UNIVERSITY OF GHANA

COLLEGE OF HUMANITIES

FINANCIAL ACCESS AND EMPLOYMENT GROWTH: EMPIRICAL EVIDENCE FROM FIRMS IN GHANA

BY

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THIS THESIS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MPHIL ECONOMICS DEGREE

JULY, 2018

DECLARATION

I hereby affirm that this research is as a result of my own original effort towards the Master of Philosophy in Economics and to the best of my knowledge, neither the whole nor a part of this thesis has been presented by someone else for another degree in this or any other university. All references used in this research have been accordingly accredited.

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CERTIFICATION

I solemnly affirm that this thesis has been assessed and all corrections have been made following the comments made by my supervisors and the laid down procedures of the University.

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DEDICATION

This research is bestowed to the Almighty Allah, my late dad and lovely mum as well as my supportive family members and friends for their overwhelming love.

ACKNOWLEDGEMENTS

My sincere appreciation goes to Almighty Allah for granting me life, good health, and strength to go through this programme.

My profound gratitude goes to Prof. Eric Osei-Assibey and Dr. Alfred Barimah for their good supervision. I also appreciate and thank all the lecturers at the Department of Economics for their suggestions during the proposal presentation. I express my heartfelt appreciation to my mum for her affection and moral support throughout this programme.

My next appreciation goes to all my program colleagues and those who played various roles during my studies; I say a big thank you for your backing.

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LIST OF ABBREVIATIONS

SMEs	Small and Medium-sized Enterprises
UNCTAD	United Nations Conference on Trade and Development.
OLS	Ordinary Least Square.
FINSSP	Financial Sector Strategy Plan.
NPLs	Non-Performing Loans.
GSE	Ghana Stock Exchange.
FINSAP	Financial Sector Adjustment Program.
SSA	Sub-Saharan Africa.
WBES	World Bank Enterprise Survey.
GIPC	Ghana Investment Promotion Center.
GDP	Gross Domestic Product.
MSME	Micro, Small and Medium Enterprises.
TFP	Total Factor Productivity.
2SLS	Two Stage Least Square.

ABSTRACT

This study aimed at finding the effect of financial access on the employment levels of firms in Ghana. It further establishes some basic factors that determine various firms' financial access. The study used a firm-level survey of 720 firms, which was conducted by the World Bank in Ghana in 2013. Employment growth levels of firms was estimated and regressed using the Two-Stage Least Square (2sls), on several firm level characteristics including financial access. The result indicated that access to cost-effective line of credit/loan or an overdraft facility has positive and statistically significant effect on firms' employment growth levels. \

Using firms' age, size, location and other control level variables, the study found foreign ownership and firm size to be positively related to firms' employment levels whilst firms' age and location had insignificant effects on firms' employment levels. These findings are consistent previous studies.

The probit estimation technique was further used by the study to establish some of the key factors that influences the financial accessibility of firms in Ghana. It was revealed that firms' innovation, availability of an audited financial record as well as firms' location, all significantly determinants of whether a firm will have access to finance or not.

In the light of this, the study therefore suggests that credit constraints should be significantly relaxed to help curb the high unemployment level, starting with the government lessening its policy rate. In addition, firms should acquire internationally recognized quality certification and take part in exporting of their products as well as allowing foreign partnerships on their shareholding structure.

CHAPTER ONE
INTRODUCTION

1.1 Background of the study

The relationship between financial growth and economic development has been extensively studied in literature over the years. There exists an extensive consensus from most findings that financial growth results in an increment in economic development through the productivity of firms and the general wellbeing of households. Much empirical evidence (World Bank, 2008; Beck & Laeven, 2006; King & Levine, 1993; Schumpeter, 1911) has documented this fact. However, the direct relationship between financial access and employment is ambiguous, because increasing access to finance will not directly lead to employing additional workers. Increasing investment could expand firms and thus output from a better financial access without even increasing labour, a case of "jobless growth" (Ayyagari et al., 2016).

