

**UNIVERSITY OF GHANA**



**ACCESS TO FINANCE AND PERFORMANCE OF FIRMS IN THE  
CONSTRUCTION SECTOR OF GHANA**

**BY**

**PATRICK EBO BONFUL JNR**

**(10415229)**

**A LONG ESSAY SUBMITTED TO THE DEPARTMENT OF FINANCE,  
UNIVERSITY OF GHANA, LEGON, IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR THE AWARD OF MASTER OF BUSINESS  
ADMINISTRATION (FINANCE OPTION) DEGREE**

**MAY, 2019**

**DECLARATION**

I, the undersigned do hereby declare that this work is the result of my own research and no part of it has been presented by anyone for any academic award in this or any other university. All references used in the work have been duly acknowledged.

.....

**PATRICK EBO BONFUL JNR**

**(10415229)**

.....

**DATE**

**CERTIFICATION**

I certify that this long essay was supervised in accordance with the procedures and guidelines laid down by the University of Ghana.

.....

**DR. LORD MENSAH**

**(SUPERVISOR)**

.....

**DATE**

## **DEDICATION**

This research work is dedicated to my family, especially to my parents, Mr. Patrick Ebo Bonful and Mrs. Patricia Enyonam Bonful, for their love, support and guidance throughout this journey.

## **ACKNOWLEDGEMENT**

First and foremost, I am eternally thankful to the Almighty God for granting me the needed grace, wisdom and knowledge and favour to complete this thesis effectively. I would also want to take this opportunity to render a special thanks to my supervisor, Dr. Lord Mensah. Under his watchful eye and insightful direction, I was able to grasp the needed skill to complete this study.

I am also especially grateful to Mr. Patrick Ebo Bonful, who inspired the selection of the topic for my thesis study. His valued input was vital as a stepping stone towards accomplishing this task. God bless you greatly.

I would like to express my sincere appreciation to all the firms and construction companies who graciously took part in my study. I am grateful that they made time to fill the questionnaires which became the substance of my study.

Finally, special thanks to Francis Kofi Gogovie and other colleagues whose suggestions kept me on the right track till the very end.

## TABLE OF CONTENT

DECLARATION .....	i
CERTIFICATION .....	ii
DEDICATION .....	iii
ACKNOWLEDGEMENT .....	iv
ABSTRACT.....	ix
TABLE OF CONTENT .....	v
LIST OF TABLES .....	vii
LIST OF FIGURES .....	viii
CHAPTER ONE .....	1
INTRODUCTION .....	1
1.1 Background of the Study.....	1
1.2 Problem Statement .....	2
1.3 Objectives of the study.....	3
1.4 Research Questions .....	3
1.5 Significance of the Study .....	3
CHAPTER TWO .....	5
LITERATURE REVIEW .....	5
2.1 Introduction .....	5
2.2 Research Evidence on Access to Finance and Financial Inclusion.....	5
2.2.1 Theories on Financial Inclusion .....	11
2.3 Research Evidence on the Construction sector and Project Finance .....	13
2.4 Hypotheses and Assumptions based on Literature.....	16
CHAPTER THREE .....	17
METHODOLOGY .....	17
3.1 Introduction .....	17

3.2 Variables for access to finance and financial inclusion .....	17
3.3 Control Variables and Dependent Variable .....	19
3.4 Model .....	20
3.5 Data .....	21
CHAPTER FOUR.....	22
DATA ANALYSIS.....	22
4.1 Introduction .....	22
4.2 Descriptive Statistics .....	22
4.2.1 Financial Inclusion Variables .....	22
4.2.2 Control Variables.....	24
4.3 Correlation and Regression .....	27
4.3.1 Correlation .....	27
4.3.2 Regression Analysis .....	28
CHAPTER FIVE .....	32
CONCLUSION AND RECOMMENDATIONS .....	32
5.1 Introduction .....	32
5.2 Conclusion.....	32
5.3 Recommendations .....	32
5.4 Limitations of the Study.....	33
REFERENCES .....	34
APPENDIX.....	40

**LIST OF TABLES**

Table 4.1 Descriptive Statistics of Financial Inclusion Variables .....	22
Table 4.2. Descriptive Statistics of Control Variables.....	24
Table 4.3. Descriptive Statistics of Dependent Variable .....	25
Table 4.4 Correlation of Variables.....	27
Table 4.5. Summary Output of Regression Model .....	28
Table 4.6. ANOVA.....	28
Table 4.7. Coefficients and P-values of Independent Variables.....	29

**LIST OF FIGURES**

Figure 4.1. Chart for Financial Inclusion Variables .....23

Figure 4.2. Normality Plot of Financial Performance.....26

## ABSTRACT

The purpose of this research study is to investigate the relationship between financial inclusion, to be specific access to finance and its impact on the performance of firms in the Construction sector of Ghana. As it is well known in the literature that financial inclusion generally has a positive influence on performance, will the results differ if the scope is narrowed down from country level to firms with similar characteristics?

Firstly, the paper seeks to identify the level of financial inclusion among firms in the Construction sector of Ghana. Secondly, through the use of OLS regression methods, the relationship between financial inclusion variables and performance is analysed. Taking cross-sectional data from 42 Construction firms in the Greater Accra Region registered with the Association of Builders and Contractors Ghana.

The analysis showed that not all financial inclusion variables were significant to the performance of firms in the construction sector. However, agreeing with existing literature that there is a positive causality relationship between access to finance and financial performance. Heavy influences on financial performance came from long term financial services. And a discovery that regulations could greatly influence financial performance as well.

These results speak loads into future policy formulation especially for a country that suffers from a great infrastructural deficit. The performance of construction firms can be greatly enhanced if these policies make firms in the sector more financially inclusive. The focus of these policies must be on long term financial service provision which will be the funds most beneficial to construction firms in Ghana.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

A basic need of every corporation for startup, survival, and growth is funds. It is apparent that funds play quite a significant role in the form of initial capital, working capital and in the cause of growth, companies make capital investments which may bring in positive returns or even the expansion of staff (Organisation for Economic Co-operation and Development, 2006). Access to funds then becomes a key factor for every firm. The need for systems within an economy to facilitate this ease of access is paramount and its impact needs to be consistently analysed not just for deeper understanding but also the knowledge that may influence policy. Analyses on access to funds is not a new concept in literature. It has been established by (Malhorta et al., 2007) that insufficient financial resources are key obstacles to firm growth. Especially in developing countries, a consistent factor faced by firms is their access to funds. (Regasa, Fielding, & Roberts, 2017) explained the association between financial access or financial inclusion and growth of firms in Ethiopia. By studying how access to various forms of funds to firm growth establishing that external funds had a negative relation with firm growth. Access to finance is not the only subject to consider with regard to firm performance. The concept of financial inclusion has to be involved. Access to finance and financial inclusion are interwoven variables. It is one factor to access finance for productivity and another factor as to the decisions of firms to use various financial services that are available in order to run their businesses. In the past, various literature has clamped financial inclusion as part of financial development. In effect, the relationship between financial development and economic growth have been explored to a great extent. However, financial development does not necessarily single out financial inclusion and its impact. (Sarma, 2008).

It is therefore imperative that a direct relationship is clearly defined as that will be beneficial to research and policy.

The construction sector of Ghana has always had great potential for economic transformation and growth. Aside from its political stance, it has been recorded that the construction sector has been a key donor to the overall Gross Domestic Product of Ghana since 2006. Construction has made an average contribution of GHS 2311.61 Million to the GDP of Ghana since 2006 (Tradeconomics.com, 2018) However, as a developing country, Ghana still continues to lag severely in infrastructural growth in comparison to the demands for more amenities. According to the National Population Council, it is estimated that Ghana has a population growth rate of about 2.5% annually. The implication of this is that there is a greater need for faster infrastructural growth. The infrastructural deficit cannot be manned by the government alone. There has to be a collaborative effort from firms in the construction sector which have not been all that prevalent in the country. If firms must participate, then it obvious that they will need to have access to funds as most construction projects tend to be capital intensive in nature. Very little has been done in research that narrows down on the influence of financial inclusion and access to funds on the level of output of construction companies in Ghana. If access to funds and financial inclusion contribute to a major role in the performance of firms, can the challenges of firms in the construction sector of Ghana and their contribution or lack thereof be attributed to financial inclusion variables? Will recent government policies towards restructuring funds that favor the sector be a warranted move?

