterprises in Accra and Kumasi. The rationale inspiring the selection of the population has to do with the fact that Accra and Kumasi are cities that houses most of Ghana's enterprises. In addition, the heterogeneous nature of Accra and Kumasi cities can be considered representative of all other businesses in Ghana. In addition, due to resource constraints, the study has been limited to these two cities. However, the selection of the two cities will not bias the sample due to the fact that Accra is the capital city of Ghana and that all forms of enterprises (micro, small, medium, and large), across all sectors (industry, service, agriculture) can be located within the city (Buame, 2012). Furthermore, Kumasi is the next populous city after Accra (World Population Review, 2021), and also it houses all forms of enterprises across varying sectors (Buame, 2012). It is believed that the characteristics of firms within these two cities are similar to those in other regions.

4.6.2 Sampling Technique

Cooper and Schindler (2014) described sampling as the process of selecting elements in a population as a representation of the population". According to Cooper and Schindler (2014) population sizes are usually large and a researcher may not have the ability to reach all members of the population. Therefore, a sample is accepted as a "representation of the study populations, upon which conclusions regarding the entire population can be drawn" (Cooper & Schindler, 2014). Accordingly, Cooper and Schindler (2014) asserted that in research, the type of sampling technique utilized has implications on time, cost and accessibility.

Sampling can be undertaken through probability or non-probability techniques (Malhotra & Dash, 2005; Cooper & Schindler, 2008). Similarly, Creswell and Creswell (2017) indicated that two broad categorizations of sampling techniques exist, and these are, probability and non-probability sampling.

As a sampling technique, probability sampling ensures that every member of the population has an equal chance of being chosen (Malhotra & Dash, 2005). The researcher has no control over who is chosen in probability sampling (Pattern & Newhart, 2017). Simple random sampling, systematic sampling, cluster sampling, and stratified sampling are some of the sample techniques used in probability sampling (Saunders et al., 2012; Bryman & Bell, 2011).

Non-probability sampling is the sampling procedure "where the members of a population do not have an equal opportunity of being selected" (Gravetter & Forzano, 2018). According to Malhotra and Dash (2005), non-probability sampling techniques "are best fit for situations where it is practically impossible to obtain the appropriate sampling frame". Non-probability sampling enables researchers to choose respondents based on subjective judgments (Saunders et al., 2012). When a researcher decides to use non-probability sampling techniques, the different techniques available to the researcher include purposive sampling, convenience sampling, snowballing, and quota sampling (Bryman & Bell, 2015; Saunders et al.,2012; Malhotra & Dash, 2005).

In light of the aforementioned factors, the study used a non-probability sampling technique known as purposive sampling. Obtaining a sampling frame of all enterprises in Accra and Kumasi is unpractical due to the fact that most informal enterprises have not been duly registered and are not even recognized by the appropriate authorities. This will render the use of a probability sampling technique to be challenging. According to Saunders et al. (2012), purposive sampling will permit the researcher to select respondents who are well qualified and knowledgeable about the phenomenon being studied, and this will aid the researcher in obtaining the appropriate answers to researcher questions stated.

4.6.3 Sampling Size

According to Patton (2012), the sample size of a study is determined by the study's questions and objectives, as well as the researcher's logical and analytical abilities. According to Hair et al. (2010), a sample size of 200 is sufficient to give statistical power for analysis. Hair et al. (2013) also stated that for a quantitative investigation, the smallest sample size should be 100. Similarly, Coakes and Steed (2009) recommended sample size of 200 or more for quantitative analysis. Similarly, Kent (2007) claimed that for a quantitative investigation, a sample size of 100 or more is sufficient. Likewise, Odoom, Anning-Dorson and Acheampong (2017) asserted that a sample size of 210 is adequate to undertake quantitative analysis.

The study employed a sample size of 228 enterprises. The sample size for this study is informed by the assertion made by the aforementioned scholarly researchers. Additionally, Hair et al. (2014) opined that for SEM analysis, a sample size of 200 and above should be utilized. The 228 enterprises sampled were founded on the cost approach cited by Burns and Bush (2000) and the fact that a sample size of 200 and upward is fit for Structural Equation Modelling (SEM) analysis.

4.7 Data Collection

This study's data gathering consisted of a series of painstakingly planned actions. Choosing what type of data to collect, selecting an appropriate source, creating and preparing a research instrument, data gathering techniques, and data analysis methodologies are all part of these activities. The sub-sections that follow will examine the data collection processes in greater detail.

4.7.1 The types of data collected

The identification of the type of data to be collected is the very first step in data gathering. Corbin and Strauss (2008) backed up this claim, warning that failing to identify proper data

could lead to poor outcomes. There are two categories of data that are commonly used in research. These categories of data include primary and secondary data (Ghauri & Gronhaug, 2005).

4.7.1.1 Primary Data

Primary data, according to Malhotra and Birks (2007), is material obtained by a researcher with the specific objective of addressing the current topic. To address current research concerns, primary data is acquired directly from the source (Saunders et al., 2012). Because of its raw and pure nature, Jankowicz (2005) argued that data acquired through primary sources is more meaningful and reliable. Furthermore, according to Ghauri and Gronhaug (2005), only primary data can help with re-questions about people's opinions, intentions, and purchase behavior. Primary data was collected on small to medium-sized enterprises operating in Ghana, specifically Accra and Kumasi

4.7.1.2 Secondary Data

Secondary data is defined as information obtained and compiled for other researcher purposes, but which is relevant and beneficial to the current study (Malhotra & Birks, 2007). Likewise, Saunders et al. (2012) opined that secondary data involves the gathering and examination of data that has previously been gathered by academics for some other reason, be it, fresh information or published summaries. Secondary data can be obtained from textbooks, reports, newspapers, magazines, articles, video recordings etc. (Saunders et al., 2012). Secondary data offers the foundation for a robust literature review and further helps to improve the prevailing knowledge of the researcher (Creswell, 2009). Secondary data for the study was obtained from textbooks, reports, articles, magazines, and newspapers

4.7.2 Research instrument for data collection

The research instrument is often determined by the researcher and is mostly tied to the research methodology. Generally, a research instrument refers to any tool that can be utilized to collect data. Research instruments establish the foundation for measuring and analyzing data. Participants observation, personal interviews, telephone interviews, and self-administered questionnaires, according to Malhotra and Briks (2007), are four instruments that can be used to collect primary data.

A quantitative approach to research has been adopted for this study and as a result, a self-administered questionnaire is employed as the instrument for data collection. Saunders et al. (2011) and Hair et al. (2010) argued that self-administered questionnaires' consistent nature assists in the assessment of unrelated responses from participants. Similarly, Lavrakas (2008) defined a self-administered questionnaire as one that was created with the intent of being completed by a respondent without the assistance of the researcher collecting the data. A self-administered questionnaire is mostly a stand-alone questionnaire, nevertheless, it can also be used together with other data collection instruments when directed by a trained interviewer (Lavrakas, 2008).

4.7.3 Questionnaire design

Designing quality questionnaires begins the journey to obtain quality data. The questionnaire (See Appendix) used in the collection of data is made up of 6 sections. The purpose of the study was stated in the preamble of the questionnaire and participant consents were also sought in the preceding preamble. Section 1 captured general information about enterprises, such as enterprise classification, the legal status of the enterprise, ownership, number of employees, year of commencement of operation, quality certification, and whether the enterprise is family-owned. Section 2 captured the enterprise's sales in the last fiscal year. Section 3 captured the extent to which these enterprises engaged in bricolage using a 5-point

Likert scale of 1 (Strongly Disagree) to 5 (Strongly Agree). Section 4 captured enterprise performance (profitability, market share, sales growth, return on investment) in relation to that of competitors on a five-item Likert scale of 1 (not at all) to 5 (very much). Section 5 captured the enterprise's level of innovation capability based on the dimensions of innovation capability using a 5-point Likert scale of 1 (strongly disagree) to 5 (strongly agree). Finally, section 6 looks at the enterprise's product innovation by capturing information on the number of new products introduced, the newness of the product, and the percentage of sales emanating from the new product. The section is made up of two dichotomous questions and two open-ended questionnaires.

4.7.4 Constructs and measures

The measures of this study were adapted from literature The researcher examined prior literature in the study area to identify scales that can be used to measure the study's construct. The construct of bricolage was measured by adapting the scale of Senyard et al. (2010). The construct was modeled as a reflective construct and measured on a 5 point response. The construct of enterprise performance was measured by adapting the scale of Senyard et al. (2010), Ankrah and Mensah (2015), Puni, Ofei and Okoe (2014). Following the works of Brush and Vanderwerf (1991), prior 12 months sales were used as a performance variable. Additionally, the construct of innovation capability was adapted from the works of Cakar and Erturk (2010), and Saunila (2014). Finally, the construct of innovation was measured by adapting the scale of Darroch (2005). Table 4 presents a summary of scales adapted for the questionnaire design.

Table 4.3 Summary of constructs and sources

Constructs	Number of items	Sources
Bricolage	9	Senyard et al. (2010)
Enterprise performance	5	Senyard et al. (2010), Ankrah and Mensah (2015), Puni, Ofei and Okoe (2014)
Innovation capability	5	Cakar and Erturk (2010), Saunila (2014).

4.7.5 Pilot test of Questionnaires and data collection procedures

Written questionnaires in social research have the potential to be misread and perceived differently by diverse persons. To address this issue, the researcher conducted a pilot-testing of questionnaires, as recommended by Hair et al. (2010) and Devellis (2003). Also, academic experts with deep expertise in the subject under study reviewed the suitability of the wording of the questionnaire, and amendments were made accordingly. Furthermore, certain elements of the questionnaires were adjusted based on feedback from the pre-test to resolve any ambiguity or difficulty in terms of clarity, relevancy, and instructions. The questionnaires were once again subjected to scrutiny by the researcher's supervisors, who are well-versed in the quantitative character of the study.

After piloting, the questionnaires were administered. The questionnaires were distributed to small and medium enterprises in Accra and Kumasi. The data collection method began with an explanation of the study's goal to respondents, as well as pledges on confidentiality of information. The questionnaires were then sent to those who met the study's criteria. Only

those who accepted to participate in the study were given a questionnaire to complete. The data collection process took two months to complete.

4.7.6 Data processing and analysis

In order to analyze the data collected, the researcher used STATA 15 as the analytical tool for the study. STATA was used to code and input raw data at the preliminary stages. The software was further used to clean the data and to check for errors in the data as well. As suggested by Pallant (2011), data screening, coding, and cleaning help to eliminate errors that may affect and influence the results of the study during analysis.

4.7.6.1 Exploratory and confirmatory factor analysis

According to Kline (2014), there are two main approaches to factor analysis, namely, Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis CFA). EFA is mostly utilized in the initial stages of the research study to obtain information about the interrelationships among variables (Pallant, 2011). EFA attempts to identify the smallest number of hypothetical constructs that can explain the co-variation observed parsimoniously among a set of variables. On the contrary, CFA is a multivariate statistical procedure that is used to test a specified hypothesis or theories underpinning a research study. CFA assesses the fit between observed data and that which has been conceptualized. CFA specifies hypothesized causal relations between latent factors and the observed indicator variables (Mueller & Hancock, 2001). CFA also aids researchers to investigate the causal relationship among variables in a priori specified and theory-derived models. CFA can assist researchers in bridging the gap between theory and observation.

For this research study, EFA was used to examine data at the beginning. EFA, according to Hair et al. (2010), can be utilized to look at "the underlying patterns or relationships for a large number of variables to see if the data can be reduced or summarized into a smaller

number of factors or components". Again, there is not a common way of using EFA or CFA first for scale adaptation studies. For an adaptation study, some studies started with EFA while others started with CFA (Güvendir and Özkan, 2015). EFA is used when it is not known how many factors there are between the items and which items determine which factors, while CFA is used if there is a strong theory about the structure. According to Pallant (2011), there are three primary processes in performing EFA: "(a) Assessment of the data's eligibility for component analysis, (b) Factor extraction, and (c) Factor rotation and interpretation". Following the EFA, a CFA was carried out to validate the model struture in this study.

4.7.6.2 Structural Equation Modeling

According to Hair et al. (2016), the Covariance-Based technique and the Partial Least Square (PLS) approach are the two most used types of SEM. As a result, Hair et al. (2016) advises that the strength and weaknesses of each approach should be considered when deciding whether to employ it. In structural modeling, the fundamental goal of PLS-SEM is to predict and explain target variables. The predictive ability of exogenous constructs on endogenous constructs is explained using coefficients of determination and beta coefficients in the PLS-SEM. The choice of PLS-SEM is preferred in situations where the goal is to predict key target constructs (Hair et al., 2016). PLS-SEM is also applicable when the structural model is complex and the sample size is small or the data is non-normally distributed (Rigdon, Sarstedt, & Ringle, 2017). According to Astrachan, Patel, and Wanzenried (2014), more recent research studies are gravitating towards the application of the variance-based approach, that is PLS-SEM, even though the Covariance-based approach, that is CB-SEM, has its peculiar use.

Covariance-based SEM analytical tools such as STATA and AMOS, have been recommended for quantitative studies that seek to test theories (Rigdon et al., 2017). In

addition, CB-SEM is applicable in studies with large sample sizes and normal distribution, according to Rigdon et al (2017). Furthermore, CB-SEM is more useful for studies that require a global goodness-of-fit criterion. Additionally, CB-SEM has been recommended for reflective constructs rather than formative constructs.

The data for this study were analyzed using the covariance-based Structural Equation Modeling (SEM) in Stata version 15. Structural equation modeling was employed due to its ability to show the causal relationships between variables (Hair et al., 2008). This study seeks to investigate how the application of bricolage affects enterprise performance, and also how innovation capability moderates this relationship, therefore the application of CB-SEM via STATA will be of immense help. SEM is also a useful tool for analyzing complex relationships between large numbers of variables

The study further conformed to the recommendations made by Hair et al. (2009) about the preparation of data for multivariate analysis, that is; defining the individual constructs, defining the measurement model, designing the study to produce empirical results, and assessing the validity of the measurement model. Hair et al. (2014) advocated a two-step SEM procedure for analyzing the model's validity, which included validation and relationship strength testing. The measurement model is verified in step one, followed by tests of composite reliability, convergent validity, and discriminant validity. The structural model is investigated in the second stage to identify the importance and strength of the interrelationships among the model's constructs.

4.7.6.3 Test of Model Fitness

The conceived model's fitness is determined by interpreting how well it fits the empirical evidence. According to Bagozzi and Yi (2012), “the model fit test is comparative in nature because it entails choosing from several fit indices that subjectively suggest whether the data

matches the theoretically provided model". A number of fit indexes have been created by researchers.