In addition, the financial growth effect on labour markets has received increasing attention in the recent literature, particularly since unemployment has become a dominant problem for governments of various countries in the world due to the global financial crisis (Garmaise, 2008). Most empirical studies estimate the impact of financial access on employment by comparing the labour market conditions before and after financial regulation changes.

However, some studies argue that constraints in the financial sector should not directly affect labour; this is because unlike capital, labour does not entail financing. Other theoretical literature on the linkages between the capital and labour market suggest that since labour has a fixed cost component, it entails direct financing to take care of the upfront costs that comes with the training and hiring (Ayyagari et al., 2016). Therefore, we should presume that the credit market has an impact on employment decision and thus better access to finance may permit firms to

employ more workers. This may also encourage firms to invest in more capital, hence, directly translate into greater job creation. In some cases, in which firms uses a production technology with capital and labour being substitutable, an increment in capital investment may reduce firms' level of employment, lowering job creation. The net effect may therefore, depend on firm level characteristics and production structure (Dao et al., 2017). While better financial access may permit firms to hire additional labour, it also encourages firms to invest in more capital, which may not automatically translate into greater job creation.

Furthermore, the size of a firm influences the finance-employment relationship greatly and indeed several empirical studies have found that firms with different sizes may face different operational and institutional constraints (Oi, 1983). More to the point, small and medium-sized enterprises (SMEs) are adversely affected more by financial, institutional and legal obstacles and may have a larger undesirable impact on their development, especially in countries with underdeveloped financial systems (Beck et al, 2005). Deficiency in access to credit remains a major obstacle for many firms, especially SMEs (Baah-Nuakoh, 2003; Osei-Assibey, 2014). In addition, since small firms are more labour intensive as compared to the large ones, the expected finance-employment connection is stronger than it is for larger firms. Ayyagari et al. (2016) shows that, increase in supply of credit results in higher employment growth especially among small firms in developing countries.

Generally, financial access is the process whereby financial products are easily made available to firms in a cost-effective manner. In the finance for all report by the World Bank (2008), three main ways were postulated by which finance, more specifically external finance can influence firms' productivity and growth; easy financial access aids most firms to be inventive. Also, financial access permits firms to gain the benefits of economies of scale and it helps firms to

acquire extra investment opportunities. Lastly, with easy financial access, firms are able to obtain more effective productive asset portfolio resulting in the opening of more investment doors. Chen et al (2011) also argued that, efficient functioning of the financial markets leads to easy and cheap loans to firms for innovative projects.

Getting access to finance is an undeniably important factor for a firm's efficiency and growth. Over the years, Ghana has been experiencing higher levels of unemployment, with the unemployment rate increasing to 5.77 percent in 2016 from 5.54 percent in 2015 (Ghana Employment Report, 2015). Past and present policy makers have implemented policies and programmes including the recent National Youth Employment Program aimed at curtailing these higher unemployment levels. The three main sectors of the economy are able to absorb just a few of the unemployed with the agriculture dominating and employing more than half of the labour force until recent times. According to the September, 2015 Ghana Employment Report of the Ghana Statistical Service, the manufacturing and service sector absorbs 14.4 percent and 40.9 percent of the labour force respectively as compared to the 44.7 percent absorbed by the agricultural sector. The lower employment levels of the industry and service sector can be attributed to various reasons.

Finance, plays a vital role in the day-to-day activities of these sectors and cannot be left out. It also serves as a catalyst that encourages the survival and growth of firms located in countries world wild. Whereas new firms require credit as a start-up capital, existing firms also use credit as a source of working capital and investment. Indeed, every business enterprise sees credit as its life-blood (Masood, R. Z., 2011). However, World Bank (2008) and International Finance Corporation (2013) reports provides evidence that most firms are significantly constrained by lack of financial access especially in Africa. Firms require capital for their operations in buying

assets, paying employees' remuneration, as well as covering operational costs. Improved access to credit helps firms to build their productive capacity and makes them competitive in both the local and the global market (UNCTAD, 2002)

Literature however, informs us that most firms especially those in countries that are less developed, lack easy access to financial services and products and are highly financially constrained (Ayyagari et al., 2016).Also, firms with greater access to finance have higher Total Factor Productivity than those with no access (Goedhuys et al., 2006).This has undoubtedly led to stunted growth and non-competitiveness of these firms in world trade.