## **1.2 Problem Statement**

While the impact of financial inclusion and financial access have been explored in various facets, there are still important gaps that can be identified. Most literature studies look at its broad encompassing and macro-level impact as well as its effect across firms in multiple sectors (Regasa et al., 2017, Fowowe, 2017). And while this is important, The argument here

is that each sector of the economy stipulates certain specific characteristics of firms operating within it (Bongomin et al, 2017). The studies done so far do not look at the impact of these variables on a sector-specific perspective. There has to be a consideration for the nuances and demands exclusive to the sector and how such characteristics may or may not affect existing empirical research. Such an understanding of how access to funds and financial inclusion affects firms with similar demands and characteristics, in this case in the construction sector may open doorways for sector-specific policy changes that may have a more lasting effect on firms in that sector. This paper will seek to reveal the importance or effect of access to finance of firms in the construction sector and explore its effect on their performance. Which may have implications on the economy as a whole.

### **1.3 Objectives of the study**

This study will seek to:

- Ascertain the level of financial access and financial inclusion among firms in the construction sector of Ghana.
- Assess the level of influence of access to funds and financial inclusion on the performance of firms in the construction sector of Ghana.

### **1.4 Research Questions**

- What are the levels of financial access and financial inclusion among firms in the construction sector of Ghana?
- What is the level of influence of access to finance and financial inclusion affect the performance of firms in the construction sector of Ghana?

### **1.5 Significance of the Study**

The conclusions and discoveries of this theoretical study are beneficial on three fronts. By focusing on a specific sector of the economy the study will allow for other researchers to

understand that the role of financial access and financial inclusion may differ across firms with different characteristics. In policy, the study throws more light on the needed strategic approach towards the making of policies that promote financial inclusion and financial access. A blanket approach may not be as efficient as it should in improving performance amongst specific firms in Ghana. In this case the firms in the construction sector

Finally, this study will also benefit the construction sector of Ghana in their quest to grow and expand in varying economic situations. Understanding the role financial access and inclusion play in project success and performance of firms in their sector will encourage an improvement in acquiring financial services for business which is a core resource for making financial decisions.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

In a perfect capital market, which is capital and credit, a firm's investment is not affected by its financial choices (Modigliani & Miller, 1958). However, in reality, the markets are deficient and as such, they are subject to financial constraints. This means that financial decisions do matter and will affect the performance of firms. The ever-infinite presence of wants and scarce resources means that individuals and firms have to decide on the equitable distribution of resources to able to meet the prevailing wants. Firms need to have access to finance and greater levels of financial inclusion which may not be readily available or understood. This chapter explores various facets of study expounded upon in research with regard to defining, measuring and reviewing the concepts of access to finance and Financial Inclusion.

#### 2.2 Research Evidence on Access to Finance and Financial Inclusion

Financial Access is described as the "absence of price and non-price barriers to financing". (Demirguc-Kunt & Levine, 2009). It has been a subject of concern for world economies as it forms a part of financial development with various levels of the study done in order to appreciate the connection between access to finance and economic growth (Demirgüç-Kunt & Maksimovic, 1998). However, in the expanse of time, research began to focus on access to finance and its impact on firms. From that, some studies combined data from firms with macro-economic indicators spanning across various countries (Beck, Demirguc-Kunt, & Maksimovic, 2008). Whilst others began to look at country-specific and looked at the association between financial access and financial development using firm-level data (Du & Girma, 2007). In all these studies, it evident that firms' performance and growth has a greater play on the welfare of economies. It is no doubt that some countries, mostly developed countries fare much better

in this regard than developing ones of which Africa is no exception. With respects to financial development, many studies have shown that the African continent severely lags behind (Fowowe & Abidoeye, 2013; Allen et al., 2012; Fowowe, 2017). This is why more research must be done with respect to the African continent in order to understand and give room for effective policies that increase the performance of firms. Institutions like the World Bank have made various enquires into financial access across nations both developed and developing. In 2008, the World Bank report acknowledged that fewer than half the populace in developing countries has access to finance. This deficiency is not only experienced by individuals but firms as well. Evidence from Demirgüç-Kunt & Klapper (2012), in their Global Findex Database, was that access to funds was cited by most SMEs in Africa as a major constraint. In the analysis of 130000 firms in 127 countries from Enterprise Survey Data set, the report also admits that firms in Africa have limited access to external funds with only 22% of firms according to their survey have access to loans and lines of credit for business. Further studies have been done to delve deeper into the conundrum of the African continent. Using data from 10,888 firms that span 30 African nations, Fowowe (2017) identified in his research on the effect of access to finance constraint on firm growth that firms who were not credit-constrained were able to experience faster growth than firm that was not credit-constrained recommending that finance must play a key role in various strategic policies. The more research became specific the more we can identify specific components that better explain the role of access to finance. Studies have shown that access to finance in this case external finance from banks and financial institutions, has a lower impact on firm growth where the basis of selection for investment has more of a political motive than business investment motive (Regasa et al., 2017). Research into the effects of financial access on productivity, on economic and firm growth, has yielded many varying results. Some studies show that there was no association existing between access to external funds and firm growth (Allen et al., 2012 and Beck, Lu, & Yang, 2015). Other

literature also proved that the association between access to finance and firm growth was a positive one (Zingales & Rajan, 1995 and Girma & Vencappa, 2015). In some research, however, it was shown that the relationship between firm growth and access to funds was negative limited by the levels of internal funds (Carpenter & Petersen, 2002 and Chen & Guariglia, 2013). These differences stem from a number of factors including the ways in which financial access of firms are measured. Various theoretical models have been developed through empirical research seeking to determine the level of financial constraint (financial access) in firms. The Q theory of investment (Tobin, 1969), the Euler equation for capital stock and (Hansen, 1999) among many others gave strong indicators however, they are very reliant on accurate financial data. Claessens & Tzioumis (2006) admits that measuring access to finance with these theoretical models have little impact on firms in the developing countries due to the lack of accurate and available data that these models require. The study suggests that there should be a more adaptable approach that must be used in defining access to finance and its impact on firms. In recent literature, more adaptive methods have been used that do not necessarily rely heavily on the financial statement. Fowowe (2017) used overdraft facilities, lines of credit and credit constraint status of firms in determining a firm's overall level of financial access whilst other research includes the possession of savings and checking accounts. These approaches are far more effective in measuring financial access in developing countries and will be adopted by this study as well. The importance of access

Financial inclusion can be defined as the effective use of formal financial services by individuals and firms to put it simply. However, earlier research has found various means of defining financial inclusion has been done within the scope of the studies to be conducted. Valverde, S., E.P.M, & Molyneux (2005) defined financial inclusion (exclusion) as the incapability of certain societal groups to have access to the financial ecosystem. This definition draws a relationship between social exclusion and financial inclusion. This form of definition

was also corroborated by Sinclair (2001). Financial inclusion can also be defined according to Demircuc-Kunt & Klapper, (2012) as the numerical total of adults that account; both individuals or multiparty with an official financial institution. Their study sought for a means to measure financial inclusion in that regard. Financial inclusion has also been identified as an economic state where persons are not deprived of access to elementary financial amenities (Amidžić, Massara, & Mialou, 2014). To add depth to financial inclusion it can be defined to include various layers. Financial inclusion can be defined as “a process that ensures the ease of access, availability, and usage of the formal financial system for all members of an economy” (Sarma, 2008). Taking a multidimensional approach in defining financial inclusion, Conde, Bykere, Cheston, & Rhyne (2016) gave five perspectives. Access to a full package of financial facilities- credit, savings, and insurance services; Quality of products and delivery – expedient, inexpensive, appropriate, delivered with poise and consumer protection; Financial capability – customers are well-versed and able to make good money management choices; Inclusiveness – everyone who can and wants, has access including the poor, women, and rural; and assorted and viable marketplace – a variety of suppliers, a vigorous financial super or substructure and a strong monitoring framework. For this paper, however, the focal point will be of the effective use of these services by firms in the provision of services(performance). Much like financial access, financial inclusion has been a matter of interest for research as it is also linked with financial development. Financial access and financial inclusion have been shown to have a combined role in financial development. Studies show that the effect of financial inclusion on growth is moderated by the access of firms to finance rather than household access (Beck et al, 2008). This study will, therefore, show furtherance to interconnectivity. Financial inclusion itself was forged out of empirical research on the impact on firm performance and economic growth. Such studies originating from the 20<sup>th</sup> Century identified that financial development could be further enhanced through the channels and ranges of financial products offered to