Nonetheless, Tanaka (1993) suggests that there are two broad conventions for assessing a model fit and these are; assessing the model's absolute fit and assessing the model's comparative fit. Model fit standards usually employed in absolute fit are chi-square (χ^2), Adjusted Goodness-of-Fit Index (AGFI), Goodness-of-Fit Index (GFI), Root-Mean-square Residual (RMR) and Root-Mean-Square-Error of Approximation (RMSEA). According to Tabachnick and Fidell (2007) "the Comparative Fit Index (CFI) considers sample size and works well even when the sample size is small". Bentler (1990) was the first to introduce this index, which he later added as part of the fit indices in his EQS program, according to Kline (2005). This statistic, like the NFI, requires that all latent variables are uncorrelated before comparing the sample covariance matrix to the null model. The Comparative Fit Index (CFI), the Normed Fit Index (NFI), and the Relative Non-centrality Index (RNI) are all examples of comparative fit indices.

The fit indexes and their corresponding values used to measure the study's model fitness are CFI $\geq$ 0.90 (Bagozzi & Yi, 2012; Hair et al., 2014) and NFI $\geq$ 0.90, RMSEA $\leq$ 0.08, and GFI $\geq$ 0.90 (Hair et al., 2014). Consequently, the fit indices were used to evaluate the construct measurements' strength and acceptability. The selection of these fit indices was based on Byrne (2013) and Kline (2015)'s justifications that these fit indices are the most widely accepted criteria in social science research.

4.8 Evaluation of Measurement Models

Research of this sort normally necessitates extra caution in order to avoid jeopardizing the study's quality. The ability to attain this goal is enabled through the use of various reliability and validity measurements (Yin, 1994). Reliability and validity, according to Golafshani

(2003) and Roberts, Priest, and Traynor (2006), are methods of ensuring that measurement is devoid of bias and distortion. Hair et al. (2014) posited that measurements are reliable and appropriate when consistent outcomes are achieved when repetitions are observed, that is, the results will be the same if the study is duplicated.

4.8.1 Reliability

According to Saunders et al. (2011), "reliability is the extent to which the data collection instrument produces consistent results when replicated in other studies". Likewise, Ghauri and Gronhaug (2005), described reliability as "measuring the stability of a proposed measure". According to Saunders et al. (2011), "reliability is a sign of a measurement's accuracy, precision, and consistency". Some researchers, such as Zikmund et al. (2012) believe that reliability measures internal consistency, and how well relevant test items measure the same construct. Reliability assesses an instrument's consistency over varying conditions. Cronbach's Alpha (α) and the Composite Reliability tests examine construct reliability. According to Chin (1998), an instrument's reliability is satisfactory if the results of the reliability tests is above the 0.70 thresholds. Test-retest, alternative forms, and internal consistency reliability are also methods for determining reliability, according to Malholtra and Briks (2007). Inter-correlations that exist between samples of items must vary between 0 and 1 in order to compute the Cronbach alpha value (Churchill & Iacobucci, 2006; Hair et al., 2014).

Cronbach alphas, composite reliability (CR), and Average Variance Extracted (AVE) were used to examine and confirm the reliability of the research instrument. Composite reliability is a metric for assessing the overall dependability of a group of disparate but related things. The AVE, on the other hand, depicts the amount of variance shared by the items and the construct being measured.

4.8.2 Validity

The validity, according to Burns and Bush (2014), is the ability of the measurements to assess the variable they claim to measure. Similarly, Zikmund et al. (2012) defined "validity as the correctness of a measurement or the degree to which a score rightly represents a concept". According to Streiner (2013), research scholars support three basic categories of validity: content validity, construct validity, and criterion validity. Content validity "refers to the adequacy with which a measure or scale has sampled from the intended universe or domain of content" (Streiner, 2013). Similarly, construct validity "involves testing theoretically derived hypotheses of the underlying variable or construct" (Streiner, 2013). Convergent validity and discriminant validity are two types of construct validity. Discriminant validity was utilized in Rezaei (2015) and Rezaei and Ghodsi (2014) studies to determine how distinct a concept is from other constructs, while convergent validity was used to confirm that the constructs discovered are true reflections of their indicators. Criterion validity concerns how well scores on one measure predict the scores of another measure of interest. Discriminant validity is applied using construct correlations and cross-loading criterion, while convergent validity is applied using Average Variance Extracted (AVE) and factor loadings, according to Kim, Hwang, Zo, and Lee (2016) and Rezaei (2015).

Content and construct validity were employed to confirm the research instrument in this study. Additionally, senior marketing experts (from academia and practice) reviewed the scales used in the study to ensure content validity. Subsequently, EFA was employed as an initial test for convergent and discriminant validity, followed by CFA. The final measurement model was subjected to a SEM process in the analysis section to evaluate the numerous structural propositions given in the study's conceptual framework.

4.9 Moderation Variable

According to Baron and Kenny (1986), a moderator variable is desirable when the moderator is uncorrelated to both the predictor and criterion variables. Accordingly, this creates an interaction term that can clearly be interpreted. Consequently, the variables underpinning the study were assessed using the criterion determined by Baron and Kenny (1986). This informed the researcher's decision to use a moderator variable instead of a mediator. Again, several researchers have used innovative capability as a moderator in enterprise performance-related research studies (Yang, 2012; Dhewanto, Prasetio, Ratnaningtyas, Herliana, & Chaerudin, 2012; Menguc, Auh & Yannopoulos, 2014).

4.10 Ethical considerations

According to Malhotra and Birks (2007), ethics is a critical problem in academic research. The general reason for ethical issues in research, according to Blaxter, Hughes, and Tigh (2010), is a conflict of interest between the researcher's and the respondents' interests. Before delivering the questionnaire, the researcher double-checked that respondents gave their informed consent, as the essential standards of ethical practice demand it. This meant that the participants pledged to respect one another's independence and to keep their personal information private and secret. Neuman (2005), defined ethics as "what is or is not legal to do". Because most research involves humans, ethical considerations are a major concern. As a result, precautions should be made to guarantee that the researcher does not create detrimental conditions for the study's subjects.

This study followed all of the necessary ethical guidelines. Before administering the questionnaire, the University of Ghana's ethics committee was consulted. Furthermore, the study followed ethical guidelines to guarantee that the research was carried out honestly and without any conflicts of interest or injury to the participants. Some specific activities taken with respect to ethical considerations include the following;

a. Informing the study's participants about the objective of the study

b. obtaining the consent of participants and making them aware that their participation in the research is voluntary, and that they can withdraw at any time if they wish to do so
c. Assuring respondents of confidentiality and making them aware that any information shared will be strictly treated confidentially.

4.11 Chapter Summary

The chapter explained the philosophical belief of the study, and the research methodology employed. Specifically, the chapter discussed the sampling techniques for data collection, the analysis approach adopted, the research method utilized, and the statistical software used for data analysis. Also, the study takes into consideration the ethics associated with research works.

CHAPTER FIVE

DATA ANALYSIS AND DISCUSSIONS

5.0 Introduction

This chapter presents the analysis of the data collected and discusses the procedures involved in conducting the analysis. The first section entails the presentation of the descriptive statistics of the data using STATA 15. Subsequently, exploratory and confirmatory factor analysis is also presented. The chapter further shows how the constructs of the study are measured and analyzed. The final section of this chapter discusses the findings of the study.

5.1 Data organization and process

According to Saunders et al. (2012), there are numerous critical procedures that scholars must follow to arrange data before conducting any salient statistical study. Similarly, researchers have been emphasizing the importance of data editing in data analysis for quite some time (Pallant, 2011). Data editing involves data screening and cleaning. For this study, data screening involved evaluating the data and looking for omitted data and outliers that could distort the data and or alter the study's outcome (Coakes & Steed, 2009). Questionnaires with biased replies, missing data, or outliers were ruled unsuitable for this study. Through this process, valid data is obtained, according to Ainin et al. (2015).

The first survey, for EFA, was undertaken within two weeks. Out of 220 administered questionnaires, 210 questionnaires were obtained and this represented a 95.5% response rate. The data was subsequently coded into the STATA 15 software after which 205 of the questionnaires were deemed good. The second survey process took about 6 weeks. Out of 230 administered questionnaires, a total of 227 questionnaires were returned representing a 98.7% response rate. These were coded into STATA software version 15. After screening the

data, 6 of the questionnaires appeared unusable. Therefore a total of 221 responses were valid after the data screening and these were subject to further analysis.

5.2 Analysis of enterprise demographics

The 221 valid responses were subjected to analysis via STATA 15, specifically, multiple-one-way tables were extracted as outputs due to the unique nature of enterprise characteristics. In terms of enterprise classification, 63 of the enterprises were manufacturing firms and this represented 28.51%. 86 of the enterprises (representing 38.91%) were retail firms. Additionally, 43 firms (19.46%) were into services and 23 firms (10.41 %) were into agriculture. 6 enterprises (2.71%) were classified as others. This is illustrated in Table 5.4.

Similarly, as shown in table 5.5, 144 of the enterprises were sole proprietorships (representing 65.16%). 34 of the enterprises (15.38%) were partnerships and 43 (19.46%) were limited liability companies. Table 5.7 indicates whether the enterprise is a family-owned business or not. The data revealed that 6.91% of the enterprises were family-owned whereas the remaining 93.09 were not family-owned businesses. Also, 43.64% of the enterprises surveyed had females as top managers, whereas 56.36 of the enterprises had males as top managers. This is evident in table 5.6.

Additionally, the maximum number of years for operation is 28 years and the minimum is 2 years. This is evident in Table 5.8. Also, Table 5.3 indicates that the enterprises surveyed started operating between the years 1993 and 2019. Furthermore, the majority of the enterprises surveyed (33 enterprises representing 15.87%) started their operations in the year 2016. This means that majority of the enterprises surveyed have been in existence for the past five years.

Table 5.4 Enterprise classifications

Classification	Freq.	Percent	Cum.
Manufacturing	63	28.51	28.51
Retail	86	38.91	67.42
Services	43	19.46	86.88
Agriculture	23	10.41	97.29
Others	6	2.71	100.00
Total	221	100.00	

Source: Field data, 2021

Table 5.5 Legal status of enterprises

Legal status	Freq.	Percent	Cum.
Sole Proprietorship	144	65.16	65.16
Partnership	34	15.38	80.54
Limited Liability Company	43	19.46	100.00
Total	221	100.00	

Source: Field data, 2021

Table 5.6 Female top managers

Female TM	Freq.	Percent	Cum.
Yes	96	43.64	43.64
No	124	56.36	100.00
Total	220	100.00	

Source: Field data, 2021

Table 5.7 Family-owned business

Family OB	Freq.	Percent	Cum.
Yes	15	6.91	6.91
No	202	93.09	100.00
Total	217	100.00	

Source: Field data, 2021

Table 5.8 Enterprise year of operation

Operations start year	Freq.	Percent	Cum.
1993	1	0.48	0.48
1995	2	0.96	1.44
1996	2	0.96	2.40
1998	1	0.48	2.88
1999	1	0.48	3.37
2000	4	1.92	5.29
2001	2	0.96	6.25
2002	2	0.96	7.21
2003	3	1.44	8.65
2004	3	1.44	10.10
2005	3	1.44	11.54
2006	2	0.96	12.50
2007	3	1.44	13.94
2008	3	1.44	15.38
2009	5	2.40	17.79
2010	10	4.81	22.60

2011	5	2.40	25.00
2012	14	6.73	31.73
2013	10	4.81	36.54
2014	15	7.21	43.75
2015	27	12.98	56.73
2016	33	15.87	72.60
2017	26	12.50	85.10
2018	27	12.98	98.08
2019	4	1.92	100.00
Total	208	100.00	

Source: Field data, 2021

5.3 Descriptive Statistics of Scale Items

Pallant (2016) opined that researchers conducting statistical analysis should subject the data to descriptive analysis before any data validation is undertaken. Palant (2011) further opined that descriptive statistics is usually made up of the mean score and the standard deviation. That notwithstanding, Pallant (2011), asserted that sometimes the skewness and kurtosis may be included in the descriptive statistics. The descriptive statistics of the constructs are shown in Table 5.9

Table 5.9 Descriptive Statistics of Variables

Variables	Observation	Mean	Standard Deviation	Min	Max
Bricolage					
B1	221	4.059	0.695	3	5
B2	221	3.950	0.890	1	5
B3	221	4.145	0.744	3	5
B4	221	4.109	0.749	1	5
B5	221	4.149	0.707	2	5
B6	221	4.113	0.837	2	5
B7	221	4.122	0.750	2	5
B8	221	4.167	0.765	2	5
B9	221	4.163	0.879	1	5
Innovation Capability					
IC1	221	3.403	1.021	1	5
IC2	221	3.412	1.022	1	5
IC3	221	3.602	1.084	1	5
IC4	221	3.531	1.066	1	5
IC5	221	3.716	1.040	1	5

Enterprise Performance					
EP1	221	3.621	0.844	1	5
EP2	221	3.538	0.899	1	5
EP3	212	3.330	0.910	1	5
EP4	212	3.552	0.877	1	5
EP5	221	3.725	0.862	1	5

Source: Field data, 2021

Table 5.9 above indicates the summary statistics of the various variables adopted for this study. The descriptive statistics covers the major variable to be used for the quantitative analysis, that is, items for entrepreneurial bricolage, innovation capability, and enterprise performance. From the table, the highest item mean for entrepreneurial bricolage was 4.167 and the least, 3.950. This gives a general view that the sampled enterprises relatively engage in some bricolage activities. For innovation capability, the mean scores were between 3.403 and 3.716, also indicating an appreciable level of innovation capability across the enterprises sampled. Enterprise performance also displayed an average mean score of 3.330 which gives an indication that the sampled enterprises are generally moderately performing firms. Consequently, exploratory factor analysis is performed to know the true state of the variables.

5.4 Exploratory Factor Analysis

The three-variable constructs made up of nineteen (19) items from the study conceptual framework were subjected to an initial exploratory factor analysis via a Principal Component Analysis (PCA) using STATA 15 statistical package. Osborne (2015) posited that PCA helps to reduce dimensionality. PCA extracts the maximum variance from the data set with each component, thereby, reducing the number of variables to a less number of components, according to Tabachnick et al. (2007).

Before the analysis, sample adequacy techniques were operationalized. Specifically, a Kaiser-Meyer-Olkin (KMO) value was extracted with a value of 0.8684 indicating the suitability of the items for proceeding factor analysis. Thus, the KMO value exceeded the accepted threshold value of 0.6 (Kaiser, 1970). The subsequent factor analysis procedure yielded three distinct components as shown in Table 5.10. All three components collectively explain 99% of the variance in the overall sample.

To assess the strength of each item in the determination of their loaded construct, a Promax rotation was carried out on all 19 items and their respective components. A Promax rotation was preferred because the items measure enterprise means utilization cases and the researcher believed that there would be some chances of items mirroring each other (Hendrickson & White, 1964). According to Yong and Pearce (2013), to improve the explanation of factors, rotation is required since factors that are not rotated are oblique and difficult to explain. Rotating ensures that each item is loaded onto a smaller number of components to achieve a simplified structure. Out of the conceptualized 19 items rotated, 16 items loaded strongly unto their respective variables and hence were retained. The threshold for consistent factor loadings 0.5 was maintained (Hair et al., 2014). Only items that have factor loading scores greater than the threshold score were considered and used for further analysis while the low-scored items were omitted or dropped. This is evident in Table 5.10.