Establishing a direct effect of financial access on employment growth is complex, since the variables that determine a firm's financial access may also reflect its labor demand. The precise channel through which finance operates is still quite unclear and a better understanding of the connection between firms access to finance and their employment levels will go a long way to help the government initiate policies aimed at increasing their access and thereby their employment levels.

1.2 Statement of the Problem

Several empirical literature have established that expansion in the financial sector leads to economic development through the productivity of firms as well as the general wellbeing of households. Contrary to the above, most firms are severely constrained in their access to finance both in developed and under developed economies (Aryeetey et al., (1994), Baah-Nuakoh, 2003). Levine (2005) proposes that, financial access may have an effect on investment decision, savings rate and technological innovation. Levine also states that "We are far from definite answers to these questions: Does finance cause growth, and if it does, how?" One of the possible ways

through which finance can affect the development of firms is through the expansion of its productivity and indeed numerous models provide theoretical validation to this proposition.

However, this study will seek to investigate the causal relationship between access to finance and firms' employment levels and find out whether financial development will make firms employ more. This generally depends on the type of firm input, thus, labour intensive firms are more likely to employ more as compared to capital-intensive firms when there is financial development. This study will also establish some of the key factors that determines a firm's success in accessing credit from various financial institutions in Ghana and show how different sectors of the economy differ in their employment levels as a result of the increment in access to credit. It would be established as to whether industry or service sector employs more. The study will compare and contrast the employment level of each sector to get a better understanding as to which sector really get a greater share in terms absorption of the labour force.

It is imperative to study this relationship and more especially within Ghana's economy because empirical evidence suggest that financing constraints are often found to have the largest undesirable impact on firms' growth, especially in countries with underdeveloped financial systems. As noted by Mensah (2004), there is no readily available data regarding the exact number of Small and Medium Enterprises (SMEs), but the Registrar General's Department approximates 90 percent.

Empirically, it has been established that SMEs promote entrepreneurship because they tend to be more labour intensive and thus, help in employment creation (Gambold, 2008). Given that these firms are labour-intensive, one would expect the finance-employment relationship to be strong and therefore access to finance by these firms should result in employment growth. Indeed in a

recent paper, Ayyagari et al. (2016) shows that an increment in the supply of credit results in higher employment growth especially among small firms using cross sectional data from developing countries particularly in Africa. This study however, particularly focuses on one country that is Ghana.

1.3 Research Questions

This study seeks to answer the following questions:

1. What impact does financial access of firms have on their employment levels?
2. How do the sectors (industry and service) vary in terms of their employment levels?
3. What factors determine firms' success in accessing credit from financial institutions in Ghana?

1.4 Research Objectives

The main objective of the study is to investigate the impact of financial access on the employment levels of firms in Ghana. Specifically the study seeks to:

I. Examine the effect and role of access to finance on employment growth of firms in Ghana.

II. Establish some of the key factors that determine firms' likelihood of having access to credit in Ghana.

1.5 Justification of the Study

This study is relevant in the view that firms contribute immensely towards the reduction of the unemployment levels in Ghana and to the general social-economic development of Ghana. The problem of access to credit has long been the main attention of many researchers. However,

study of the literature on firms' financing and employment levels reveals that there is an important gap in knowledge as to how firms' access to credit affect the labour market in Ghana. Even though previous studies have been conducted on the determinants of firms' access to credit in Ghana, only quite a few works have been done to examine its impact on the labour market. However, previous studies has been done on developing countries (Ayyagari et al., 2016, Dao et. al., 2017) and based on the selection of the countries, there were some biases in the sense that some countries had fewer firms relative to others.