firms and individuals (Beck, Degryse, & Kneer, 2014). Other studies also emphasised on the role that financial systems played in enhancing the work of the firms in the private sector (Aghion, Angeletos, Banerjee, & Manova, 2010). All these studies point to the need for firms and individuals to use mediums, which may come in the form of financial facilities in order to benefit accordingly. The financial crisis of 2009 sent shock waves through various economies and as researchers sought to understand this phenomenon, one of the areas looked into were the kinds of financial services firms were actively using in financial decision making. This is where financial inclusion plays its role as studies began to look at financial inclusion and its impact independent of financial development. Researchers acknowledge that clumping financial inclusion together with financial development made it ambiguous when assessing its direct impact. The point being driven here is that it is unclear whether financial inclusion is the same as financial development or merely a subset (Sarma, 2008). Chauvet & Jacolin (2017) in their research seems to draw some distinction between financial development and financial inclusion concluding in their research that although financial development did not have an impact on firm performance, financial inclusion had an impact on firm growth. The measurement of financial inclusion takes on the shape and form of how it is defined. For instance, in determining factors that drive financial inclusion and financial performance, Soriano (2017) chooses to measure financial inclusion by the level of active users even though the study throws light on accessibility, affordability and active usage. The research defends this means of measuring financial inclusion by stating the obvious that registration into various platforms for financial services may not necessarily mean that these services will be employed. A similar approach was used by Hillary (2016) who swapped affordability with quality whilst maintaining the two other variables. Financial inclusion can be measured from various levels. Demircuc-Kunt & Klapper, (2012) measured financial inclusion on the African continent. The study identified that there is a severe gap when it comes to firms and individuals using formal

financial services in Africa in comparison with the other developed nations. This is further broken down by stating that the average ratio of private credit to GDP is 24% of GDP in Sub-Saharan Africa in 2010 and 39% in North Africa, in comparison to 77% in all other emerging economies, and 172% for developed or high-income economies. The African continent severely lacks even amongst other developing countries. To elaborate on this point, data surveys from Enterprise Data Survey has also shown that only 22% of firms in Africa have access to loans and lines of credit when done in comparison to other developing countries in the rest of the world which have about 43%. Sarma 2008, in measuring the level of financial inclusion across multiple economies propounds a comprehensive measure called the Index of Financial Inclusion (IFI). Here economies were graded between 0 and 1 with 0 meaning perfect financial exclusion and 1 being perfect financial inclusion. The highest-ranked African country was Morocco with 37 out of 100 countries used in the study. Many developing countries and for that matter, African countries ranked below 40. Nonetheless, research has shown that financial inclusion is an important subject of study for lower-income countries. Financial inclusion is a factor for economic growth and this is especially true in developing countries (Burgess & Pande, 2005). Financial development enhances overall firm growth if only it is evenly distributed that is, financial inclusion is high. Where there are low levels of financial inclusion, it is most likely going to lead to crowding out of smaller firms as growth will be benefited only by those who utilize financial services (Chauvet & Jacolin, 2013). The positive effect of financial inclusion on firm growth is magnified when banks are able to market a higher level of financial inclusion, with competition at its wheels. (Chauvet & Jacolin, 2017). Technology has also been seen as a moderating factor on the positive association between financial inclusion and growth of Small and Medium Scale Enterprises (Hillary, 2016). The study was conducted in the Nairobi County, Kenya where it was identified that MPESA,

Mshwari, and Agency banking propelled the levels of financial inclusion and overall firm growth.

### **2.2.1 Theories on Financial Inclusion**

#### **Financial Growth Perspective.**

Philosophies on the financial growth state that financial development generates a productive atmosphere for growth through the supply push (financial development as a catalytic agent for growth) or demand-pull effect (growth, in turn, stimulates greater demand for financial products) (World Bank, 2008). These concepts as well remark on the absence of access to finance as a perilous issue answerable for the obstinate gap in the income of the rich and poor as well as the lag in economic growth. The ability to have access to innocuous, easy as well as cheap source of finance therefore is a standard precondition for quickening development and plummeting revenue differences and scarcity which generates equivalent prospects, allows people who may have been left out in terms of social and economic gains to assimilate in a more significant manner to the economy as a whole, and vigorously participate in development, and shield from various shocks that may occur within the economy (Serrao, 2012). The general consensus is concerning the impact of financial inclusion has differed. Some researchers perceive the role not necessarily major whereas other literature identifies it as notable. The demand-pull school of thought view as buttressed claims that the economic ecosystem will not offshoot economic growth; the financial ecosystem simply answers to progress in the real sector instead. The supply push school of thought advocates into contrast the previous opinion. They claim that the true basis of the financially led growth theory contends that growth is enhanced by the presence of a vibrant financial sector in an economy. Schumpeter (1911) postulated that financial institutions and for that matter, banks allow an economic ecosystem to grow by providing highly efficient markets for the supply of funds. Levine (1996) also stresses the positive role that is played by financial systems in contributing to growth within an

economy as also mentioned by Aduda & Kalunda (2012). Consequently, the crucial point of contention for supporters of the supply push model is that financial markets progress by reacting to an amplified call for the provision of financial amenities from a burgeoning economy. For that matter, the extension of financial markets is merely a replication of expansion reflecting in other segments of the economy. Widely held concepts have established a constructive positive interaction existing among financial development through inclusion and economic growth. Financial inclusion, therefore, is able to for that matter guarantee some level of maintainable access to, and usage of suitable financial facilities.

### **Financial Intermediation Perspective.**

Another theory underpinning financial inclusion in the financial intermediation theory. Here financial institutions and for that matter, the financial service that they offer is seen a means to connect surplus spenders to deficit units within an economical space (Ndebbio, 2014). This, therefore, suggests that economies that are more financially inclusive are those that have been able to a greater extent establish this connection between the deficit units and the surplus units. The theory also argues that financial institutions also are in an improved position to enable financial inclusion in the sense that they are able to monitor borrowers of funds more appropriately and thus shield surplus spending units from the greater credit risk which allows such units to make their surplus funds available. Diamond (1984) argues that it is for this reason that investors will consider purchasing the secondary investment financial assets from these intermediaries and are willing to pay for the service fees charged rather than just lend the monies directly to the deficit units. The theory of financial intermediations also suggests that entrepreneurs, who may otherwise lack the capital to fund their projects are able to do so by virtue of financial inclusion that stems from financial institutions. In a bid to earn returns for the going concern of financial institutions, they search out various investment opportunities that have good potential.

This intermediary interaction contributes to overall economic growth and thus financial institutions are able to allocate funds efficiently within an economy and provide some level of economic opportunities for both the poor and relatively rich households (Hillary, 2016).

Finally, under the financial intermediation theory, there is a view that financial institutions have a larger capacity in terms of technical prowess to gain higher levels of relevant information asymmetry which will influence better investment decision making in comparison to the individual investor who may not be preview to such relevant information. This information asymmetry enhances the position of financial institutions as the necessary financial intermediary.