Subsequently, after the exploratory factor analysis was conducted to ensure internal consistency amongst items, the retained items were checked to ensure that their independent adequacies were away from the dropped items. Consequently, the retained items were structured into a follow-up questionnaire and returned to the sample to confirm their selections of those questions. A subsequent confirmation factor analysis was performed based on the returned responses.

Table 5.10 Exploratory Factor Analysis

Items	Factors		
	1	2	3
Bricolage (Senyard et al., 2010)			
We are confident in our ability develop workable solutions to new challenges by using our existing resources	omitted		
We typically take on a broader range of challenges than others with our resources would do	omitted		
We use any existing resource that seems useful to responding to a new problem or opportunity	0.7718		
We deal with new challenges by applying a combination of our existing resources and other resources inexpensively available to us	0.5606		
When dealing with new problems or opportunities we immediately act by assuming that we will find a workable solution	0.8060		
By combining our existing resources, we take on a very broad variety of new challenges	0.6760		
When we face new challenges, we put together workable solutions from my existing resources	0.7471		
We combine resources to accomplish new challenges that the resources were not originally intended to accomplish	0.6841		
To deal with new challenges, we access resources at low or no cost and combine them with what I already have.	0.7640		
Innovation Capability (Saunila, 2014)			
Our firm has an organizational culture that promotes innovation		0.9411	
Our firm is able to use knowledge from various sources to develop products efficiently and rapidly.		0.8507	
Our firm is able to identify changes in the market and rapidly apply them to its own products and processes.		0.7937	
The employees in our firm are able to contribute to activities such as product development, improving the innovation		0.8173	

process and developing new ideas.			
Our firm is able to evaluate new ideas from customers, suppliers, etc. and take them into account in product development.		0.8913	
Enterprise Performance (Senyard et al., 2010)			
Profitability			0.8702
Sales growth			0.9013
Market share			omitted
Return on investment			0.7467
Overall business performance			0.9143
Eigen Value	4.8978	4.2567	2.1750
% of Variance Explained	0.4297	0.3734	0.1908

Note: Total Variance Explained: 0.9939; Loadings <0.50 are omitted (Dropped); KMO: 0.8684

5.5 Confirmatory Factor Analysis

The confirmation and constructs' internal consistency were assessed through confirmatory factor analysis. This study adopted a dual approach to confirming the conceptualized constructs of the study.

The PCA method was initially used to ascertain Average Variance Extracted, Composite Reliability, and Cronbach's alpha scores to ensure convergence and divergence across items respectively. According to Hair et al. (2016), three main criteria can be employed to measure the reliability and validity of a model. Accordingly, internal consistency reliability is measured using Cronbach's alpha and composite reliability. The convergent validity is measured using the AVE. The principle or rule of thumb associated with measuring internal consistency is that Cronbach's alpha and Composite reliability should be between 0.60 – 0.90 (Hair et al., 2016; Hair et al., 2012). Also, when using the average variance extracted (AVE) to measure convergent validity, values greater than 0.50 are accepted (Hair et al., 2016). As indicated in Table 5.11, these criteria were met and the retained items were consistent with the data.

A structural covariance-based method was also adopted to ensure the fitness of the individual items and their respective constructs for further quantitative analysis. Figure 5.1 indicates the Covariance confirmatory model. According to both adopted models, all the retained items were consistent with the data, and the factor loading threshold of 0.5 was also met. According to Hair et al., (2014), such models are fit to be used for the conceptualization of a study's hypothesis. Similarly, the study's covariance model showed good-fit indices as indicated in Table 5.12 therefore the model can be used to conceptualize and test the hypothesis formulated.

Table 5.11 Confirmatory factor analysis, reliability and validity analysis

Items	Loadings	CR	AVE	α
Bricolage		**0.908**	**0.711**	**0.885**
	0.7434			
	0.6530			
	0.7707			
	0.7118			
	0.8092			
	0.6965			
	0.7586			
Innovation Capability		**0.892**	**0.542**	**8.931**
	0.9301			
	0.8650			
	0.7654			
	0.8180			
	0.8751			
Enterprise Performance		**0.930**	**0.727**	**0.929**
	0.8721			
	0.8463			
	0.7903			
	0.8626			

Note: KMO= 0.8669

Figure 5.1 Covariance Confirmatory Model

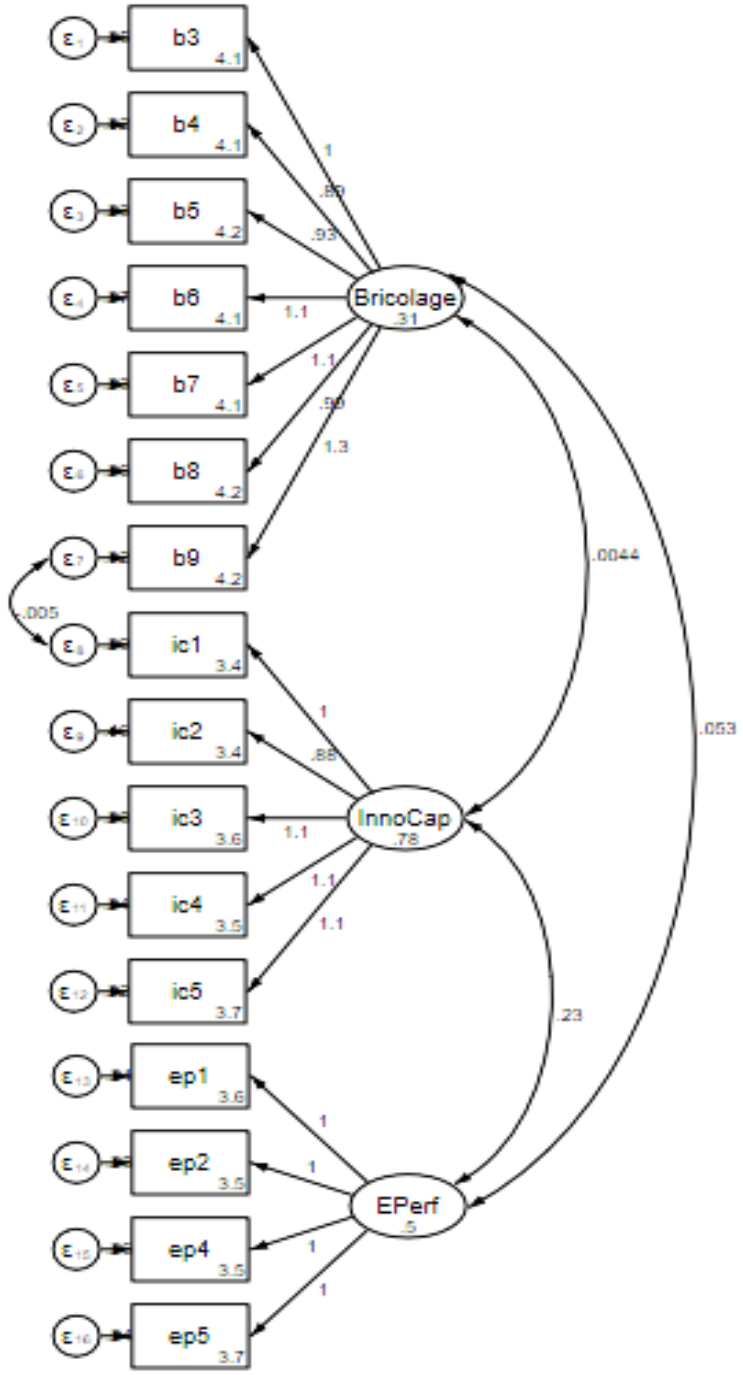


Table 5.12 Goodness of fit indices for covariance model

Fit Index	Threshold	Estimate	Comment
RMSEA	≤ 0.08	0.081	Good Fit
CFI	≥ 0.80	0.936	Good Fit
TFI	≥ 0.90	0.923	Good Fit
SRMR	≤ 0.05	0.061	Moderate Fit

Source: Stata 15 Output, 2021

The next stage of the analysis focused on testing the conceptual model formed, based on the confirmed items and constructs from the CFA, hence, the hypothesized model was tested in this section. The results are presented in Table 5.12 above. From Table 5.12, the model had a good fit when RMSE, CFI, TFI, were tested, however, there was a moderate fit when SRMR was tested.

5.6 Analysis of hypothesized relationships

This section presents the regression results and their inferences from findings of the relationships between the variables of interest.

The general question that the research sought to answer is the extent to which the innovation capability of a firm influences the relationship between their entrepreneurial bricolage practices and firm performance. As such the study tests four hierarchical models to comparatively explore the relationships between control variables (firm classification, firm legal status, firm age, and female top manager), predictor variables (bricolage and innovation capability), and the dependent variable (enterprise performance). The study relies on an ordinary least square (OLS) enquiry model to perform the regression analysis. By instituting robust coefficients, the analysis results indicate fitness and representative findings. The ensuing paragraphs shed more information about the hypothesized relationships and their subsequent findings.

As shown in Table 5.10, the initial results from Model 1 reveal that the control variables; firm classification, firm legal status, firm age, and female top manager have varying relationships with enterprise competitive performance. From the table, firm classification shows a negative significant relationship with enterprise performance (β= -0.115, $p<0.05$). The results although

depicting an inverse association with firm performance primarily show that the classification of firms into manufacturing, retailing services, agriculture, and so on influences the extent of bricolage practice one way or the other. Other controls such as firm legal status, firm age, and female top manager did not show any significant coefficients across the models inferring their limited effects on the proposed null states of our conceptualized relationship. The results also indicate the essence of the control variables to the conceptual framework as their cumulative relative R-squared values enhance the overall variance explained by the overall model.

In examining the relationships between the predictor variables and enterprise performance, the study finds that entrepreneurial bricolage has a significant and positive effect on enterprise performance in model 2 (β=0.128, $p<0.05$), as shown in table 5.13. This supports the arguments made for H1 that there is a positive relationship between bricolage and enterprise competitive performance. Also, innovation capability showed a positive and significant effect on enterprise performance (β=0.244, $p<0.001$), thereby confirming H2, that is, innovation capability will have a positive effect on enterprise competitive performance. In model 3, it can be seen from Table 5.10 that the tested contingency analysis between bricolage, innovation capability, and enterprise performance showed significant positive results. Thus, the moderating effect of innovation capability on firm-level bricolage and enterprise competitive performance showed a positive significant effect (β=0.054, $p<0.001$). This overall relationship is sustained in the full model where the results confirm H3, that is, a firm's innovation capability serves as an ample multiplier to their bricolage practices which in turn leads to competitive performance in the marketplace.

Table 5.13 Analysis (Ordinary Least Square- OLS Model)

Variables	Enterprise Performance			
	Model 1	Model 2	Model 3	Model 4
	β (t-value)	*β* (t-value)	*β* (t-value)	*β* (t-value)
Controls				
Firm Classification	-0.115 (-2.10)*	-0.133 (-2.50)**	-0.134(-2.22)*	-0.136(-2.75)*
Firm Legal Status	0.059 (0.81)	0.034 (0.47)	0.033(0.41)	0.243(0.38)
Firm Age	-0.001 (0.06)	0.012 (1.05)	0.014 (1.24)	0.012 (0.77)
Female Top Manager 1=yes	0.068 (0.55)	0.068 (0.57)	0.071 (0.59)	0.071 (0.59)
Independent Variables				
Bricolage		0.128 (1.05)*		0.013 (0.13)
Innovation Capability		0.244 (3.92)***		0.913 (1.65)
Interaction				
Bricolage*Innovation Capability			0.054 (3.57)***	0.323(2.31)**
Constant	1.808(16.36)***	0.753 (3.78)***	0.435(8.72)***	0.471(7.73)***
R^2	0.0519	0.7573	0.7591	0.7557
ΔR^2		0.7054	0.7020	0.7034
Observation	221	221	221	221

Note: *** P < 0.001, ** P < 0.01, and *P < 0.05

A major augmented argument would be why a mediation relationship was not tested on the predictor variables and firm performance. From the tenets of mediation, the pass-through variable should have a high correlation with the independent variable which is not so according to the correlation matrix indicated in table 5.14. The correlation magnitude of 0.039 between bricolage and innovation capability allows ample divergence in their constructs to conduct a moderation analysis. Table 5.14 shows the correlation matrix augmenting the point made.

Table 5.14 Correlation Matrix showing Co-linearity

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) Enterprise Performance	1.000						
(2)Firm Classification	-0.177	1.000					
(3)Firm Legal Status	0.085	-0.100	1.000				
(4)Firm Age	0.009	-0.101	-0.026	1.000			
(5)Female Top Manager 1=yes	0.037	0.070	-0.108	-0.196	1.000		
(6) Bricolage	0.073	0.046	0.176	-0.387	0.062	1.000	
(7) Innovation Capability	0.287	0.050	0.070	-0.110	0.063	**0.039**	1.000