In addition, firms in different countries have different characteristic and this was not considered. This current study focuses on the firms in Ghana specifically targeting the industry and service sector, the selection bias is omitted since all the firms under consideration are in Ghana. In contrast, this study tackles Ghana under isolation, using robust estimation technique (OLS) as against the pooled regression used by previous studies. This study will includes all the 720 firms in the 2013 Ghana Enterprise Survey of the World Bank that is not only firms that have applied for credit but also those that have been discouraged from doing so for various reasons.

Primarily, the results of this study can have a significant impact government policies aimed at eradicating firms financing obstacles, especially regarding access to credit. Getting a better understanding regarding how finance affects the employment levels of firms would be very significant in highlighting the efforts of the government in promoting firms access to credit and hence reducing the higher unemployment levels in Ghana through firms. In addition, the findings of this study will serve as an incentive for government to create an enabling financial environment to entice various lending institutions to make credit readily available for firms to access. Lastly, this study will contribute to the existing literature on firms' financing and its impact on their employment growth.

1.6 Organization of the Study

The study is organized into six chapters. The present chapter entails the background, the problem statement, research questions and objectives, as well justification of the study and it provides a general description of the study. Chapter two provides a general overview of the financial sector in Ghana as well as the employment trends. Chapter three discusses and reviews important but detailed empirical literature. The fourth chapter describes the study's methodology as well as issues including the type and source of data used for the study and the estimation techniques. Chapter five presents and discusses the most critical part of the study, which are the findings. The last but not least chapter provides a summary of the research findings and relevant conclusions and suggests plausible and appropriate policy recommendations.

CHAPTER TWO

OVERVIEW OF THE FINANCIAL SECTOR AND EMPLOYMENT TRENDS IN GHANA

2.0 Introduction

This chapter provides a synopsis of the financial sector, both in developed and developing economies with particular focus on Ghana, as well as the various employment levels over years. It begins with a theoretical definition of finance and financial access and a general overview of financial access in Ghana. It further analyzes the importance of access to finance and how important various institutions in the financial sector are with regards to the role they play in economic growth. This chapter also discusses general problems facing the financial sector, particularly problems associated with access to finance. Finally, government's supports aimed at alleviating problems associated with financial sector in Ghana are also discussed.

2.1 General overview of the financial sector of Ghana

Ghana's financial system has experienced so many processes of reorganization and transformation in contemporary years. Various regulatory and controlling frameworks in the country are backed strongly by the modern financial infrastructure. There are however still challenges associated with this financial system and the second phase of the Financial Sector Strategy plan II, which was accepted in 2010 and launched in June 2011, revealed strategic targets at increasing the financing base of banking institutions, promoting quality services through increased competition and eliminating barriers to access to finance as well as introducing innovative financial instruments.

The financial sector however, has been somehow resilient to financial crisis globally and this is largely due to its limited incorporation with international markets and dependence on domestic funding. The various credit markets are still buoyant and most of the financial institutions generally continue to be stable with just some few strains in the financial sector increasing recently. The credit settings for enterprises and households was tightened in 2009, this reflected in the unwillingness of various banks to offer the private sector credit and also the household selective credit stance. More to the point, inflationary pressures, which were coupled with the foreign capital inflows falling, also added to interest rates rising in the domestic money markets and exerted pressure in the foreign exchange market as well.

Banks largely dominate Ghana's financial sector. Owing to the long term structural enhancements in the macroeconomic environment in Ghana, various bank increased their credits to the private sector and also, as a result of the introduction of a new banking law in 2003, the financial market has witness a soared competition among financial institutions. As of 2011, in addition to three state-owned development banks, 28 licensed commercial banks with 790 branches, operated in the country. Various soundness indicators provide strong evidence that the banking system is liquid and well capitalized, with the capital steadily above statutory levels. Nevertheless, the rapid expansion in the sector, rising funding costs, stronger and fierce competition have encouraged greater risk taking.

Bank loan portfolios are still usually intense in just a few vital sectors and large borrowers. Speedy increment in the number of domestic branch networks, together with the rapidly expanding cross-border operations by their parent banks, has led to increment in the potential for strategic and operational risk. Since the year 2009, the sector has experienced a decline in loan books and this is partly driven by the high domestic arrears that is accumulated by the

government, with the amount of non-performing loans (NPLs) representing 17.2 percent of the total loans in 2011, compared to only 7.7 percent in 2008.