### **2.3 Research Evidence on the Construction sector and Project Finance**

“The construction sector, like agriculture or manufacturing, follows a pattern of change that reflects a country’s level of development” (Strassmann, 1970). The construction sector as we know usually encompasses a dynamic range of activities that provide infrastructure for residential, commercial and recreational purposes amongst others. The sector has many connections with other sectors of the economy like manufacturing employing labor, energy, material, and finance (Construct Ghana, 2018). Project financing can also be described as the use of a mostly collateralized or limited collateral financial structure where debt used to finance the scheme is refunded from the cash inflows generated by the project itself. Research in project finance and performance of Construction firms is very limited despite its immense contribution to world economies (B. Esty & Megginson, 2001). However, the has been headway in empirical research that exposes the significance of the construction sector and economic growth. Some studies have shown a duality in their relationship where construction sector performance affects the GDP of the country which in turn affect the performance of firms in the construction sector (De Long & Summers L.H, 1991). To add to this, even though there’s a dual association between the construction sector and the economy, that is, the influence of

GDP on construction as a whole sector is in the short run whereby the GDP of an economy gives the initial boost that for firms in that sector. In the long run, the construction sector propels economic growth forward through collaborations with other sectors and employment (Dakhil, 2013). It is unparalleled to say, given empirical evidence, that the construction sector is a poignant contribution to GDP (Green, 1997; Hillebrandt, 2000; Lean, 2001; Rameezdeen, 2007). Some studies look beyond the impact on the level of causality. Anaman & Osei-Amponsah (2007) in one of such research concluded that in as much as the government seeks to boost growth in the economy through agriculture, it can largely benefit in that regard if efforts are also invested in the construction sector. Research in the causality relationship does not necessarily have the same results contrarily, Erol and (Erol & Unal, 2015) identified that the construction sector was not the main driver of the GDP of Turkey rather it seems to be a follower of macroeconomic fluctuation. The construction sector despite the seemingly great role it plays in the growth of economies has been accused of lagging behind. Large infrastructural gaps amongst developing countries, low quality of output, budget overruns and the failure of long-term projects have plagued the sector (Edwards, 2002; (Woudhuysen & Abley, 2004). These challenges also show to a greater level than the low attention that is provided by policymakers give to the construction sector (Oladinrin, Ogunsemi, & Aje, 2012). The enabling environment is necessary for firms in the construction sector to thrive. This study will seek to unveil the need for policy to be specific in order to meet and solve the needs of the construction sector. Firms in the construction sector much like any other firm is confronted with the conundrum of a financial decision in attempting to meet its objectives and maintain itself as a going concern. However, the main concern of such a firm is how to fund their capital investments like plant and machinery which is closely tied to their level of performance. Given the level of demand for capital investment firms are exposed to financial risk (Myers & Majluf, 1984). This risk is further enhanced by the kinds of projects they engage in which by nature

have the tendency to be long-term in nature and as such finding the right financial services that can meet those needs at minimal cost is paramount. In most parts of the world, project finance is funded differently than regular corporate investments. However, they play a huge part in investments across various continents half of large investments in the USA were on project finance which cost range from a minimum of \$500 million (Esty, 2004). This distinction in funding is an enabler to most firms in the construction sector who leverage on its longer maturity with most likely a fixed interest rate and lower covenants (Kleimeier & Megginson, 2000). It is also noted therefore that project finance normally focuses on infrastructural and utility development since they have better assurances of cash flows that can be used as repayment when necessary. In effect most, developed countries have thriving firms in the constructing sector who have the financial capacity to engage bigger projects. Sub-Saharan Africa has seen no less contribution the construction sector between the years of 2013 to 2015, the construction sector of Ghana has contributed from \$2.9 billion to \$3.8 billion to the country's GDP (Construct Ghana, 2018). The consistently growing sector continues to evolve starting from \$280 million in 2006. However, it is severely hampered the absence of many financial services especially mortgage services. According to research difficulties of long-term financing have been identified within the financial lending system (Nkyi, 2012). This means that firms will be placed on a backfoot when it comes to fulfilling or completing projects. The focus of financial institutions on short to medium forms of financing is an inhibiting factor that once again points to a lack of understanding of financial access and financial inclusion to the sector and for that matter the economy's progress. This paper exposes this relevant information using empirical methods.

#### **2.4 Hypotheses and Assumptions based on Literature.**

Having thoroughly explored the subject matter to reveal various empirical conclusions drawn across the time frame, it is still worthy to acknowledge that there are little studies that necessary look into the role the access to finance and financial inclusion play in the performance of firms in the construction sector of Ghana. This study on the basis of existing research proposes a new hypothesis;

H<sub>0</sub>: Financial inclusion is significant to the performance of firms in the construction sector of Ghana

Subsequent chapters will explore this with available data to arrive at an empirical conclusion.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

This chapter provides an in-depth breakdown of the empirical steps that are adapted from existing research around access to finance and financial inclusion in order to achieve the objectives of this study. The chapter is broken into three parts; the first dealing with the methods in ascertaining the main variables of the study, the second explaining the model to be used for this study and finally, an exposition into the method and scope of data collection. The overall aim of this chapter is to provide a guideline of how each objective of the study will be met.

#### **3.2 Variables for access to finance and financial inclusion**

As indicated in the introductory chapter, the aim of this study is to primarily ascertain the level of access to finance and financial inclusion among firms in the construction sector. In order to achieve this, this paper determines a means to measure financial inclusion and access to finance among firms taking a cue from existing research. In the end, the study provides a descriptive analysis of the data acquired thereby meeting the first objective of the paper.

Determining the access to finance of firms and for that matter firms in the construction sector of Ghana may seem to be subjective in nature how this study seeks to obtain an objective form using data that is readily available. Among the other constraints of a business environment, those that will be classified under access to finance are the Credit Constrained Status (CCS), Overdraft facilities and Credit line. Credit Constrained Status is a concept developed by Kuntchev, Ramalho, Rodriguez-Meza, & Yang (2013) who used Enterprise data set to construct 4 different subgroups as a means of estimating how credit-constrained firms are. These subgroups are Full Credit Constrained (FCC), Partially Credit Constrained (PCC),

Maybe Credit Constrained (MCC) and No Credit Constrained (NCC). Kuntchev et al (2013) identified that for a firm to be categorised as Full Credit Constrained, it must be established that the firm has applied for a loan and have been rejected with no other source of external finance. They must also fall under these criteria:

- a. In financing their working capital and investments in the previous year the firm did not use any external finance.
- b. The firm does not have any outstanding loan that was disbursed during the previous fiscal year or any period after as at the time the questionnaire is being completed
- c. Applied for a loan during the previous year.

Firms that fall under the category of PCC are firms that were able to obtain other sources of external finance. These firms should also:

- a. Have used an external source of finance to fund investments made and/ or for working capital within the previous year
- b. Not have applied for any external loan for any reason except the reason of having sufficient funds
- c. Applied for a loan and was rejected within the previous year

For firms under the category of MCC, they have access to external finance.

- a. Used external source of finance for working capital and/or have a loan outstanding as at the previous year
- b. Applied for a loan in the previous

Finally, for firms categorised under the NCC, irrespective of their present level of external funds, they are truly satisfied with their present financing structure for both working capital and investment. The group, therefore, comprises of firms that:

- a. Did not request for any loan from any bank or financial institution during the preceding year.
- b. The cause of not applying for a loan was they being sound financially.

With these categories, we are able to objectively access the credit-constrained level of the firms in the construction sector. We now assign ordinal values to each credit-constrained category with higher levels of financial access having higher values. This means that FCC=1, PCC=2, MCC=3, NCC=4, we are now able to value the credit-constrained status of the firms. The other variables namely, credit line looks if the firms have an arrangement with a bank or financial institution establishing a maximum limit that the firms can borrow in their course of work. While the overdraft facilities will identify if firms are allowed to draw more than their current account holds as a means of providing a reliable source of working capital. These variables are directly associated with access to finance. Firms as such having greater levels of CCS with a credit line and overdraft facilities will be noted as firms that have greater levels of financial access.

### **3.3 Control Variables and Dependent Variable**

Having ascertained the variables of financial access and financial inclusion, it must be acknowledged that firms still operate within a business environment and are thus affected by them. These variables which are the control variable are characteristics that ultimately affect the performance of firms and in this case few and more in turn with that of firms within the construction sector of Ghana. Similar to Fowowe (2017) we identify the control factors to be the Firm size; which will be determined by the number of workers that have been employed by the firm as permanent staff. Another control factor considered was the Age of the firm. This simply deals with how long the firm has been in operation within the sector. Regulation is the final control variable. It is measured by the number of financial regulations the firms must

adhere to in the delivery of the services and comprise of taxes, filing returns, operating permits but not limited to these

The paper seeks to identify the impact of financial access and financial inclusion of the performance of firms within the construction sector of Ghana. This means it is the dependent variable of the study. The paper measures performance on the bases of projects initiated or completed within the previous year and the capital investment (machinery or equipment) that were purchased by the firms within the previous year. This method of assessing performance was also employed by (Delmar, Davidsson, & Gartner, 2003) and (Davidsson, Leona, & Naldi, 2010). This method is a reliable means of assessing performance in the absence of financial statements.