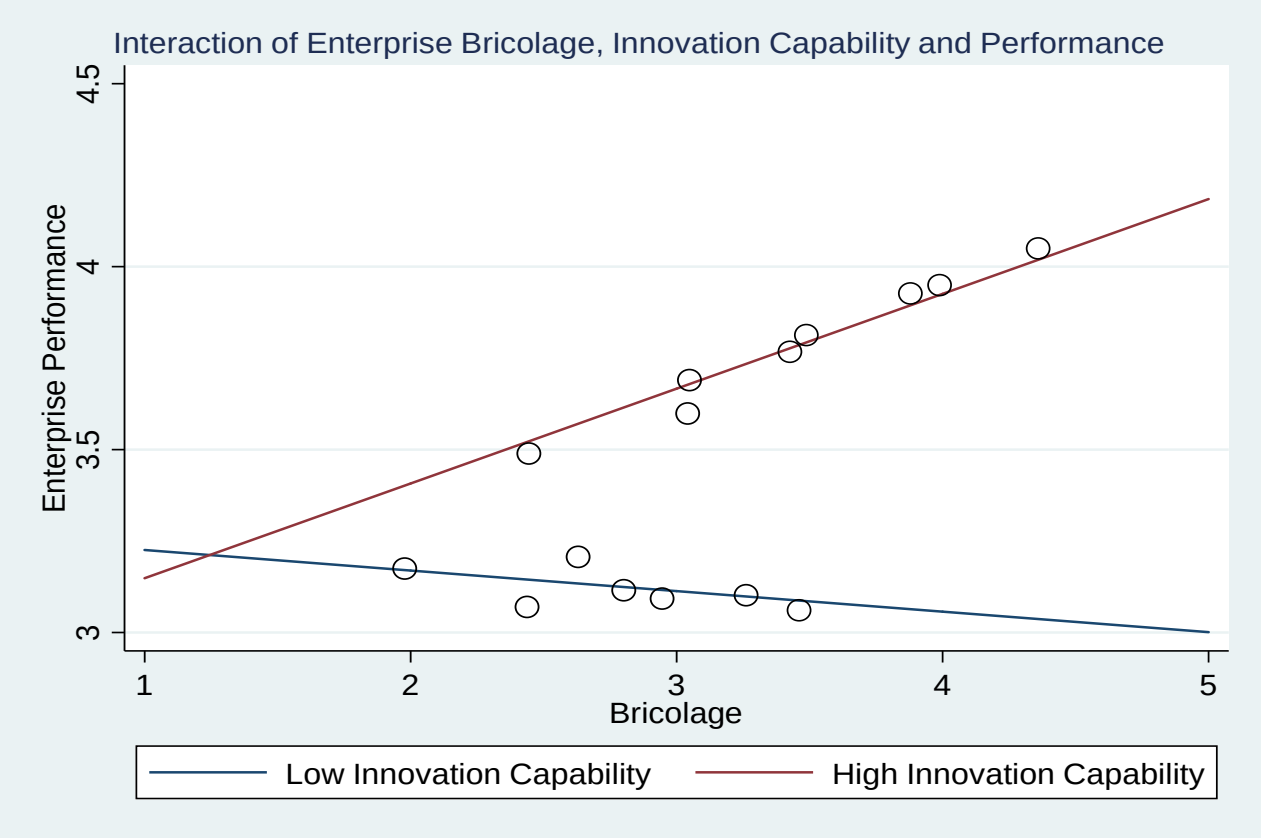
Source: STATA Output, 2021

5.8 The moderation effect

After the successful moderation interaction between bricolage, innovation capability and enterprise competitive performance, the researcher wanted to further understand the different levels of innovation capability and how they affect the bricolage-performance nexus. Figure 5.2 depicts the graphical representation of extreme two levels of innovation capability and how they interact with the conceptual model. From the figure, we see that it pays to have higher levels of innovation capability, especially in resource constraint situations. By doing so, firms are better positioned to explore bricolage strategies. The graph reveals the opposite for firms with lower levels of innovation capability. It is clear that, when firms possess lower levels of innovation capability, they are not strategically placed to fall on bricolage practices as that could make them worse off. The graph vividly shows that firms with low levels of

innovation capability fall way below the line of those that have higher levels of innovation capability and also there is a negative slope seen with low levels of interaction of lower levels of innovation capability on bricolage leading to subsequent lower levels of competitive firm performance

Figure 5.2 Interaction Plot



5.9 Discussion of findings

This section discusses the findings of the study from the lens of the three objectives posited at the beginning of this research study.

5.9.1 The impact of bricolage on enterprise competitive performance

The first objective of the study was to determine the impact of bricolage on enterprise competitive performance. This objective was influenced by the contrasting views on the effect of bricolage on enterprise competitive performance. To achieve this objective, the first

hypothesis (H1) was formulated based on the literature reviewed. H1 indicated that there is a positive relationship between bricolage and enterprise competitive performance. The results of the study indicate that entrepreneurial bricolage has a significant and positive effect on enterprise competitive performance.

The result obtain is in line with the findings of Vanevenhoven et al. (2011) who asserted that that internal and external bricolage can help SMEs to improve their performance. Even though the study focused on internal bricolage, its effects on enterprise performance remained unchanged. The findings also complement the works of Tindiwensi et al. (2020) who identified that entrepreneurial bricolage empowers smallholder commercialization through resource reallocation, improvisation, interconnectedness, and self-reinforcing bricolage, even though the scholars employed multiple case study designs in their analysis.

Again, the findings of the study contrast the works of Beltagui et al. (2021) who ascertained that bricolage restricts commercial growth such that a need for more structured processes becomes necessary. The findings further contradict the works of Fisher (2012) who discovered that bricolage can lock the enterprise into a self-reinforcing cycle of activities that limit firm growth. That notwithstanding this study identified that enterprise classification may have an effect on bricolage which will subsequently affect enterprise performance. Although the result depicted an inverse relationship, its influence on bricolage cannot be overlooked, Similarly, the study also revealed that the age of the enterprise, the legal status, and the gender of the top manager does not influence bricolage one way or the other in emerging countries characterized by resource constraint environment.

5.9.2 The impact of innovation capability on enterprise competitive performance

The second objective of this study sought to determine the impact of innovation capability on enterprise competitive performance. As a result the second hypothesis, H2, was formulated and tested. H2 indicates that innovation capability will have a positive influence on enterprise competitive performance.

The findings of the study suggest that the innovation capability of an enterprise will have a positive effect on the enterprise's competitive performance. The findings of the study support the works of Wyne and Hafeez (2019), who identified that innovation capability positively influences SMEs' performance when positively moderated by the business environment. Although the works of Wyne and Hafeez (2019) focused on SMEs in the sports industry whiles this study focused on general SMEs categories in Ghana (that is manufacturing, retail, services, agriculture, and others), the findings augment the works of Wyne and Hafeez in generalizing the assertion that innovation capability influences enterprise competitive performance.

Furthermore, the findings support the generalization of the assertion that the innovation capability of an enterprise influences its competitive performance as documented by Hult et al. (2004) who described a firm's capability to produce continuous innovations as a crucial factor for its growth and success. Accordingly, the findings of Kim and Maubourgne (2005) and Calentone et al. (2002) have indicated that innovation plays an important role in determining the growth and competitiveness of any organization. The findings of this study augment what they discovered and reiterate that even in resource constraints environment, which is usually a characteristic of emerging economies, the innovation capability of enterprises will still influence their competitive performance.

Additionally, this study identified that the combined dimensions of innovations capability positively influence the competitive performance of SMEs operating in resource constraint environments.

5.9.2 The moderation effect of innovation capability

The last and main objective of the study was to examine the moderation effect of innovation capability on the relationship between entrepreneurial bricolage and enterprise competitive performance. As a result, the third hypothesis, H3, was formulated to test the moderation effect. H3 states that innovation capability moderates the relationship between bricolage and enterprise competitive performance.

The findings of the study revealed that indeed innovation capability can moderate the relationship between bricolage and enterprise competitive performance. This was ascertained when a correlation magnitude of 0.039 between bricolage and innovation capability was obtained. The magnitude obtained allows for ample divergence in the constructs, thus, impliedly indicating a moderation analysis can be undertaken. The results achieved fulfill Baker and Nelson's (2005) call for researchers to test the relationship between bricolage and firm performance with other moderating variables. Baker and Nelson (2005) moderated the relationship between bricolage and firm performance with the business environment and this study has also moderated the relationship with innovation capability successfully.

Additionally, the findings indicate that the moderating effect of innovation capability on bricolage and enterprise competitive performance showed a positive and significant effect. The relationship was sustained in the full model, indicating that innovation capability serves as an ample multiplier to bricolage practices which consequently leads to enterprise competitive performance. Thus, confirming the third hypothesis, H3. The findings augment Rajapathirana and Hui (2018) assertion that “the relationship between innovation capabilities,

innovation efforts, and firm performance are significant" even though the focus of analysis is distinct. The findings help in generalizing the moderating prowess of innovation capability geared towards firm performance.

Furthermore, the study revealed that in a resource constraint environment, enterprises that combine a higher level of innovation capability with bricolage are better positioned to attain enterprise competitive performance. Likewise, enterprises with low innovation capability become worse off in attaining competitive firm performance when they engage in bricolage activities. These findings contradict the works of Senyard et al. (2010), who asserted that young enterprises that combine bricolage with higher levels of innovation will attain lower enterprise performance. The opposite rather holds with enterprises operating in emerging economies.

5.10 Chapter summary

The chapter discussed the findings obtained from analyzing the data collected. This chapter presented the descriptive statistics of enterprise demographics as well as the descriptive statistics of the constructs under study. The chapter also presented the EFA results and the subsequent CFA results as well. Additionally, the chapter also indicated the covariance structural model and the analysis result obtained from OLS regression. Finally, the chapter discussed the results of the findings.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

The chapter presents a summary of the research study being undertaken by highlighting the major findings emanating from this work. The chapter also houses the conclusion and limitations of the research study. In the last section of this chapter, the recommendations for future research directions are further presented.

6.2 Study summary and major findings

Enterprises in developing or emerging economies, particularly SMEs are constraint in resources. Nevertheless, their quest to achieve competitive firm performance causes some of them to adopt or engage in bricolage activities. This study sought to find out whether their engagement in bricolage can produce the needed results and also whether their innovation capability can change or alter the direction of the results they seek to obtain. Specifically, this thesis aimed to achieve the following objectives; to determine the impact of bricolage on enterprise competitive performance, to determine the impact of innovation capability on enterprise competitive performance, and to examine the moderating effect of innovation capability on the relationship between bricolage and enterprise competitive performance.

The quest to provide answers to the compelling research questions emanating from the research objectives led to the review of literature on the variables and or the constructs under study. Three main constructs or variables were thoroughly examined and these are bricolage, innovation capability, and enterprise competitive performance. Through the extensive review of literature, a conceptual framework was developed for the study and also, three hypotheses were formulated. The hypothesis included the following; H1, bricolage positively affects enterprise competitive performance; H2, innovation capability positively influences

enterprise performance; H3, innovation capability moderates the relationship between bricolage and enterprise competitive performance.

Accordingly, 230 questionnaires were administered to SMEs within Accra and Kumasi to collect data, and out of this, 228 were returned. The data collected was analyzed via STATA 15 statistical software. The analysis began with the cleaning of data, after which the descriptive statistics of the scale items were derived. Additionally, exploratory factor analysis was performed to check the internal consistency of the constructs. After which the required research processes were undertaken to begin the confirmatory factor analysis. Subsequently, ordinary least square regression analysis was performed to test the hypothesis formulated.

The results of the analysis indicated that bricolage has a significant and positive influence on enterprise competitive performance, thereby confirming the first hypothesis (H1). Also, the study identified that innovation capability positively and significantly influences enterprise competitive performance. This finding also confirmed the second hypothesis (H2). Similarly, the study also identified that innovation capability can moderate the relationship between bricolage and enterprise competitive performance. Upon discovering that innovation capability can moderate the relationship, the study further subjected the test of moderation to further analysis and identified that higher levels of innovation capability combined with bricolage leads to better enterprise performance. On the flip side, the study identified that firms who combine low levels of innovation capability with bricolage are likely to be worse off than their counterparts.

6.3 Contributions and implications of the research

This study contributes immensely to the literature on entrepreneurial bricolage. The study further adds up to the literature on innovation capability and enterprise performance. Also, this research study has some implications for practice and policy.

From the findings of this study, it was established that innovation capability moderates the relationship between bricolage and enterprise competitive performance, thus, an addition to the scholarly works in the domain of bricolage. Very few studies have focused on examining the relationship between bricolage and firm performance, and these studies either focused on the direct relationship between the variables or moderated it with a variable other than innovation capability (Baker & Nelson, 2005; Senyard et al., 2010; Wyne & Hafeez, 2019). This study can be counted among the pioneers to first moderate the relationship between bricolage and enterprise performance from a developing country context. Additionally, by focusing on the internal aspect of bricolage, the study adds up to the literature seeking to differentiate the types of bricolage (Vanevenhoven et al.,2011) and its impact on enterprise performance. Furthermore, the study makes an input in the domains of innovation capability. Specifically, this study concludes that a high level of innovation capability when combined with bricolage positively influences enterprise performance. Similarly, the study also identified that a low level of innovation capability when combined with bricolage will negatively affect firm performance. Furthermore, the study applied two theories namely, knowledge-based theory and resource orchestration theory, to augment the theory of entrepreneurial bricolage. The additions of these theories strengthen the application of the concept of bricolage to the context of SMEs resource utilization. From another viewpoint, the conceptual framework presented in the study can be modified and applied to other contexts to augment the results achieved.

Secondly, the findings of the study provide some practical implications for the corporate world. The findings of the study suggest that SMEs with high innovation capability can engage in bricolage to alter their performance even when they are constrained in resources. Additionally, the study also makes some interesting revelations on the need to possess knowledge in one's field of operation if an enterprise wants to reap the full benefits associated

with the practice of bricolage. The findings of the study further suggest that managers of SMEs can benefit from the usage of internal resources that are readily available but idle. The study also provides the managers of SMEs with empirical evidence concerning the effect of bricolage on enterprise performance. Similarly, the findings of the study go a long way to augment the call for SMEs to be innovative by doing more with the little resources they have at their disposal.

6.4 Conclusions

The study has been able to justify that innovation capability can moderate the relationship between bricolage and enterprise performance and that high levels of innovation capability positively influence the performance of SMEs operating in developing nations. The study further established in the context of an emerging economy that bricolage has a direct positive effect on enterprise performance which contrasts some research findings in other jurisdictions. Similarly, the study affirms that internal bricolage positively influences enterprise performance. Additionally, the study concludes that innovation capability has a direct positive relationship with enterprise performance.

6.5 Research Implications

The research findings provide managers of SMEs with information on the benefits of utilizing internal resources that are readily available to achieve business objectives. The study reassured managers of SMEs in Ghana that they can still thrive in a resource-constraint environment by providing empirical evidence on the concept of bricolage and its effect on enterprise performance. The study further augments the Government of Ghana‘s efforts in encouraging SMEs to do more with less by providing more insights about entrepreneurial bricolage. In addition, the research findings creates a directional path of which policy makers can follow to solve resource related challenges encountered by SMEs in Ghana.

6.6 Limitations of the study

The study utilized only one country, specifically, two cities in Ghana for the research and this limits the coverage of the research even though the rigorous research process was followed in order to generalize the study's findings. Additionally, the study focused generally on the major SMEs sectors in Ghana which may not be so in other African countries.

6.7 Recommendation for future studies

The findings of this study provide and establishes a direction for other researchers to explore in their future studies.

Firstly, researchers should consider looking at the use of multiple contexts. This will enrich the comparative aspect of the findings since this study only focused on a developing country's context. Other African countries should consider replicating this research in their respective countries to provide more evidence that augments the findings of this study.

Secondly, future studies should consider the use of a mixed-method approach. The use of qualitative studies will provide more detailed revelations which will augment the strength of quantitative studies. This research study utilized a quantitative research method, thus, future studies should consider the use of a mixed-method approach. Furthermore, this study utilized a cross-sectional survey, therefore other future studies should consider looking at longitudinal surveys to identify whether similar outcomes will be achieved.

Again, the study focused on the internal aspect of bricolage and as a result, future studies can also look at the external aspect. Most research studies on bricolage have focused on the combined bricolage, that is internal and external, thus exploring the external aspect of bricolage becomes an avenue for researchers to consider in the future. Additionally, future research activities may also consider mediating the relationship between bricolage and enterprise with variables such as innovation.

6.8 Chapter summary

This chapter provides a summary of the study and also discussed the findings that have been ascertained. The chapter further presents the study's limitations and recommendations for future research.