The Bank of Ghana in the 2008 increased the minimum capital requirements for banks to GHS 60 million. By December in the year 2011, the number of banks that had met this requirement was 16, out of which included 13 banks were owned by foreigners. Banking in the mobile sector has been rising fast due to the higher mobile phone usage among the populace (over 70 percent of adult population in 2010). Varieties of products have been made available to consumers, including the ability to pay school fees. The capital markets on the other hand has been developing very fast regardless of the fact that markets for equity were unfavorably affected by the 2008/2009 global financial crisis. In the early part of the year 2010, there were over 35 companies in the Ghana Stock Exchange (GSE) that had more than USD 12 billion in market capitalization. Under the present-day rule, foreigners are only allowed to invest in the stock exchange without exchange-control restrictions. In addition, second to South Africa, Ghana is another country that have contact with the global capital markets and had issued a sovereign Eurobond, with a 10-year USD 750 million issue in back in the year 2007.

The fixed income market is still full of life, even though some of the debt markets recently experienced narrowing of options for new sovereign issues, expanding spreads on the international bond, and some foreign investors exiting from government securities. However, securities in the non-government sector remain very limited, and as of March 2013, the Standard and Poor's awarded Ghana a sovereign rating of B whilst Fitch awarded Ghana a B+. The investor base of Ghana's security market is relatively diversified; as of June 2009, various commercial banks held 27.4 percent of all outstanding government securities, with other notable holders which included the Bank of Ghana (39.9 percent), insurance companies (0.9 percent), the

Social security and National Insurance Trust (5.1 percent), firms and fund managers (5.6 percent), and retail investors (19 percent).

As of December 2006, foreign investors were allowed to maintain foreign currency accounts with domestic banks and place bids on longer-term government issues having maturities of three years or more. Secondary market trading, which usually involves government securities are mostly conducted on an over-the-counter basis through networks of primary dealers, although authorities have, in 2006 and 2007, listed certain longer-term outstanding bonds on the Stock Exchange to boost secondary trading activity and increase liquidity. The derivatives market remains largely undeveloped and usually does not feature any interest rate or currency derivatives. The insurance market is relatively developed, having more than 30 companies competing on the market, which includes branches of international companies as well.

2.2 Contributions of the Financial Sector to Economic Growth

The important contributions of various financial institutions to the economic growth and development of national economies especially in developing countries have been emphasized by a number of empirical studies. In economics, there is a prevailing view that improvement in the financial sector contributes immensely to the development various economies. "For example, financial institutions are better suited than individuals to identify potentially successful projects because these institutions are big enough to pay large fixed costs of collecting information about individual projects and to analyze this information more efficiently" (Cristina, Yan & Zhang, 2009).

Furthermore, once a project is underway, these financial institutions are always in a better position to scrutinize borrowers so as to guarantee that savers' assets are used judiciously and

productively. According to Levine (1997), the prevalence of theoretical reasoning and empirical evidence proposes that, there is a positive first-order relationship that connects financial development and economic growth. Economic growth can also be improved by financial markets. Primarily, financial institutions enhance the collection of resources from the numerous savers necessary to invest in large projects. Secondly, they also enable pooling and risk reduction that is inherent in individual projects. "Finally, the secondary financial markets reduce securities holders' liquidity risk by providing them the opportunity to sell their securities without affecting firms' access to the funds initially invested" (David, 2006). Therefore, well-developed financial sector can help create growth through the increment in the pool of funds and by reducing the risk as well as promoting the productivity of fund transfers from savers to efficient investment projects. "Some economists have focused on events that have led to large changes in the size and development of the financial sector in a short period of time to isolate the impact of financial development on growth within a country over time". Usually they are referred to as event studies (Erdal, Veli&Tuzel, 2007)

In addition to the above, argument from Joseph Schumpeter suggested that, financial development is very much crucial for technological innovation and economic growth; with trace of this issue concerning financial development back to 1911. Schumpeter believes that Technological changes can support invention and innovation of methods of production in which brand new products and production process are invented and eventually economic growth.