### 3.4 Model

The models for the study that determines the impact of Financial Access and Financial Inclusion on the performance of firms in the construction sector of Ghana are:

$$\begin{aligned} FinP = & \beta_0 + \beta_1 CCS_i + \beta_2 OVERDRAFT_i + \beta_3 CREDIT LINE_i + \beta_4 MATURITY_i \\ & + \beta_5 STATUS + \beta_6 REG_i + \varepsilon_i \end{aligned}$$

Where Fin P= performance of firms

CCS = Credit constrained status of the firm.

OVERDRAFT = dummy variable with 1 being firms with overdraft facilities, 0 if otherwise.

CREDIT LINE = dummy variable with 1 being firms with credit lines, 0 if otherwise.

AGE = number of years in operation.

SIZE= number of employees working in the firm

REG = number of government regulations (tax, filing returns, operating permits amongst others) the firms must adhere to

### **3.5 Data**

For the purpose of the study, data is collected using structured questionnaires. This enables a level of objectiveness in the responses that are gotten from the firms. A total sample of 42 firms listed with the Association of Building and Civil Engineering Contractors of Ghana. The study focuses on firms within the Accra and Tema Metropolis. A healthy blend of firms in multiple subsectors was considered in order to provide greater coverage of the sector. The sampling method to be undertaken for the purpose of the study will be random sampling. method.

**CHAPTER FOUR****DATA ANALYSIS****4.1 Introduction**

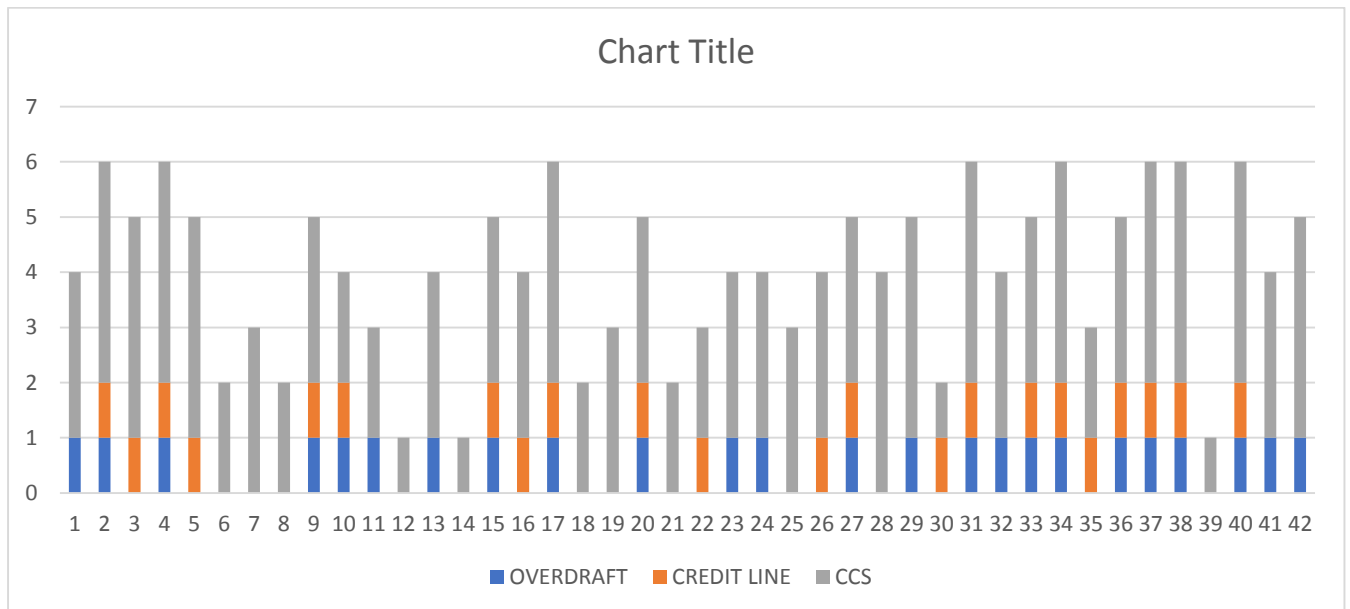
This chapter contains a breakdown of the results obtained after the analysis of data collected. The chapter shall be broken down into two main sections. The first section explores a descriptive analysis of the firms under the study, with regards to the variables that affect performance. Special attention is given to the financial inclusion variables as well as other control variables that were analysed in the course of the study. This exploratory research is to understand the current state of financial inclusion among firms in the construction sector. The second section measures the impact of the financial inclusion variables on the performance of the firms in the construction sector considering a few control variables.

**4.2 Descriptive Statistics****4.2.1 Financial Inclusion Variables****Table 4.1 Descriptive Statistics of Financial Inclusion Variables**

<i>OVERDRAFT</i>		<i>CREDIT LINE</i>		<i>CCS</i>	
Mean	0.5714	Mean	0.5238	Mean	2.9286
Standard Error	0.0773	Standard Error	0.0780	Standard Error	0.1462
Median	1	Median	1	Median	3
Mode	1	Mode	1	Mode	3
Standard		Standard		Standard	
Deviation	0.5009	Deviation	0.5055	Deviation	0.9472
Sample Variance	0.2509	Sample Variance	0.2555	Sample Variance	0.8972

Kurtosis	-2.0084	Kurtosis	-2.0923	Kurtosis	-0.4822
Skewness	-0.2995	Skewness	-0.0989	Skewness	-0.5756
Range	1	Range	1	Range	3
Minimum	0	Minimum	0	Minimum	1
Maximum	1	Maximum	1	Maximum	4
Sum	24	Sum	22	Sum	123
Count	42	Count	42	Count	42

**Figure 4.1. Chart for Financial Inclusion Variables**



With regard to the variables of financial inclusion which were in the form of Credit Constrained Status (CCS), Overdraft and Credit Line. The descriptive summary as per the data collated came as shown in the table.

From Table 4.1, it was observed that on average the Credit Constrained status of the construction firm in Ghana stood to about 2.93. This suggests that on the Kuntchev et al (2013) ordinal scale for assessing the credit-constrained status of firms, firms in the construction sector of Ghana on the average, fell under the category of Maybe Credit Constraint

(Category 3). This means that on average, firms within the sector have used some form of external sources of funds within the past financial year or have a loan outstanding within their books. They may have also considered applying for a loan within the financial year. This is further corroborated with the modal CCS status of 3 as well as the median. On average, for both Overdraft and Credit Line usage, construction firms had access to these financial services. There is an implication that even though construction firms are not fully free from credit constraints, they may have access to credit lines and overdraft facilities and on average, show greater levels of financial inclusion as a whole. As shown in figure 4.1, the lot of firms of the study seem to prefer the long-term financial options rather than the short term as seen in the levels of CCS (which represent typical company loans) and Credit Line facilities.