REFERENCES

Abor, J. (2007). Corporate governance and financing decisions of Ghanaian listed firms. *Corporate Governance: The international journal of business in society*.

Abor, J., & Quartey, P. (2010). Issues in SME development in Ghana and South Africa. *International research journal of finance and economics*, *39*(6), 215-228.

Acheampong, G. (2018). Financial institution ties and survival of small commercial poultry farms (SCPFs) in Ghana. *Journal of Entrepreneurship in Emerging Economies*.

Acheampong, G., & Esposito, M. (2014). The nature of entrepreneurship in bottom of the pyramid markets. *International Journal of Entrepreneurship and Small Business*, *21*(4), 437-456.

Acheampong, G., Narteh, B., & Rand, J. (2017). Network ties and survival: a study of small commercial poultry farms in Ghana. *The International Journal of Entrepreneurship and Innovation*, *18*(1), 14-24.

Ackah, J., & Vuvor, S. (2011). The Challenges faced by Small & Medium Enterprises (SMEs) in Obtaining Credit in Ghana.

Adom, K. (2015). Recognizing the contribution of female entrepreneurs in economic development in sub-Saharan Africa: Some evidence from Ghana. *Journal of Developmental Entrepreneurship*, *20*(01), 1-24

Agyapong, D., & Attram, A. B. (2019). Effect of owner-manager's financial literacy on the performance of SMEs in the Cape Coast Metropolis in Ghana. *Journal of Global Entrepreneurship Research*, *9*(1), 1-13.

Afutu-Kotey, R. L., & Gough, K. V. (2019). Bricolage and informal businesses: Young entrepreneurs in the mobile telephony sector in Accra, Ghana. *Futures*, 102487.

Ainin, S., Parveen, F., Moghavvemi, S., Jaafar, N. I., & Shuib, N. L. M. (2015). Factors influencing the use of social media by SMEs and its performance outcomes. *Industrial Management & Data Systems*.

Alavi, M., & Leidner, D. E. (2001). Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS quarterly*, 107-136.

Aliyu, M. S. (2020). Determinants of entrepreneurial success among women in North-Western Nigeria.

Al-Matari, E. M., Al-Swidi, A. K., & Fadzil, F. H. B. (2014). The measurements of firm performance's dimensions. *Asian Journal of Finance & Accounting*, *6*(1), 24.

Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of personality and social psychology*, *45*(2), 357.

Amabile, T.M. (1996). Creativity and innovation in organizations, Boston, MA: Harvard Business School.

Amaratunga, D., & Baldry, D. (2002). Moving from performance measurement to performance management. *Facilities*.

Amonoo, E., Acquah, P. K., & Asman, E. E. (2003). The Impact of Interest Rates on Demand for Credit and Loan—Repayment by the Poor arid SMEs in Ghana.

Armstrong, C. E., & Shimizu, K. (2007). A review of approaches to empirical research on the resource-based view of the firm. *Journal of management*, *33*(6), 959-986.

Ankrah, E., & Mensah, C. C. Y. (2015). Measuring performance in small and medium scale enterprises in the manufacturing industry in Ghana. *International Journal*, *34*.

Ariely, G. (2003). Knowledge management, terrorism, and cyber terrorism. In *Cyber warfare and cyber terrorism* (pp. 7-16). IGI Global.

Arnold, U. (2000). New dimensions of outsourcing: a combination of transaction cost economics and the core competencies concept. *European journal of purchasing & supply management*, *6*(1), 23-29.

Aryeetey, E. (1994). *Supply and demand for finance of small enterprises in Ghana* (No. 251). World Bank Publications.

Assink, M. (2006). Inhibitors of disruptive innovation capability: a conceptual model. *European journal of innovation management*.

Astrachan, C. B., Patel, V. K., & Wanzenried, G. (2014). A comparative study of CB-SEM

and PLS-SEM for theory development in family firm research. *Journal of Family Business Strategy*, *5*(1), 116-128.

Atinc, G., Simmering, M. J., & Kroll, M. J. (2012). Control variable use and reporting in macro and micromanagement research. *Organizational Research Methods*, *15*(1), 57-74.

Awal, M. (2018). *Presidential Pitch Award Ceremony.* Accra. Ghana

Ayyagari, M., Demirgüç-Kunt, A., & Maksimovic, V. (2011). Small vs. young firms across the world: contribution to employment, job creation, and growth. *World Bank Policy Research Working Paper*, (5631).

Baah-Nuakoh, A. (2003). *Studies on the Ghanaian economy: The industrial sector* (Vol. 3). Woeli Pub Serv.

Bacq, S., Ofstein, L. F., Kickul, J. R., & Gundry, L. K. (2015). Bricolage in social entrepreneurship: How creative resource mobilization fosters greater social impact. *The International Journal of Entrepreneurship and Innovation*, *16*(4), 283-289.

Bacharach, S. B. (1989). Organizational theories: Some criteria for evaluation. *Academy of management review*, *14*(4), 496-515.

Bagozzi, R. P., & Yi, Y. (2012). Specification, evaluation, and interpretation of structural equation models. *Journal of the academy of marketing science*, *40*(1), 8-34.

Baker, T. & Howard E. A. (2000). *Bricolage and resource-seeking: Improvisational responses to dependence in entrepreneurial firms*. Working paper. University of North Carolina at Chapel Hill.

Baker, T., Anne S. M., and Dale T. E. (2003). Improvising firms: Bricolage, account giving, and improvisational competency in the founding process'. *Research Policy* 32: 255–276.

Baker, T., Miner, A. S., & Eesley, D. T. (2003). Improvising firms: Bricolage, account giving and improvisational competencies in the founding process. *Research policy*, *32*(2), 255-276.

Baker, T., Pollock, T.G. and Sapienza, H.J. (2013), "Winning an Unfair Game: How a Resource-Constrained Player Uses Bricolage to Maneuver for Advantage in a Highly Institutionalized Field", *Entrepreneurial Resourcefulness: Competing With Constraints* (*Advances in Entrepreneurship, Firm Emergence and Growth, Vol. 15*), Emerald Group Publishing Limited, Bingley, pp. 1-41.

Baker, T., & Nelson, R. E. (2005). Creating something from nothing: Resource construction through entrepreneurial bricolage. *Administrative science quarterly*, *50*(3), 329-366.

Baker, T. & Nelson, R. E. (2007). Resources in play: Bricolage in the Toy Store (y). *Journal of business venturing*, *22*(5), 694-711.

Balogun, J., & Jenkins, M. (2003). Re-conceiving change management:: A knowledge-based perspective. *European management journal*, *21*(2), 247-257.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, *51*(6), 1173.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, *17*(1), 99-120.

Baumol, W. J. (2002). Entrepreneurship, innovation and growth: The David-Goliath symbiosis. *Journal of Entrepreneurial Finance, JEF*, *7*(2), 1-10.

Bechky, B. A., & Okhuysen, G. A. (2011). Expecting the unexpected? How SWAT officers and film crews handle surprises. *Academy of Management Journal*, *54*(2), 239-261.

Beck, T., Demirguc-Kunt, A., & Levine, R. (2005). SMEs, growth, and poverty: Cross-country evidence. *Journal of economic growth*, *10*(3), 199-229.

Beck, T., & Cull, R. (2014). SME finance in Africa. *Journal of African Economies*, *23*(5), 583-613.

Bell, M., & Figueiredo, P. N. (2012). Innovation capability building and learning mechanisms in latecomer firms: recent empirical contributions and implications for research. *Canadian Journal of Development Studies/Revue canadienne d'études du développement*, *33*(1), 14-40.

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological bulletin*, *107*(2), 238.

Beltagui, A., Sesis, A., & Stylos, N. (2021). A bricolage perspective on democratising innovation: the case of 3D printing in makerspaces. *Technological Forecasting and Social Change*, *163*, 120453.

Berchicci, L., and Hulsink, W. (2006). Of Bikes and Men: Innovation patterns and strategic entrepreneurship in the human-powered vehicle sector. Paper prepared for the workshop on Strategic Entrepreneurship: the role of networking, Vrije Universiteit Amsterdam, July 3-4, 2006

Bell, M., & Figueiredo, P. N. (2012). Innovation capability building and learning mechanisms in latecomer firms: recent empirical contributions and implications for research. *Canadian Journal of Development Studies/Revue canadienne d'études du développement*, *33*(1), 14-40.

Beltagui, A., Sesis, A., & Stylos, N. (2021). A bricolage perspective on democratising innovation: the case of 3D printing in makerspaces. *Technological Forecasting and Social Change*, *163*, 120453.

Bessant, J., Kaplinsky, R., & Lamming, R. (2003). Putting supply chain learning into practice. *International journal of operations & production Management*.

Bessant, J., Alexander, A., Tsekouras, G., Rush, H., & Lamming, R. (2012). Developing innovation capability through learning networks. *Journal of economic geography*, *12*(5), 1087-1112.

Bicen, P., & Johnson, W. H. (2015). Radical innovation with limited resources in high-turbulent markets: The role of lean innovation capability. *Creativity and Innovation Management*, *24*(2), 278-299.

Bitar, J., & Hafsi, T. (2007). Strategizing through the capability lens: sources and outcomes of integration. *Management Decision*.

Bjorkdahl, J., & Borjesson, S. (2012). Assessing firm capabilities for innovation. *International Journal of Knowledge Management Studies*, *5*(1-2), 171-184.

Boateng, R. (2014). *Research Made Easy* (1st Ed.). Accra: Pearl Richards Foundation.

Boateng, R. (2016). *Research made easy*. CreateSpace Independent Publishing Platform.

Boeddrich, H. J. (2004). Ideas in the workplace: a new approach towards organizing the fuzzy front end of the innovation process. *Creativity and innovation management*, *13*(4), 274-285.

Boote, D. N., & Beile, P. (2005). Scholars before researchers: On the centrality of the dissertation literature review in research preparation. *Educational researcher*, *34*(6), 3-15.

Borjesson, S., & Elmquist, M. (2012). Aiming at innovation: a case study of innovation capabilities in the Swedish defence industry. *International Journal of Business Innovation and Research*, *6*(2), 188-201.

Bouazza, A. B. (2015). Small and medium enterprises as an effective sector for economic development and employment creation in Algeria. *International Journal of Economics, commerce and management*, *3*(2), 1-16.

Bowen, T., Cicardi, M., Farkas, H., Bork, K., Longhurst, H. J., Zuraw, B., ... & Xiang, Z. Y. (2010). 2010 International consensus algorithm for the diagnosis, therapy and management of hereditary angioedema. *Allergy, Asthma & Clinical Immunology*, *6*(1), 1-13.

Braimah, M. (2014). Key determinants of university selection among international students in Ghana. *Journal of Business and Economics*, *5*(9), 1656-1666.

Braimah, M. (2015). Green brand awareness and customer purchase intention. *Management Science Letters*, *5*(10), 895-902.

Brem, A., & Voigt, K. I. (2007). Innovation management in emerging technology ventures–the concept of an integrated idea management. *International Journal of Technology, Policy and Management*, *7*(3), 304-321.

Brown, L. D., & Caylor, M. L. (2004). Corporate governance and firm performance. *Available at SSRN 586423*.

Brush, C. G., & Vanderwerf, P. A. (1991). A comparison of methods and sources for obtaining estimates of new venture performance. *Journal of Business Venturing*, 7(2), 157-170.

Bryman, A. (2006). Integrating quantitative and qualitative research: how is it done?. *Qualitative research*, *6*(1), 97-113.

Bryman, A., & Bell, E. (2011). Business Research Methods. sl: Oxford University Press Inc. *New York*.

Bryman, A., & Bell, E. (2015). Business research methods (Vol. 4th). *Glasgow: Bell & Bain Ltd*.

Buame, S. (2012). *Entrepreneurship: Entrepreneurial Education, Venture Creation and SME Management in Ghana.* Accra: Big Mike Publication.

Burns, A. C., Bush, R. F., & Sinha, N. (2014). *Marketing research* (Vol. 7). Harlow: Pearson.

Burns, A. C., & Bush, R. F. (2014). *Marketing research* (Vol. 7). Harlow: Pearson.

Byrne, B. M. (2013). *Structural equation modeling with Mplus: Basic concepts, applications, and programming*. routledge.

Cainelli, G., Evangelista, R., & Savona, M. (2004). The impact of innovation on economic performance in services. *The service industries journal*, *24*(1), 116-130.

Çakar, N. D., & Erturk, A. (2010). Comparing innovation capability of small and medium-Sized enterprises: examining the effects of organizational culture and empowerment. *Journal of small business management*, *48*(3), 325-359.

Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial marketing management*, *31*(6), 515-524.

Campbell, J. P. (1997). Speaker recognition: A tutorial. *Proceedings of the IEEE*, *85*(9), 1437-1462.

Carson, D., & Gilmore, A. (2000). SME marketing management competencies. *International Business Review*, *9*(3), 363-382.

Carnes, C. M., Chirico, F., Hitt, M. A., Huh, D. W., & Pisano, V. (2017). Resource orchestration for innovation: Structuring and bundling resources in growth-and maturity-stage firms. *Long range planning*, *50*(4), 472-486.

Cashman, S. B., Adeky, S., Allen III, A. J., Corburn, J., Israel, B. A., Montaño, J., ... & Eng, E. (2008). The power and the promise: working with communities to analyze data, interpret findings, and get to outcomes. *American journal of public health*, *98*(8), 1407-1417.

Chan, F. F. Y. (2015). A critical realist and multi methodology framework for product placement research. *Journal of Promotion Management*, *21*(3), 279-295.

Chao, E. (1999). The Maoist shaman and the madman: Ritual bricolage, failed ritual, and failed ritual theory. *Cultural Anthropology*, *14*(4), 505–534.

Chin, W. W. (1998). Commentary: Issues and opinion on structural equation modeling. *MIS quarterly*, vii-xvi.

Choy, L. T. (2014). The strengths and weaknesses of research methodology: Comparison and complimentary between qualitative and quantitative approaches. *IOSR journal of humanities and social science*, *19*(4), 99-104.

Churchill, G. A., & Iacobucci, D. (2006). *Marketing research: methodological foundations*. New York: Dryden Press.

Ciborra, Claudio 1992 'From thinking to tinkering: The grassroots of strategic information systems'. *The Information Society*. 8(1), 297–309.

Ciborra, C. (2002). *The labyrinths of information: Challenging the wisdom of systems: Challenging the wisdom of systems*. OUP Oxford.

Coakes, S. J., & Steed, L. (2009). *SPSS: Analysis without anguish using SPSS version 14.0 for Windows*. John Wiley & Sons, Inc.

Combs, J. G., & Ketchen Jr, D. J. (1999). Can capital scarcity help agency theory explain franchising? Revisiting the capital scarcity hypothesis. *Academy of Management Journal*, *42*(2), 196-207.

Corbin, J., & Strauss, A. (2008). Strategies for qualitative data analysis. *Basics of Qualitative*

Research. Techniques and procedures for developing grounded theory, *3*(10.4135), 9781452230153.