#### 4.2.2 Control Variables

**Table 4.2. Descriptive Statistics of Control Variables**

<i>SIZE</i>		<i>AGE</i>		<i>REGULATION</i>	
Mean	26.5238	Mean	11.5476	Mean	3.4524
Standard Error	2.4014	Standard Error	0.7406	Standard Error	0.1777
Median	25	Median	11.5	Median	3
Mode	20	Mode	15	Mode	3
Standard Deviation	15.5630	Standard Deviation	4.7994	Standard Deviation	1.1519
Sample Variance	242.2067	Sample Variance	23.0343	Sample Variance	1.3269
Kurtosis	-0.5272	Kurtosis	0.5417	Kurtosis	-1.4163
Skewness	0.3599	Skewness	0.6631	Skewness	0.1219
Range	58	Range	22	Range	3
Minimum	4	Minimum	4	Minimum	2
Maximum	62	Maximum	26	Maximum	5

Sum	1114	Sum	485	Sum	145
Count	42	Count	42	Count	42

Fowowe (2017) identifies in his study identified that firms that were older in age tend to have greater financial inclusion. As seen in Table 4.2, firms in the construction sector of Ghana have a mean age of about 12 years which may suggest that the industry is a relatively mature one which may suggest why overall, firms in the construction sector have access to loan facilities (CCS) as well as overdraft and credit line services. It is also worth noting that the variable size which was determined by the number of permanent staff that has been employed by the firm had an average of about 27 people. The firm with the highest number had 62 and the minimum was 4. With regards to regulations from government or by law, on average, firms had to conform to 3 main regulations. Dependent Variable:

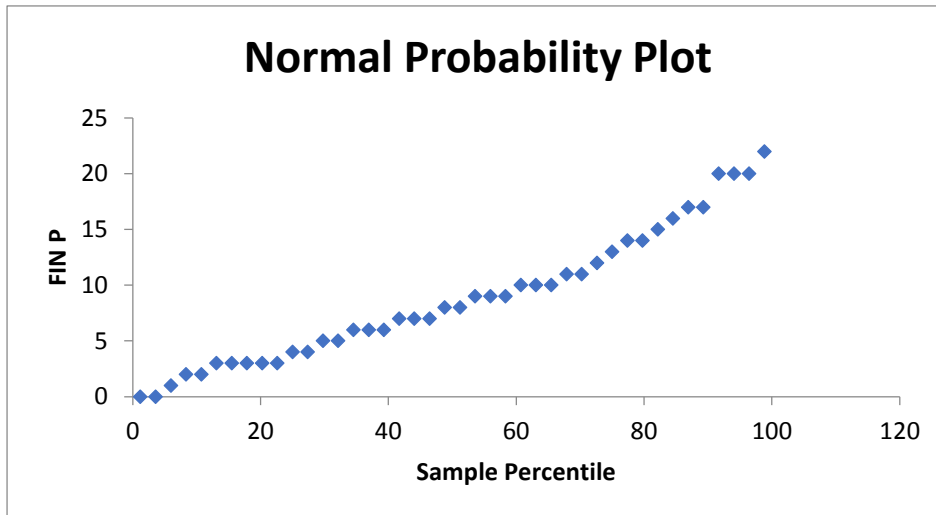
**Table 4.3. Descriptive Statistics of Dependent Variable**

<i>FIN P</i>	
Mean	8.8571
Standard Error	0.9199
Median	8
Mode	3
Standard Deviation	5.9615
Sample Variance	35.5401
Kurtosis	-0.5733
Skewness	0.5484
Range	22
Minimum	0

Maximum	22
Sum	372
Count	42

---

**Figure 4.2. Normality Plot of Financial Performance**



The dependent variable for this study adopted a proxy for performance and growth that was used by (Delmar, Davidsson, & Gartner, 2003; Davidsson, Leona, & Naldi, 2010). The financial performance of the firms in the sector had an average of about 9. These were spread across the number of projects initiated within the past financial year, the number of projects initiated within the past financial year and as well. The maximum performance of a firm in this sector given the proxy was 22 while few firms had no performance outputs. And follow a normal distribution as shown in Figure 4.2 even though the dependent variable is a proxy. The proxy suggests that the performance average of firms in the construction sector is relatively low with an average of about 9 per year. This hints to the observation made by Annamalai & Jain (2013) that developed the performance of the construction sector of developing countries are considerably lower than that of developed countries.

### 4.3 Correlation and Regression

#### 4.3.1 Correlation

**Table 4.4 Correlation of Variables**

	<i>CREDIT</i>						
	<i>OVERDRAFT</i>	<i>LINE</i>	<i>CCS</i>	<i>SIZE</i>	<i>AGE</i>	<i>REGULATION</i>	<i>FIN P</i>
<i>OVERDRAFT</i>	1						
<i>CREDIT LINE</i>	0.2340	1					
<i>CCS</i>	0.4994	0.3347	1				
<i>SIZE</i>	-0.0644	0.0790	0.1201	1			
<i>AGE</i>	0.3131	0.0699	0.0947	-0.0307	1		
<i>REGULATION</i>	-0.3744	-0.1656	-0.5732	0.1538	-0.1518	1	
<i>FIN P</i>	0.5671	0.3977	0.8015	-0.0520	0.0463	-0.7540	1

Table 4.4 shows the direction of both the dependent and independent variables and their relation with each other. From the table, it can be observed that there are low levels of multicollinearity with the highest VIF of 0.49 that was between overdraft and CREDIT CONSTRAINED STATUS. With the dependent variable, however, it had a positive correlation with OVERDRAFT, CREDIT LINE, CREDIT CONSTRAINED STATUS, and the AGE of firm with only the size of firms and regulation negatively correlated with the dependent variable. CREDIT CONSTRAINED STATUS and REGULATION seemed to be the strongest correlating variable with financial performance with 0.8015 and -0.7540 respectively. The least correlated variables with the dependent variable were AGE and SIZE having values of -0.0520 and 0.0463 respectively.

### 4.3.2 Regression Analysis

The second section of this chapter explores the causality relationship between the financial inclusion variables and the performance of firms in the construction sector.

**Table 4.5. Summary Output of Regression Model**

SUMMARY OUTPUT

---

*Regression Statistics*

---

Multiple R	0.9111
R Square	0.8301
Adjusted R Square	0.8010
Standard Error	2.6595
Observations	42

---

**Table 4.6. ANOVA**

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	6	1187.587	197.9311	25.69999232	0.0000000000184
Residual	35	269.5561	7.701603		
Total	41	1457.143			

---

**Table 4.7. Coefficients and P-values of Independent Variables.**

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	8.6143	3.0241	2.8486	0.0073	2.4751	14.7536
OVERDRAFT	2.3706	1.0210	2.3219	0.0262	0.2979	4.4433
CREDIT LINE	1.7792	0.8768	2.0293	0.0501	-0.0007	3.5592
CCS	2.6811	0.6215	4.3141	0.0001	1.4194	3.9427
SIZE	-0.0157	0.0282	-0.5590	0.5797	-0.0729	0.0414
AGE	-0.1647	0.0918	-1.7945	0.0814	-0.3510	0.0216
REGULATION	-2.1945	0.4614	-4.7559	0.0000	-3.1312	-1.2578

From Table 4.5, the summary output of the regression shows that the independent variables that are OVERDRAFT, CREDIT LINE, CREDIT CONSTRAINED STATUS (CCS), SIZE, AGE, and REGULATION explain about 80% of the dependent variable FINANCIAL PERFORMANCE (FIN P) from the indication of the adjusted R with standard error of 2.6. This suggests that the model is well fit. The regression model also shows a very low probability of being wrong with a Significance F of 0.0000000000184. lower than the alpha of 0.05 given a 95% confidence interval as seen in Table 4.6.

From table 4.7, we see the specification of the financial inclusion variables as well as the control variables. CREDIT LINE and CCS had positive significant relationships with FINANCIAL PERFORMANCE. CCS shows a strong causality relationship with the dependent variable with a coefficient of 3.1021. which suggests that the higher the value of the Credit Constrained Status of a firm, that is, the firm being less financially constrained according to Kuntchev et al (2013), the higher the firm is likely to perform within the financial year. On the other hand, lower CCS values which signify that a firm will most likely be constrained proved to lead to low financial performance amongst firms in the construction sector of Ghana. This view was also held by Fowowe (2017) in his analysis of firms in Africa. However, there is a difference in the results of OVERDRAFT effect on the financial performance of firms. Whiles OVERDRAFT showed a positive relationship with financial performance, it was not significant for firms in the construction sector. This contrasts the view of Fowowe (2017) who found all financial inclusion variables to be significant. This could possibly stem from the nature of overdraft which tends to be short term in nature whereas more construction firms would prefer larger pools of income and longer-term income to cover for the financial performance in terms of project completion and capital investments. This assertion is supported by Nkyi (2012) who studies concluded that the construction firm's performance challenges were a result of the poor access to long term funds for their projects. Even though insignificant,

the positive relationship with financial performance moves in line with the other significant Financial inclusion variables. Overall however it does seem that higher levels of financial inclusion connote higher levels of financial performance amongst firms in the construction sector.

With regards to the control variables, it is worth noting that all three control variables show a negative relationship with financial performance. It is not, however, strange as some existing literature also backs this assertion that age and firm size may have such a relationship. For the age of the firm, it is older firms have tendencies to experience slower growth parameter in comparison to the younger one (Fowowe, 2017). These variables were however statistically insignificant. The insignificance of size could be related to the models use of employee numbers as a measure which although a reasonable measure could yield results showing insignificance (Bigsten & Soderbom, 2006). Regulation, on the other hand, showed a statistically significant relationship with the dependent variable with the second-highest coefficient of the regression model of -2.1359. This negative coefficient suggests that high levels of government regulations in terms of taxes and other legal demands may actually lead to lower firm performance. These regulations come with costs that could contribute to higher operational costs.

## CHAPTER FIVE

### CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter concludes the study and enquiry into the role of financial inclusion on the performance of firms within the Construction sector of Ghana. Understanding the level of financial inclusion and the implication that it may have on firms and the policy direction the government should take in regards to boosting the sector and advertently provide some level of solution to the infrastructural deficit within the country.

#### 5.2 Conclusion

From the data analyses above it would seem that the financial inclusion levels of construction firms are quite adequate however they still have greater elements of credit constraints which may hamper their performance. It has also been established that higher levels of financial inclusion may lead to higher performance amongst firms in the construction sector. Although long-term financial options will seem much more favourable in comparison to short term financial packages like an overdraft.

For firms, this suggests in the pursuit of their projects it will be beneficial to look out for long term sources of funds as opposed to those in the shorter term. Also, it is a worthy point to note that constraints from these financial packages will have a negative implication on their performance and so they would have to be circumspect when seeking out these financial options being provided by the financial institutions.

#### 5.3 Recommendations

In terms of government policy, the recent proposals of the ministry of work and housing to engage with holders of pension funds to provide the sector with greater access to long term

financing options is a warranted move. From the study increasing the levels of financial inclusions greatly benefits their performance levels. Another thing the study uncovered was also the implication of tax and financial regulation on the firms in the construction sector. Heavy regulations seem to pay a heavy toll on the performance of firms in the sector and so the government will have to be considerate in its tax laws.

The study set out to explore if firms with similar characteristics could have a different relationship with financial inclusion. However, from the study, it could be seen that largely the results agree with other existing literature. There were, however, subtle differences in the detail of the relationship.

#### **5.4 Limitations of the Study**

There are still gaps that could be explored in this sector as aforementioned in earlier chapters, research regarding the construction sector in Ghana is minimal at best. There are still gaps that this study was not able to cover. The study uses contemporary data concerning a specific point in time. The same study could be conducted using longitudinal data that will allow for a greater understanding of the relationship between financial inclusion and performance of firms in the construction sector. Also, the use of proxy variables to measure performance may not be able to fully reflect the characteristics of the dependent variable. Provided there could be access to audited financial statements measures like Return on assets (ROA) could be a better measure.

## REFERENCES

- Aduda, J., & Kalunda, E. (2012). Financial Inclusion and Financial Sector Stability With Reference To Kenya: A Review of Literature. *Journal of Applied Finance & Banking*, 2, 110–111.
- Aghion, P., Angeletos, G.-M., Banerjee, A., & Manova, K. (2010). Volatility and growth: Credit constraints and the composition of investment. *Journal of Monetary Economics*, 57(3), 246–265.
- Allen, F., Chakrabarti, R., De, S., Qian, J., Q., & Qian, M. (2012). Financing firms in India. *Journal of Financial Intermediation*, 21(3), 409–445.
- Amidžić, G., Massara, A., & Mialou, A. (2014). *Assessing Countries' Financial Inclusion Standing—A New Composite Index* (36 No. 14). Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.678.5013&rep=rep1&type=pdf>
- Anaman, K. ., & Osei-Amponsah, C. (2007). Analysis of the causality links between the growth of the construction industry and the growth of the macroeconomy in Ghana. *Construction Management and Economics*, 25(9), 445–455.
- Beck, T., Degryse, H., & Kneer, C. (2014). Is more nance better? Disentangling intermediation and size effects of financial systems. *Journal of Financial Stability*, 10, 50–64.
- Beck, T., Demirguc-Kunt, A., & Maksimovic, V. (2008). Financing patterns around the world: Are small firms different? *Journal of Financial Economics*, 89(3), 467–487.
- Beck, T., Lu, L., & Yang, R. (2015). Finance and Growth for Microenterprises: Evidence from Rural China. *World Development* 67, 38–56.
- Bigsten, A., & Soderbom, M. (2006). What have we learned from a decade of manufacturing enterprise surveys in Africa. *World Bank Res.*, 21(2), 241–265.
- Burgess, R., & Pande, R. (2005). Do rural banks matter? Evidence from the indian social

- banking experiment. *The American Economic Review*, 95(3), 780–795.
- Carpenter, R., & Petersen, B. (2002). Is the growth of small firms constrained by internal finance? *The Review of Economics and Statistics*, 84(2), 298–309.
- Chauvet, L., & Jacolin, L. (2013). Financial Inclusion and Firms performance To cite this version : HAL Id : hal-01516871. *Access to Finance: Building Inclusive Financial Systems*, 1(8), 1–10. <https://doi.org/10.1111/j.1467-629X.1980.tb00220.x>
- Chauvet, L., & Jacolin, L. (2017). Financial Inclusion, Bank Concentration, and Firm Performance. *World Development*, 97, 1–13. <https://doi.org/10.1016/j.worlddev.2017.03.018>
- Chen, M., & Guariglia, A. (2013). Internal financial constraints and firm productivity in China: Do liquidity and export behavior make a difference? *Journal of Comparative Economics*, 41(4), 1123–1140.
- Claessens, S., & Tzioumis, K. (2006). Measuring firms' access to finance. *Access to Finance: Building Inclusive Financial Systems*, 1–25.
- Conde, T., Bykere, A., Cheston, S., & Rhyne, B. (2016). The Business of Financial Inclusion: Insights from Banks in Emerging Markets. Retrieved January 20, 2019, from <https://www.iif.com/publication/research-note/business-financialinclusion-%0Ainsights-banks-emerging-markets>
- ConstructGhana. (2018). CONSTRUCTION INDUSTRY – ECONOMIC CONTRIBUTOR. Retrieved February 1, 2019, from <http://www.constructghana.com/construction-industry/>
- Dakhil, A. (2013). THE CONTRIBUTION OF THE CONSTRUCTION INDUSTRY TO ECONOMIC DEVELOPMENT IN LIBYA BY AMEL DAKHIL A thesis submitted in fulfilment of the requirements of Liverpool John Moores University for the degree of Doctor of Philosophy October 2013.
- Davidsson, P., Leona, A., & Naldi, I. (2010). Small firm growth. *Foundations and Trends in*

- Entrepreneurship*, 6(2), 69–166.
- De Long, J. ., & Summers L.H. (1991). Equipment investment and economic growth. *The Quarterly Journal of Economic*, 106, 445–502.
- Delmar, F., Davidsson, P., & Gartner, W. (2003). Arriving at the high-growth firm. *Journal of Business Venturing*, 18(2), 266–307.
- Demirgüç-Kunt, A., & Klapper, L. (2012). *Measuring Financial Inclusion: The Global Findex Database*. (No. 6025). Washington D.C.
- Demirguc-Kunt, A., & Levine, R. (2009). Finance and Inequality: Theory and Evidence. *Annual Review of Financial Economics* 1, 287–318.
- Demirgüç-Kunt, A., & Maksimovic, V. (1998). Law, finance and firm growth. *Journal of Finance*, (53), 2107–2131.
- Du, J., & Girma, S. (2007). *Does the source of finance matter for firm growth? Evidence from China: GEP Research Paper 39*. University of Nottingham.
- Edwards, B. (2002). *Rough Guide to Sustainability*. London: RIBA Publications.
- Erol, I., & Unal, U. (2015). Mp r a, (68263).
- Esty, B. . (2004). When do Foreign Banks Finance Domestic Investment? New Evidence on the Importance of Legal and Financial Systems. Boston, Massachusetts.
- Esty, B., & Megginson, W. . (2001). *Legal Risk as a Determinant of Syndicate Structure in the Project Finance Loan Market* (02 No. 067).
- Fowowe, B. (2017). Access to finance and firm performance: Evidence from African countries. *Review of Development Finance*, 7(1), 6–17. <https://doi.org/10.1016/j.rdf.2017.01.006>
- Fowowe, B., & Abidoye, B. (2013). The effect of financial development on poverty and inequality in African countries. *Manchester School*, 4(81), 562–585.
- Girma, S., & Vencappa, D. (2015). Financing sources and firm level productivity growth: evidence from Indian manufacturing. *Journal of Productivity Analysis*, 44(3), 283–292.