Cooper, D., & Schindler, P. (2008). Business research methods (10th ed.). New York, McGraw-Hill/Irwin

Cooper, D. R., & Schindler, P. S. (2014). *Marketing research*. New York: McGraw-Hill/Irwin.

Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research* (No. Sirsi) i9781412927918).

Creswell, J. W. (2009). Mapping the field of mixed methods research. *Journal of mixed methods research*, *3*(2), 95-108.

Creswel, J. W. (2012). Research Design: Pendekatan Metode Kuantitatif, Kualitatif, dan Campuran. *Metodologi Penelitian*, 673.

Creswell, J. W. (2013). Steps in conducting a scholarly mixed methods study. Retrieved from https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1047&context=dberspeakers

Creswell, J. W. (2014). *Qualitative, quantitative and mixed methods approaches*. Sage.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Cross, K. and Lynch, R. (1991). Measure Up! Yardstick for Continuous Improvement. Oxford: Blackwell.

Cunha, R. A. (2005). Neuroprotection by adenosine in the brain: from A 1 receptor activation to A 2A receptor blockade. *Purinergic signalling*, *1*(2), 111-134.

Cunha, M. P. E., Rego, A., Oliveira, P., Rosado, P., & Habib, N. (2014). Product innovation in resource-poor environments: Three research streams. *Journal of Product Innovation Management*, *31*(2), 202-210.

Daily Graphic (2017). *885 SMEs lost 250m cedis within four year 'dumsor period'.* Retrieved from https://www.graphic.com.gh/news/general-news/885-smes-lost-gh-250m-within-four-year-dumsor-period.html

Darroch, J. (2005). Knowledge management, innovation and firm performance. *Journal of Knowledge Management*, *9*(3), 101-115.

Das, V. (2008). Violence, gender, and subjectivity. *Annual review of anthropology*, *37*, 283-299.

Davidsson, P., Steffens, P.R., Gordon, S.R., and Reynolds, P. (2008). Anatomy of New Business Activity in Australia: Some Early Observations from the CAUSEE Project. School of Management, Faculty of Business, QUT.

Davidsson, P., Baker, T., & Senyard, J. M. (2017). A measure of entrepreneurial bricolage behavior. *International Journal of Entrepreneurial Behavior & Research*.

Dayton, J. (2019). *Education law: Principles, policies, and practice*. Wisdom Builders Press.

De Carolis, D. M. (2003). Competencies and imitability in the pharmaceutical industry: An analysis of their relationship with firm performance. *Journal of management*, *29*(1), 27-50.

Demirbag M. T., Tatoglu, E., Tekinus, M., & Zaim, S. (2006). An analysis of the relationship between TQM implementation and organizational performance: evidence from Turkish SMEs. Journal of Manufacturing Technology Management,17(6), 829-847.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2011). *The SAGE handbook of qualitative research*. London: Sage.

Desa, G., & Basu, S. (2013). Optimization or bricolage? Overcoming resource constraints in global social entrepreneurship. *Strategic entrepreneurship journal*, *7*(1), 26-49.

Desouza, K. C., & Awazu, Y. (2006). Knowledge management at SMEs: Five peculiarities. *Journal of Knowledge Management*, *10*(1), 32-43.

Department of Innovation, Industry, Science and Research –DIISR (2011). *Key Statistics: Australian Small Business*. Retrieved from https://www.parliament.nsw.gov.au/researchpapers/Documents/small-business-in-nsw-statistical-snapshot-and-r/Small%20Business%20in%20NSW%204.pdf

DeVellis, R. F. (2003). *Scale development: Theory and Applications* (Vol. 2nd Edition). Thousand Oaks, CA: Sage Publications.

Dhewanto, W., Prasetio, E. A., Ratnaningtyas, S., Herliana, S., Chaerudin, R., Aina, Q., & Rachmawaty, E. (2012). Moderating effect of cluster on firm's innovation capability and business performance: A conceptual framework. *Procedia-Social and Behavioral Sciences*, *65*, 867-872.

Duxbury, T. (2014). Improvising entrepreneurship. *Technology Innovation Management Review*, *4*(7).

Edwards, M. R. (2010). An integrative review of employer branding and OB theory. *Personnel review*. 39 (1-2).

Eesley, G. L., Elmoursi, A., & Patel, N. (2003). Thermal properties of kinetic spray Al–SiC metal-matrix composite. *Journal of Materials Research*, *18*(4), 855-860.

European Commission (2016). *User guide to SME definition.* Retrieved from https://ec.europa.eu/regional_policy/sources/conferences/stateaid/sme/smedefinitionguide_en.pdf

Eurostat (2014), *Patent Statistics at Eurostat. Mapping the contribution of SMEs in EU patenting. Eurostat Manuals and Guidelines*. Luxembourg. Retrieved from http://ec.europa.eu/eurostat/documents/3859598/6064260/KS-GQ-14-009-EN-N.pdf/caa6f467-11f8- 43f9-ba76-eb3ccb6fab6d.

Faems, D., Van Looy, B., & Debackere, K. (2005). Interorganizational collaboration and innovation: Toward a portfolio approach. *Journal of product innovation management*, *22*(3), 238-250.

Farjoun, M. (1998). The independent and joint effects of the skill and physical bases of relatedness in diversification. *Strategic Management Journal*, *19*(7), 611-630.

Farzin, F. (2017). Localising the impact of techno-entrepreneurship in Eastern Iran: Birjand's

Science and Technology Park as a local innovation community. *Local Economy*, Vol. 32, No. 7, pp. 692–710.

Fasua, K. O. (2006). Entrepreneurship theory, strategy and practice. *Abuja: Bee Printing and Publishing Co*.

Fisher, G. (2012). Effectuation, causation, and bricolage: A behavioral comparison of emerging theories in entrepreneurship research. *Entrepreneurship theory and practice*, *36*(5), 1019-1051.

Fleming, L. (2001). Recombinant uncertainty in technological search. *Management science*, *47*(1), 117-132.

Fowler Jr, F. J. (2013). *Survey research methods*. London: Sage publications.

Fraenkel, Jack R. and Wallen, N.E. (2007). *How to Design and Evaluate Research in Education*. New York: Mcgraw-Hill companies Inc.

Garud, R., & Karmoe, P. (2003). Bricolage versus breakthrough: Distributed and embedded agency in technology entrepreneuship. *Research Policy* 32, 277–300.

Ghana Statistical Service (2016). *Ghana Living Standard Surve.* Glss, 1-7

Ghauri, P., & Gronhaug, K.(2005). *Research Methods in business research*. Cambridge University Press.

Ghauri, P., Gronhaug, K., & Strange, R. (2020). *Research methods in business studies*. Cambridge University Press.

Gimbert, X., Bisbe, J., & Mendoza, X. (2010). The role of performance measurement systems in strategy formulation processes. *Long Range Planning*, *43*(4), 477-497.

Gilbert, J. T. (1994). Choosing an innovation strategy: Theory and practice. *Business Horizons-Bloomington-*, *37*, 16-16.

Gilmore, A., McAuley, A., Gallagher, D., Massiera, P., & Gamble, J. (2013). Researching SME/entrepreneurial research: A study of Journal of Research in Marketing and Entrepreneurship (JRME) 2000-2011. *Journal of Research in Marketing and Entrepreneurship*.

Global Entrepreneurshi Monitor (2010). *Global Report.* Retrieved from file:///C:/Users/new/Downloads/1313079238GEM_2010_Global_Report_Rev_210111.pdf

Gloet, M., & Terziovski, M. (2004). Exploring the relationship between knowledge management practices and innovation performance. *Journal of manufacturing technology management*.

GNA (2021). *GIZ and DHL trains SMEs in to boost their capacity in E-Commerce.* Retrieved from https://newsghana.com.gh/giz-dhl-trains-smes-to-boost-their-capacity-in-e-commerce/

Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The qualitative report*, *8*(4), 597-607.

Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic management journal*, *17*(S2), 109-122.

Gravetter, F. J., & Forzano, L. A. B. (2018). *Research methods for the behavioral sciences*. Cengage learning.

Gray, D. E., & Goregaokar, H. (2010). Choosing an executive coach: The influence of gender on the coach-coachee matching process. *Management Learning*, *41*(5), 525-544.

Groves, R. M., Fowler, Jr., F. J., Couper, M. P., Lepkowski, J. M., Singer, E., & Tourangeau, R. (2009). *Survey Methodology*, Wiley.

Grover, V., & Davenport, T. H. (2001). General Perspectives on Knowledge Management: Fostering a Research Agenda. *Journal of Management Information Systems*, 5-21.

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research*, *2*(163-194), 105.

Gumede, V. (2000). Growth and exporting of small and medium enterprises in South Africa, some thoughts on policy and scope for further research. *Trade and Industrial Policy Strategies, South Africa*.

Guo, Z., Zhang, J., & Gao, L. (2018). It is not a panacea! The conditional effect of bricolage in SME opportunity exploitation. *R&D Management*, *48*(5), 603-614.

Hair Jr, J. F., Babin, B., Money, A. H., & Samouel, P. (2003). *Essentials of Business Research Methods*. Johns Wiley & Sons : United States of America.

Hair, J. F., Babin, B. J. & Boles, J. S. (2008). Publishing research in marketing journals using structural equation modeling. *Journal of marketing theory and practice*, *16*(4), 279-286.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2009). *Análise multivariada de dados*. Bookman editora.

Hair, J. F., Ortinau, D. J., & Harrison, D. E. (2010). *Essentials of marketing research* (Vol. 2). New York, NY: McGraw-Hill/Irwin.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2012). Partial least squares: the better approach to structural equation modeling?. *Long range planning*, *45*(5-6), 312-319.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long range planning*, *46*(1-2), 1-12.

Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European business review*.

Hair Jr, J. F., Sarstedt, M., Matthews, L. M., & Ringle, C. M. (2016). Identifying and treating unobserved heterogeneity with FIMIX-PLS: part I–method. *European Business Review*.

Hayes, A. F. (2015). An index and test of linear moderated mediation. *Multivariate behavioral research*, *50*(1), 1-22.

Harrison, J. S., & Wicks, A. C. (2013). Stakeholder theory, value, and firm performance. *Business ethics quarterly*, *23*(1), 97-124.

Hein, G. (1991). Constructivist learning theory. *Institute for Inquiry. Available at:/http://www. exploratorium. edu/ifi/resources/constructivistlearning. htmlS*.

Hendrickson, A. E., & White, P. O. (1964). Promax: A quick method for rotation to oblique simple structure. *British journal of statistical psychology*, *17*(1), 65-70.

Hitt, M. A. (2003). Managing resources: Linking unique resources, management, and wealth creation in family firms. *Entrepreneurship theory and practice*, *27*(4), 339-358.

Hitt, M. A., Ireland, R. D., Sirmon, D. G., & Trahms, C. A. (2011). Strategic entrepreneurship: creating value for individuals, organizations, and society. *Academy of management perspectives*, *25*(2), 57-75.

Hollenstein, H. 2005. Determinants of International Activities: Are SMEs Different? *Small Business Economics*, 24(5), 431-450.

Holton, S., McCann, F., Prendergast, K., & Purdue, D. (2013). Policy measures to improve access to credit for SMEs: a survey. *Quarterly Bulletin Articles*, *4*, 91-110.

Honebein, P. C. (1996). Seven goals for the design of constructivist learning environments. *Constructivist learning environments: Case studies in instructional design*, 11-24.

Hoshmand, L. T. (2003). Can lessons of history and logical analysis ensure progress in psychological science? *Theory & Psychology*, *13*(1), 39-44.

Hotho, S., & Champion, K. (2011). Small businesses in the new creative industries: innovation as a people management challenge. *Management Decision*.

Huang, K. F., & Yu, C. M. J. (2011). The effect of competitive and non-competitive R&D collaboration on firm innovation. *The Journal of Technology Transfer*, *36*(4), 383-403.

Hult, G. T. M., Hurley, R. F., & Knight, G. A. (2004). Innovativeness: Its antecedents and impact on business performance. *Industrial marketing management*, *33*(5), 429-438.

Iddris, F. (2016). Innovation capability: A systematic review and research agenda. *Interdisciplinary Journal of Information, Knowledge, and Management*, *11*, 235-260.

IFC (2011). *IFC and Small and Medium Enterprises.* Retrieved from

https://www.ifc.org/wps/wcm/connect/d3b0345a-d6ba-4028-8b21-594553773166/IFC-SME-Factsheet2012.pdf?MOD=AJPERES&CVID=juUwYke

Jarvis, R., Curran, J., Kitching, J., & Lightfoot, G. (2000). The use of quantitative and qualitative criteria in the measurement of performance in small firms. *Journal of small business and enterprise development*.

Jayasinghe, L., & Ritson, M. (2012). Everyday advertising context: An ethnography of advertising response in the family living room. *Journal of Consumer Research*, *40*(1), 104-121.

Johnson, P., & Duberley, J. (2000). *Understanding management research: An introduction to epistemology*. Sage.

Kaplan, R. S., & Norton, D. P. (1992). The balanced scorecard--measures that drive performance. *Harvard Business Review*, *70*(1), 71-79.

Kaplan, R. S., & Norton, D. P. (2001). Transforming the balanced scorecard from performance measurement to strategic management: Part 1. *Accounting horizons*, *15*(1), 87-104.

Kaplan, S., Schenkel, A., von Krogh, G., & Weber, C. (2001). Knowledge-based theories of the firm in strategic management: A review and extension. *International Journal of Project Management*, *25*(56), 143-158.

Kang, S. T., & Kim, J. K. (2011). The relation between fiber orientation and tensile behavior in an Ultra High Performance Fiber Reinforced Cementitious Composites (UHPFRCC). *Cement and Concrete Research*, *41*(10), 1001-1014.

Kaiser, H. F. (1970). A second generation little jiffy. *Psychometrika*, *35*(4), 401-415.

Kao, R. W., & Liang, T. W. (2001). Entrepreneurship and enterprise development in Asia. *Language*, *12*(380).

Kayanula, D., & Quartey, P. (2000). The policy environment for promoting small and medium-sized enterprises in Ghana and Malawi.

Kelemen, M. L., & Rumens, N. (2008). *An introduction to critical management research*. London: Sage.

Kent, J. A. (Ed.). (2007). Kent and Riegel's handbook of industrial chemistry and biotechnology.

Killam, L. A. (2010). An Introduction to Distance Education: Understanding Teaching and Learning in a New Era. *International Journal of E-Learning & Distance Education*, *24*(3), 1.

Killam, L. (2013). *Research terminology simplified: Paradigms, axiology, ontology, epistemology and methodology*. Laura Killam.

Kim, S. (2003). Research paradigms in organizational learning and performance: Competing modes of inquiry. *Information technology, learning, and performance journal*, *21*(1), 9.

Kim, W. C., & Mauborgne, R. (2005). Value innovation: a leap into the blue ocean. *Journal of business strategy*.