- Green, R. (1997). Follow the leader: how changes in residential and non-residential investment predict changes in GDP. *Real Estate Economics*, 25(2), 253–270.
- Hansen, B. . (1999). Threshold effects in non-dynamic panels: Estimation, testing and inference. *Journal of Econometrics*, 93(2), 345–368.
- Hillary, O. E. (2016). Determinants of Financial Inclusion and Performance of Small and Medium Enterprises in Nairobi City County Determinants of Financial Inclusion and Performance of Small and Medium Enterprises. *International Journal of Financing and Accounting*, 1(3), 62–78.
- Hillebrandt, P. . (2000). *Economic theory and the construction industry* (3rd ed.). Basingstoke: McMillan Press Ltd.
- Kleimeier, S., & Megginson, W. . (2000). Are project finance loans different from other syndicated credits? *Journal of Applied Corporate Finance*, 13(1), 75–87.
- Kuntchev, V., Ramalho, R., Rodriguez-Meza, J., & Yang, J. . (2013). *What Have We Learned from the Enterprise Surveys Regarding Access to Finance by SMEs?* (No. 6670). Washington D.C.
- Lean, S. C. (2001). Empirical tests to discern linkages between construction and other economic sectors in Singapore. *Construction Management and Economics*, 13, 253–262.
- Levine, R. (1996). Financial Development and Economic Growth: Views and Agenda. *Journal of Economic Literature*, 35, 688–726.
- Malhorta, M., Chen, Y., Criscuolo, A., Fan, Q., Hamel, I. ., & Savchenko, Y. (2007). Expanding Access to Finance: Good Practices and Policies for Micro, Small and Medium Enterprises. *WBI Learning Resource Series*.
- Modigliani, F., & Miller, M. . (1958). The cost of capital, corporation finance and the theory of investment. *American Economic Review*, 3(48), 261–297.
- Myers, S. ., & Majluf, N. (1984). Corporate financing and investment decisions when firms

- have information that investors do not have. *The Journal of Economic Perspectives*, 15(2), 187–224.
- Nkyi, B. . (2012). *Strategies for Financing Real Estate Development In Ghana*. Kwame Nkrumah University Of Science and Technology.
- Okello Candiya Bongomin, G., Mpeera Ntayi, J., Munene, J. C., & Akol Malinga, C. (2017). The relationship between access to finance and growth of SMEs in developing economies: Financial literacy as a moderator. *Review of International Business and Strategy*, 27(4), 520–538. <https://doi.org/10.1108/RIBS-04-2017-0037>
- Oladinrin, T. O., Ogunsemi, D. R., & Aje, I. O. (2012). ROLE OF CONSTRUCTION SECTOR IN ECONOMIC GROWTH : EMPIRICAL EVIDENCE FROM NIGERIA, 7(1), 50–60.
- Organ-isation for Economic Co-operation and Development. (2006). *Financing SMEs and Entrepreneurs*.
- Rameezdeen, R. (2007). *Image of the construction industry*. in M. Sexton, Kahkonen, K. and Lu, S.L. (eds), *CIB Priority Theme – Revaluing Construction: A W065 Organization and Management of Construction Perspective*. CIB Publication.
- Regasa, D., Fielding, D., & Roberts, H. (2017). Access to Financing and Firm Growth: Evidence from Ethiopia, 2293(1707). Retrieved from <https://ourarchive.otago.ac.nz/handle/10523/7267>
- Sarma, M. (2008). *Index of Financial Inclusion*. Indian Council for Research on International Economic Relations Working Paper (No. 215).
- Serrao, M. . (2012). Designing a Methodology to Investigate Accessibility and Impact of Financial Inclusion. Retrieved February 10, 2019, from <http://ssrn.com/abstract=2025521>
- Sinclair, S. (2001). Financial exclusion: An introductory survey. Retrieved from [http://www.academia.edu/download/33733104/Financial\\_Exclusion\\_-](http://www.academia.edu/download/33733104/Financial_Exclusion_-)

%0A\_An\_Introductory\_Survey.pdf

- Soriano, M. A. (2017). Factors driving financial inclusion and financial performance in Fintech new ventures: An empirical study. Retrieved from [https://ink.library.smu.edu.sg/etd\\_coll/145](https://ink.library.smu.edu.sg/etd_coll/145)
- Strassmann, P. (1970). The construction sector in economic development. *The Scottish Journal of Political Economy*, 17, 390–410.
- Tobin, J. (1969). A general equilibrium approach to monetary theory. *Journal of Money, Credit and Banking*, 1(1), 1425–1460.
- Tradeconomics.com. (n.d.). Ghana GDP from construction. Retrieved October 22, 2018, from <https://tradingeconomics.com/ghana/gdp-from-construction>
- Valverde, C., S., G., E.P.M., & Molyneux, P. (2005). Financial exclusion. *Palgrave Macmillan*.
- Woudhuysen, J., & Abley, I. (2004). Why is construction so backward? Great Britain. *Wiley Academy*.
- Zingales, L., & Rajan, R. (1995). What do know about capital structure? Some evidence from international data. *The Journal of Finance*, 50, 1421–1460.

**APPENDIX**

Thesis Questionnaire

Please tick here to indicate your informed consent to participate in this study

Please provide us with an email address, we'd like to share our findings with you (Optional)

---

Part A.

*The questions in this section are designed to collect information about the company*

**A1. How long has the company been in operation?**

Years

**A2. What is the ownership status of the company?**

Foreign  Local

**A3. Please record your primary area of specialization.**

**Primary Area**

**of Specialization:** \_\_\_\_\_

**A4. Please record any additional areas of specialization**

*IF NONE: MARK THIS BOX:*

1. **Area of Specialization:** \_\_\_\_\_

2. **Area of Specialization:** \_\_\_\_\_

3. **Area of Specialization:** \_\_\_\_\_

**A5. How many employees does the company have?**

\_\_\_\_\_

**Part B**

The questions in this section are designed to collect information on the current business environment of the company.

**B1. What are your primary and secondary sources of funds?**

*Mark One in Each Column*

Sources	Primary	Secondary
a. Internal funds	<input type="checkbox"/>	<input type="checkbox"/>
b. External funds	<input type="checkbox"/>	<input type="checkbox"/>

**B2. Has the company applied for a loan in the past year?**

Yes

No

**B3. If Yes, was the application successful?**

Yes

No

**B4. If No, is the company sufficiently funded for its projects**

Yes

No

**B5. Does the company have any loan outstanding as at the end of the past year?**

Yes

No

**B6. Has the company used external funds to finance any project and investment in the past year?**

Yes

No

**B7. Is the firm satisfied with current financial provision?**

Yes

No

**B8. Does the firm have access to overdraft facilities from any financial institution?**

Yes

No

**B9. Does the firm have access to credit line facilities from any financial institution?**

Yes

No

**B10. How many government regulations (tax, permits, filing returns etc.) must the firm adhere to in its operations?**

---

**B11. Will the company consider litigation as significant obstacle to completion?**

Yes

No

**B12. If any, how many litigation cases were pending by the close of the previous year?**

---

**B13. Among the following constraints which ones will your firm consider significant?**

Constraints

**Yes**      **No**

Power Supply

Security

Inflation	<input type="checkbox"/>	<input type="checkbox"/>
Exchange rate	<input type="checkbox"/>	<input type="checkbox"/>
Input prices (Raw materials)	<input type="checkbox"/>	<input type="checkbox"/>
Labour availability	<input type="checkbox"/>	<input type="checkbox"/>
Logistics	<input type="checkbox"/>	<input type="checkbox"/>

**Part C**

We are interested in the project performance and Capital Investments.

**C1. How many projects was the firm able to complete in the previous year?**

---

**C2. How many new projects was the firm able to initiate work on in the previous year?**

---

**C3. How many capital investments (machinery and equipment) did the firm invest in within the previous year?**

---