Kim, K., Hwang, J., Zo, H., & Lee, H. (2016). Understanding users' continuance intention toward smartphone augmented reality applications. *Information development*, *32*(2), 161-174.

Kline, T. (2005). *Psychological testing: A practical approach to design and evaluation*. Sage.

Kline, P. (2014). *An easy guide to factor analysis*. Routledge.

Kline, R. B. (2015). *Principles and practice of structural equation modeling*. Guilford publications.

Kogut, B., & Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization science*, *3*(3), 383-397.

Knight, G. 2000. Entrepreneurship and Marketing Strategy: The SME Under Globalization. *Journal of International Marketing*. 8 (2), 12-32.

Kuyumcu, D., & Dahling, J. J. (2014). Constraints for some, opportunities for others? Interactive and indirect effects of Machiavellianism and organizational constraints on task performance ratings. *Journal of Business and Psychology*, *29*(2), 301-310.

Lanzara, G. F. (1998). Self-destructive processes in institution building and some modest countervailing mechanisms. *European Journal of Political Research*, *33*(1), 1-39.

Lawson, B., & Samson, D. (2001). Developing innovation capability in organisations: a dynamic capabilities approach. *International journal of innovation management*, *5*(03), 377-400.

Lavrakas, P. J. (2008). *Self administered quesionnaires in encyclopaedia of survey research methods.* Retrieved from https://methods.sagepub.com/reference/encyclopedia-of-survey-research-methods/n522.xml

Lebans, M., & Euske, K. (2006). Business Performance Measurement: A conceptual and operational delineation of performance.

Leedy, P. D., & Ormrod, J. E. (2001). Practical research: Planning and research. *Upper Saddle*.

Leedy, P. D., & Ormrod, J. E. (2005). *Practical research* (Vol. 108). Saddle River, NJ: Pearson Custom.

Lévi-Strauss, C. (1966) *The Savage Mind*. Chicago: University of Chicago Press.

Levi-Strauss, C. (1967). The Savage Mind. *Philosophical Quarterly*, *17*(69).

Lin, X. (2001). Designing metacognitive activities. *Educational Technology Research and Development*, *49*(2), 23-40.

Lin, H. F. (2007). Knowledge sharing and firm innovation capability: an empirical study. *International Journal of manpower*.

Lincoln, Y. S., Lynham, S. A., & Guba, E. G. (2011). Paradigmatic controversies, contradictions, and emerging confluences, revisited. *The Sage handbook of qualitative research*, *4*(2), 97-128.

Loewenberger, P. (2013). The role of HRD in stimulating, supporting, and sustaining creativity and innovation. *Human Resource Development Review*, *12*(4), 422-455.

Love, J., & Roper, S. (2013). SME innovation, exporting and growth. *Enterprise Research Centre*, *5*, 1-56.

Lynch, R. L., & Cross, K. F. (1992). Migliorare la performance aziendale. *F. Angeli, Milano*.

Macionis, J. J., & Gerber, L. M. (2010). Sociology, seventh Canadian edition. *Don Mills: Pearson Education Canada*, *1*.

Mackinnon, D. P. (2000). Contrasts in multiple mediator models. In J. S. Rose, L. Chassin, C. C. Presson, & S. J. Sherman (Eds), *Multivariate applications in substance use research: New methods for new questions* (141–160). Mahwah, NJ: Erlbaum.

Mahmood, S. (2008). Arbitrary amplitude dust ion acoustic solitary waves in dense Fermi plasmas. *Physics of Plasmas*, *15*(1), 014502.

Malhotra, N. K. (1996). The impact of the Academy of Marketing Science on marketing scholarship:an analysis of the research published in JAMS. *Journal of the Academy of Marketing Science*, *24*(4), 291-298.

Malhotra, N. K., & Dash, S. (2005). An applied orientation. *Marketing Research*, *2*.

Malhotra, N., & Birks, D. (2006). Marketing Research: An Applied Perspective. Prentice Hall.

Malhotra, N. K., & Birks, D. F. (2007). *Marketing research: An applied approach.* London, Prentice Hall.

Martins, E. C., & Terblanche, F. (2003). Building organisational culture that stimulates creativity and innovation. *European journal of innovation management*.

Mauborgne, L., & Rival, X. (2005, April). Trace partitioning in abstract interpretation based static analyzers. In *European Symposium on Programming* (pp. 5-20). Springer, Berlin, Heidelberg.

Maxwell, S., & Stone, D. L. (Eds.). (2004). *Global knowledge networks and international development*. Routledge.

McDaniel, C., & Gates, R. (2010). Marketing research with SPSS. Hoboken.

McDowell, W. C., Peake, W. O., Coder, L., & Harris, M. L. (2018). Building small firm performance through intellectual capital development: Exploring innovation as the "black box". *Journal of business research*, *88*, 321-327.

McGiven, Y. (2006). *Collecting Qualitative Data in Research Methods in Business Studies*. Pearson Education.

McGiven, Y. (2009). *The practice of market research: an introduction*. Pearson Education.

Mckeown, M. (2019). *The strategy book*. Pearson UK.

Mensah, S. (2004, March). A review of SME financing schemes in Ghana. In *A Presentation at the UNIDO Regional Workshop of Financing SMEs* (pp. 15-16). Ghana: Accra.

Mensah, M. S. B. (2012). Access to market of a manufacturing small business sector in Ghana. *International Journal of Business and Management*, *7*(12), 36.

Menguc, B., Auh, S., & Yannopoulos, P. (2014). Customer and supplier involvement in design: The moderating role of incremental and radical innovation capability. *Journal of Product Innovation Management*, *31*(2), 313-328.

Merriam-Webster Dictionary (2013). *Axiology*, Springfield, MA: Merriam-Webster Inc.

Mertens, D. M. (2010). Philosophy in mixed methods teaching: The transformative paradigm as illustration. *International Journal of Multiple Research Approaches*, *4*(1), 9-18.

Miner, A. S., Bassoff, P., & Moorman, C.V. (2001). Organizational improvisation and learning: A field study. *Administrative Science Quarterly*. 46, 304–337.

Ministry of Trade and Industry (2021). *MoTI news*. Retrieved from https://moti.gov.gh/article.php?id=NjM=

MoF (2021). *Obaatanpa programme.* Retrieved from https://mofep.gov.gh/mof-covid-19-updates/obaatanpa-programme

Morgan, K. (2007). The learning region: institutions, innovation and regional renewal. *Regional studies*, *41*(1), 147-159.

Mowery, D. C., Oxley, J. E., & Silverman, B. S. (1996). Strategic alliances and inter firm knowledge transfer. *Strategic management journal*, *17*(S2), 77-91.

Mueller, R. O., & Hancock, G. R. (2001). Factor analysis and latent structure, confirmatory.

Neely, A. D., Adams, C., & Kennerley, M. (2002). *The performance prism: The scorecard for measuring and managing business success*. London: Prentice Hall Financial Times.

Neely, A., Mills, J., Platts, K., Richards, H., Gregory, M., Bourne, M., & Kennerley, M.

(2000). Performance measurement system design: developing and testing a process-based approach. *International journal of operations & production management*.

Neely, A., Adams, C., & Crowe, P. (2001). The performance prism in practice. *Measuring business excellence*, 5(2), 6-13

Nelson, R. J. (2005). *An introduction to behavioral endocrinology*. Sinauer Associates.

Neuman, W. (2005). *Social Research Methods: Quantitative and Qualitative approaches.* Allyn and bacon. Boston, MA.

Neuman, D. (2014). Qualitative research in educational communications and technology: A brief introduction to principles and procedures. *Journal of Computing in Higher Education*, *26*(1), 69-86.

Nonaka, I., & Toyama, R. (2005). The theory of the knowledge-creating firm: subjectivity, objectivity and synthesis. *Industrial and corporate change*, *14*(3), 419-436.

Nonaka, I., Von Krogh, G., & Voelpel, S. (2006). Organizational knowledge creation theory: Evolutionary paths and future advances. *Organization studies*, *27*(8), 1179-1208.

Ntiamoah, E. B., Opoku, B., Abrokwah, E., Baah-Frimpong, G., & Agyei-Sakyi, M. (2014). Assessing The Contributions Of Small And Medium Sized Enterprises To Ghana‟ s Economic Growth. *International journal of economics, commerce and management*, *2*(11), 1-14.

Ntiamoah, E. B., Li, D., & Kwamega, M. (2016). Impact of government and other institutions' support on performance of small and medium enterprises in the agribusiness sector in Ghana. *American Journal of Industrial and Business Management*, *6*(05), 558.

O'Connor, P., Martin, P. Y., Carvalho, T., Hagan, C. O., Veronesi, L., Mich, O., ... & Caglayan, H. (2019). Leadership practices by senior position holders in Higher Educational Research Institutes: Stealth power in action?. *Leadership*, *15*(6), 722-743.

Odoom, C. K. (2012). Logistics and supply chain management in the hotel industry: Impact on hotel performance in service delivery.

Odoom, R. (2016). Brand-building efforts in high and low performing small and medium-

sized enterprises (SMEs). *Journal of Small Business and Enterprise Development*.

Odoom, R., Anning-Dorson, T., & Acheampong, G. (2017). Antecedents of social media usage and performance benefits in small-and medium-sized enterprises (SMEs). *Journal of Enterprise Information Management*.

OECD (2017). *Small, Medium, Strong. Trends in SME Performance and Business Conditions*, OECD Publishing, Paris

Okpara, J. O. (2011). Factors constraining the growth and survival of SMEs in Nigeria: Implications for poverty alleviation. *Management Research Review*, *34*(2), 156-171.

Olsson, A., Wadell, C., Odenrick, P., & Bergendahl, M. N. (2010). An action learning method for increased innovation capability in organisations. *Action Learning: Research and Practice*, *7*(2), 167-179.

Opoku, R. A., & Akorli, P. A. (2009). The preference gap: Ghanaian consumers attitudes toward local and imported products. *African Journal of Business Management*, *3*(8), 350-357.

Organization for Economic Co-operation and Development (2000). Small and medium-sized enterprises: local strength, global reach. *OECD Policy Review*, June, pp. 1-8.

Organization for Economic Co-operation and Development. (2002), *Small and Medium Enterprise Outlook*, OECD, Paris.

Osborne, J. W. (2015). What is rotating in exploratory factor analysis?. *Practical Assessment, Research, and Evaluation*, *20*(1), 2.

Pallant, J. (2011). Survival manual. *A step by step guide to data analysis using SPSS*, *4*.

Pallant, J. (2016). *SPSS survival guide manual* 6th ed. two Penn plaza.

Patten, M. L., & Newhart, M. (2017). *Understanding research methods: An overview of the essentials*. Routledge.

Patton, A. J. (2012). A review of copula models for economic time series. *Journal of Multivariate Analysis*, *110*, 4-18.

Peterson, W., Gijsbers, G., & Wilks, M. (2003). *An organizational performance assessment*

system for agricultural research organizations: concepts, methods, and procedures (No. 2126-2021-1308).

Phillips, N., & Tracey, P. (2007). Opportunity recognition, entrepreneurial capabilities and bricolage: connecting institutional theory and entrepreneurship in strategic organization. *Strategic organization*, *5*(3), 313-320.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioural research: A critical review of the literature and recommended remedies. *Journal of applied psychology*, *88*(5), 879 – 903.

Ponterotto, J. G. (2005). Qualitative research in counseling psychology: A primer on research paradigms and philosophy of science. *Journal of counseling psychology*, *52*(2), 126.

Puni, A., Ofei, S. B., & Okoe, A. (2014). The effect of leadership styles on firm performance in Ghana. *International Journal of Marketing Studies*, *6*(1), 177.

Quaye, D., & Mensah, I. (2019). Marketing innovation and sustainable competitive advantage of manufacturing SMEs in Ghana. *Management Decision*.

Rajapathirana, R. J., & Hui, Y. (2018). Relationship between innovation capability, innovation type, and firm performance. *Journal of Innovation & Knowledge*, *3*(1), 44-55.

Ray, G., Barney, J. B., & Muhanna, W. A. (2004). Capabilities, business processes, and competitive advantage: choosing the dependent variable in empirical tests of the resource-based view. *Strategic management journal*, *25*(1), 23-37.

Rezaei, J. (2015). Best-worst multi-criteria decision-making method. *Omega*, *53*, 49-57.

Rezaei, S., & Ghodsi, S. S. (2014). Does value matters in playing online game? An empirical study among massively multiplayer online role-playing games (MMORPGs). *Computers in Human Behavior*, *35*, 252-266.

Rigdon, E. E., Sarstedt, M., & Ringle, C. M. (2017). On comparing results from CB-SEM and PLS-SEM: Five perspectives and five recommendations. *Marketing: ZFP–Journal of Research and Management*, *39*(3), 4-16.

Roberts, P., & Priest, H. (2006). Reliability and validity in research. *Nursing standard*, *20*(44), 41-46.

Robertson, R. (1992). *Globalization: Social theory and global culture* (Vol. 16). Sage.

Robson, C. (2011). *Real world research: A resource for users of social research methods in applied settings* 3rd edition. West Sussex: John Wiley & Sons.

Rodsutti, M. C., & Swierczek, F. W. (2002). Leadership and organizational effectiveness in multinational enterprises in southeast Asia. *Leadership & Organization Development Journal*.

Rondi, E., De Massis, A., & Kotlar, J. (2019). Unlocking innovation potential: A typology of family business innovation postures and the critical role of the family system. *Journal of Family Business Strategy*, *10*(4), 100236.

Ronkko, M., Peltonen, J., & Arenius, P. (2013). Selective or parallel? Toward measuring the domains of entrepreneurial bricolage. In *Entrepreneurial resourcefulness: Competing with constraints*. Emerald Group Publishing Limited.

Rothaermel, F. T., & Deeds, D. L. (2006). Alliance type, alliance experience and alliance management capability in high-technology ventures. *Journal of business venturing*, *21*(4), 429-460.

Sahoo, S. (2019). Quality management, innovation capability and firm performance: empirical insights from Indian manufacturing SMEs. *The TQM Journal*.

Samson, D., & Gloet, M. (2004). Innovation capability in Australian manufacturing organisations: an exploratory study. *International Journal of Production Research*, *52*(21), 6448-6466.

Samson, D., Gloet, M., & Singh, P. (2017). Systematic innovation capability: Evidence from case studies and a large survey. *International Journal of Innovation Management*, *21*(07), 1750058.

Saunders, M. N., & Lewis, P. (2012). *Doing research in business & management: An essential guide to planning your project*. Upper Saddle River, NJ: Pearson Education.

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*.

Essex. Financial Times/Prentice Hall.

Saunders, M. N., M., Lewis, P., & Thornhill, A. (2011). *Research methods for business students, 5/e*. India: Pearson Education.

Saunila, M., & Ukko, J. (2011). A conceptual framework for the measurement of innovation capability and its effects. *Baltic Journal of Management*, *7*(4), 355-375.

Saunila, M., & Ukko, J. (2013). Facilitating innovation capability through performance measurement: A study of Finnish SMEs. *Management Research Review*.

Saunila, M. (2014). Innovation capability for SME success: perspectives of financial and operational performance. *Journal of Advances in Management Research*, *11*(2), 163-175.

Schaper, M. (2002). The challenge of environmental responsibility and sustainable development: Implications for SME and entrepreneurship academics. *Radical changes in the world: Will SMEs soar or crash*, 541-553.

Senyard, J., Baker, T., & Davidsson, P. (2009). Entrepreneurial bricolage: Towards systematic empirical testing. *Frontiers of Entrepreneurship Research*, *29*(5), 5.

Senyard, J., Baker, T., & Steffens, P. (2010). Entrepreneurial bricolage and firm performance: Moderating effects of firm change and innovativeness. In *Annual Meeting of the Academy of Management* (No. 50237, pp. 1-25).

Senyard, J., Baker, T., Steffens, P., & Davidsson, P. (2014). Bricolage as a path to innovativeness for resource-constrained new firms. *Journal of Product Innovation Management*, *31*(2), 211-230.

Senyard, J., Davidsson, P., & Steffens, P. (2015). Environmental dynamism as a moderator of the relationship between bricolage and firm performance. In *Annual Meeting of the Academy of Management* (No. 50237, pp. 1-1).

Seibel, H. D. (1996). Microenterprises in the Informal Economy: Leave them of Support them? Retrieved from http://www.hwf.uni-koeln.de/data/eso/File/seibel/ElFo70.pdf

Shannon-Baker, P. (2016). Making paradigms meaningful in mixed methods research. *Journal of mixed methods research*, *10*(4), 319-334.

Shan, Y. G., & McIver, R. P. (2011). Corporate governance mechanisms and financial performance in China: Panel data evidence on listed non-financial companies. *Asia Pacific Business Review*, *17*(3), 301-324.

Sher, P. J., & Yang, P. Y. (2005). The effects of innovative capabilities and R&D clustering on firm performance: the evidence of Taiwan's semiconductor industry. *Technovation*, *25*(1), 33-43.

Silverman, D. (1998). Qualitative research: meanings or practices? *Information Systems Journal*, *8*(1), 3-20.

Simons, R. (2000). *Performance measurement and control systems for implementing strategy*. Prentice hall.

Singh, R. K., Garg, S. K., & Deshmukh, S. G. (2008). Challenges and strategies for competitiveness of SMEs: a case study in the Indian context. *International Journal of Services and Operations Management*, *4*(2), 181-200.

Singh, R. K., Garg, S. K., & Deshmukh, S. G. (2008). Strategy development by SMEs for competitiveness: a review. *Benchmarking: An International Journal*, *15*(5), 525-547.

Simons, R. (2000). *Performance measurement and control systems for implementing strategy*. Prentice Hall.

Sirmon, D. G., Hitt, M. A., Ireland, R. D., & Gilbert, B. A. (2011). Resource orchestration to create competitive advantage: Breadth, depth, and life cycle effects. *Journal of management*, *37*(5), 1390-1412.

Streiner, D. L. (2013). A Checklist for Evaluating the Usefulness of Rating Scales. *A Guide for the Statistically Perplexed: Selected Readings for Clinical Researchers*, 267.

Soosay, C. A., Hyland, P. W., & Ferrer, M. (2008). Supply chain collaboration: capabilities for continuous innovation. *Supply chain management: An international journal*.

Stein, P., Goland, T., & Schiff, R. (2010). Two trillion and counting. *International Finance Corporation and McKinsey & Company*.

Stephanou, C., & Rodriguez, C. (2008). Bank financing to small and medium-sized

enterprises (SMEs) in Colombia. *World Bank Policy research working paper*, (4481).

Stinchfield, B. T., Nelson, R. E., & Wood, M. S. (2013). Learning from Levi–Strauss' legacy: Art, craft, engineering, bricolage, and brokerage entrepreneurship. *Entrepreneurship theory and practice*, *37*(4), 889-921.

Stone-Romero, E. F. (2009). Implications of research design options for the validity of inferences derived from organizational research. *The Sage handbook of organizational research methods*, 302-327.

Swink, M. (2006). Building collaborative innovation capability. *Research-technology management*, *49*(2), 37-47.

Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). *Using multivariate statistics*. Vol. 5. Boston, MA: Pearson.

Tanaka, J. S. (1993). Multifaceted conceptions of fit. *Testing structural equation models*, 10-39.

Tangen, S. (2004). Performance measurement: from philosophy to practice. *International journal of productivity and performance management*.

Taouab, O., & Issor, Z. (2019). Firm performance: Definition and measurement models. *European Scientific Journal*, *15*(1), 93-106

Tasavori, M., Kwong, C., & Pruthi, S. (2018). Resource bricolage and growth of product and market scope in social enterprises. *Entrepreneurship & Regional Development*, *30*(3-4), 336-361.

Tashakkori, A., & Teddlie, C. (Eds.). (2010). *Sage handbook of mixed methods in social & behavioral research*. Thousand Oaks, CA: Sage.

Taouab, O., & Issor, Z. (2019). Firm performance: Definition and measurement models. *European Scientific Journal*, *15*(1), 93-106.

Tillal, E., Zahir, I., Ray J. P., & Love, P. E. D. (2002). Quantitative and qualitative decision-making methods in simulation modelling, *Management Decision*, 40(1), 64 – 73.

Tindiwensi, C. K., Abaho, E., Munene, J. C., Muhwezi, M., & Nkote, I. N. (2020). Entrepreneurial bricolage in smallholder commercial farming: a family business perspective. *Journal of Family Business Management*.

Tsilika, T., Kakouris, A., Apostolopoulos, N., & Dermatis, Z. (2020). Entrepreneurial bricolage in the aftermath of a shock. Insights from Greek SMEs. *Journal of Small Business & Entrepreneurship*, *32*(6), 635-652.

United Nations Conference on Trade and Development – UNCTAD (2005). *Improving the competitiveness of SME's through enhancing productive capacity.* Retrieved from https://unctad.org/system/files/official-document/iteteb20051_en.pdf

Valenti, M. A., Luce, R., & Mayfield, C. (2011). The effects of firm performance on corporate governance. *Management Research Review*.

Van Burg, E., Podoynitsyna, K., Beck, L., & Lommelen, T. (2012). Directive deficiencies: How resource constraints direct opportunity identification in SMEs. *Journal of Product Innovation Management*, *29*(6), 1000-1011.

Vanevenhoven, J., Winkel, D., Malewicki, D., Dougan, W. L., & Bronson, J. (2011). Varieties of Bricolage and the Process of Entrepreneurship. *New England Journal of Entrepreneurship*.

Van Maanen, J. (1983). *Doing new things in old ways* (No. TR-ONR-17). Cambridge, MA: Alfred P Sloan School of Management.

Van Winkelen, C., & Tovstiga, G. (2009). Understanding an organisation's knowledge-enabled innovation capability. *International Journal of Knowledge Management Studies*, *3*(1-2), 97-115.

Varun Grover, T. H. D. (2001). General perspectives on knowledge management: Fostering a research agenda. *Journal of management information systems*, *18*(1), 5-21.

Verboncu, I., & Zalman, M. (2005). Management si performanþe. *Universitara House of Publishing, Bucharest*.

Watson, J., Newby, R., & Woodliff, D. (2000, February). Work and owner satisfaction: implications for performance measurement. In *USASBE 2000 Conference Proceedings, San Antonio, TX* (pp. 16-19).

Wang, C. L., & Ahmed, P. K. (2004). The development and validation of the organisational innovativeness construct using confirmatory factor analysis. *European journal of innovation management*.

Webster, M. (2013). Merriam Webster dictionary online. *Merriam Webster*.

Weick, K. E. (1993). The collapse of sense making in organizations: The Mann Gulch disaster. *Administrative Science Quarterly* 38, 628–652.

Williamson, O. E. (1999). Strategy research: governance and competence perspectives. *Strategic management journal*, *20*(12), 1087-1108.

Willis, K. (2011). *Theories and practices of development*. routledge.

Witell, L., Gebauer, H., Jaakkola, E., Hammedi, W., Patricio, L., & Perks, H. (2017). A bricolage perspective on service innovation. *Journal of Business Research*, *79*, 290-298.

World Bank Enterprise Survey- WBES (2013). *Ghana country profile 2013.* Retrieved from https://openknowledge.worldbank.org/bitstream/handle/10986/20890/923290WP0Box385365B00PUBLIC00Ghana02013.pdf?sequence=1&isAllowed=y

World Bank (2010). *Ghana's infrastructure: a continental perspective.* Retrieved from https://openknowledge.worldbank.org/bitstream/handle/10986/27760/623880WP0P12420ry0report0Image0Bank.pdf?sequence=1&isAllowed=y

World Population Review (2021). *Population of ciites in Ghana.* Retrieved from https://worldpopulationreview.com/countries/cities/ghana

World Economic Forum (2021). *Future readiness of SMEs: Mobilizing the SMEs sector to drive widespread sustainability and prosperity.* Retrieved from https://www.weforum.org/whitepapers/future-readiness-of-smes-mobilizing-the-sme-sector-to-drive-widespread-sustainability-and-prosperity/

Wu, L., Liu, H., & Zhang, J. (2017). Bricolage effects on new-product development speed and creativity: The moderating role of technological turbulence. *Journal of Business Research*, *70*, 127-135.

Wyne, F., & Hafeez, M. H. (2019). Do Strategic Resources Influence SMEs Performance?. *Pakistan Journal of Social Sciences (PJSS)*, *39*(3).

Yang, J. (2012). Innovation capability and corporate growth: An empirical investigation in China. *Journal of Engineering and Technology Management*, *29*(1), 34-46.

Yin, R. K. (1994). Discovering the future of the case study. Method in evaluation research. *Evaluation practice*, *15*(3), 283-290.

Yin, R. K. (2009). *Case study research: Design and methods (applied social research methods). London and Singapore: Sage*.

Yong, A. G., & Pearce, S. (2013). A beginner's guide to factor analysis: Focusing on exploratory factor analysis. *Tutorials in quantitative methods for psychology*, *9*(2), 79-94.

Yu, X., Li, Y., Su, Z., Tao, Y., Nguyen, B., & Xia, F. (2020). Entrepreneurial bricolage and its effects on new venture growth and adaptiveness in an emerging economy. *Asia Pacific Journal of Management*, *37*(4), 1141-1163.

Yu, F., & Schweisfurth, T. (2020). Industry 4.0 technology implementation in SMEs–A survey in the Danish-German border region. *International Journal of Innovation Studies*, *4*(3), 76-84.

Yusr, M. M., Othman, A. R., Mokhtar, S. S. M., & Don, M. S. (2014). How innovation capability can be a mediate between knowledge management and innovation performance. *International Business Management*, *8*(2), 118-125.

Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2003). Research methods. *Health economics research method*, *2*.

Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2012). Business Research Methods (9th International ed.). *South-Western College Publishing*.

Zikmund, W. G., Carr, J. C., & Griffin, M. (2013). *Business Research Methods*. Cengage Learning.

APPENDIX: QUESTIONNAIRE

UNIVERSITY OF GHANA BUSINESS SCHOOL
DEPARTMENT OF MARKETING AND ENTREPRENEURSHIP
RESEARCH QUESTIONNAIRE

Introduction

Dear Respondent: This questionnaire is designed to understand the relationship between bricolage and enterprise competitive performance and how innovation capability mediates this relationship. This questionnaire is purely for academic purpose and as such any information provided would be treated with utmost confidentiality. It is also anonymous and thus, your identity will be concealed. **PLEASE NOTE:** there are no right or wrong answers

SECTION 1: Enterprise-Level Questions: *General Information*

1. Classification: Manufacturing [ ] Retail [ ] Services [ ] Agriculture [ ] Other [ ]
2. What is the firm's current legal status?
   Sole Proprietorship [ ] Partnership [ ] Limited Liability Company [ ]
3. Is the business family owned? Yes [ ] No [ ] || Percentage if YES _____
4. What percentage of the firm is owned by:
   Foreigners _____ Private Locals _____ Government/State _____
5. In what year did it start operations_____
6. How many employees did the firm start with? _____
7. In what year was the business registered _____
8. What percentage of the business is owned by females? _____
9. Is the top manager female? Yes [ ] No [ ]
10. Does this firm have an internationally-recognized quality certification such ISO and HACCP? Yes [ ] No [ ]

SECTION 2 Enterprise-Level Questions: *Sales and Supplies*

11. What was the firm's sales in the last fiscal year? ***[Please refer to financial records and compute month by month]*** _____

SECTION 3: Theories of Entrepreneurship

To what extent do you agree with the following statements? Indicate on a continuum from 1 to 5 where 1 reflects strongly disagree and 5 for strongly agree.

No.	Statement	1	2	3	4	5
3.1	**Bricolage**					
	We are confident in our ability develop workable solutions to new challenges by using our existing resources					
	We typically take on a broader range of challenges than others with our resources would do					
	We use any existing resource that seems useful to responding to a new problem or opportunity					
	We deal with new challenges by applying a combination of our existing resources and other resources inexpensively available to us					
	When dealing with new problems or opportunities we					

	immediately act by assuming that we will find a workable solution					
	By combining our existing resources, we take on a very broad variety of new challenges					
	When we face new challenges, we put together workable solutions from my existing resources					
	We combine resources to accomplish new challenges that the resources were not originally intended to accomplish					
	To deal with new challenges, we access resources at low or no cost and combine them with what I already have.					

Section 4: Entrepreneurial Performance
To what extent do you agree with the following statements? Indicate on a continuum from 1 to 5 where 1 reflects not at all and 5 very much.

No.	Statement	1	2	3	4	5
4.1	**Enterprise Performance**					
	To what extent did your business perform better than its competitors					
	Profitability					
	Sales growth					
	Market share					
	Return on investment					
	Overall business performance					

Section 5: Enterprise-Level [Answer Questions in relation to the business]
To what extent do you agree with the following statements? Indicate on a continuum from 1 to 5 where 1 reflects strongly disagree and 5 for strongly agree.

No.	Statement	1	2	3	4	5
5.1	**Innovation Capability**					
	Our firm has an organisational culture that promotes innovation					
	Our firm is able to use knowledge from various sources to develop products efficiently and rapidly.					
	Our firm is able to identify changes in the market and rapidly apply them to its own products and processes.					
	The employees in our firm are able to contribute to activities such as product development, improving the innovation process and developing new ideas.					
	Our firm is able to evaluate new ideas from customers, suppliers, etc. and take them into account in product development.					

Section 6: Others
6.1: Innovation
Did your business introduce any new products in the last year? Yes [ ] No [ ]
How many products and services were introduced? _____
What was the percentage of sales from all innovative products? _____
Was the main innovative product new to market/industry? Yes [ ] No [ ]