Following the same reasoning, King and Levine (1993b) tested Schumpeter view and revealed that financial development measures and economic growth indicators had a positive correlation. That is, development of a conducive financial environment have the capacity to affect economic growth in the long run which then produces a conducive atmosphere for capital accumulation

and improvements in the economy's future efficiencies.. More to the point, Raymond W. Goldsmith (1969) came up with a different observation which postulated that economic and financial development over decades had exhibited parallelism in their relationship.

There was an emphasis on choice between financial factors that promote acceleration of economic development and those that promote financial development that reflects economic growth. In this view, Bagehot (1873) and Hicks (1969) supported that financial sector development triggered industrialization in England and it was through an increment of the access to funds, which in turn they used to finance and execute capital projects. That is to say, private investment project could no longer rely on funds from individuals instead stock markets acts as intermediaries.

2.3 Financial sector reforms and economic performance of Ghana

The last three decades has seen Ghana move from an interventionist to a liberalized financial sector policy regime with quite a lot of notable turnaround from what existed before most of the comprehensive chains of reforms initiated in 1988. Empirical studies by Aryeetey et al. (2000) revealed that, development of the financial sector should imply that financial resource are efficient and effective in its mobilization and allocation. However, prior to the reforms in the Ghanaian financial system, it had already been characterized by financial repression and therefore had failed in channeling funds effectively to enhance growth in the real sectors of the economy such as agriculture and manufacturing.

Even though organization and distribution of credit to the numerous economic agents in Ghana were quite dreadful between years 1960 and the mid-1980s, most criticizers of the then pre-reform financial sector had compared it to the financial repression categorization of McKinnon

(1973) and Shaw (1973). The underdeveloped and inefficient financial system resulted from the direct controls of government as well as the manipulations in its administrations. Various despotic financial policies such as interest rate ceilings stunted the growth of private investment, discouraged savings culture and inhibited financial deepening and hence growth of the economy. Numerous State-owned banks including Ghana Commercial Bank (1953), Agricultural Development Bank (1965), Bank for Housing and Construction (1973), National Investment Bank (1963) supervised by the Bank of Ghana (1957), were directed to channel credit to "unproductive sectors" of the economy by combining a policy mix of interest rates and selective credit controls and ceilings (Aryeetey et al., 2000).

At the beginning of 1980s, it had become so obvious and clear that financial sector policy that were implemented in1960s through to 1970s had failed to mobilize resources for economic growth and had left a very shallow financial system that had no room for improved deepening of the sector. Many negative repressive policies were evident in the trend performance of indicators of financial depth such as the money supply (M2-to-GDP ratio) which had decreased from 24% in 1977 to 12% in 1984.

In addition, negative real interest rates prevailed under the regime in which there were direct controls involving nominal interest and inflation rates. There were other indicators over the same period, which documented persistent declines as share of GDP as follows: demand deposits (11.6–4.6%), savings and time deposits (7.1–2.6%) and domestic credit (38.8–15.6%) (Aryeetey et al., 2000). The general and overall effect on economic growth of the failed financial policies has been well documented (Aryeetey et al., 2000; Bawumia, 2010). Real GDP growth was recorded to have only managed an average of 3.04% between 1961 and 1970 and a disappointing 0.52% over the period 1971–1980 (see Table 2.1 and Fig. 2.1 for trends). The launch and

implementation of Financial Sector Adjustment Program (FINSAP) in 1988 was part of some of the comprehensive macroeconomic reform programs (economic reform program) of the World Bank as well as the International Monetary Fund aimed at the liberalization and restructuring of the financial sector.

Various banks that were distressed were restructured and their nonperforming assets were cleaned up as well, to restore profitability and viability in the banking sector. Other notable policy tools used under the program included right price setting, structural reform initiation, the elimination of credit controls as well directed credit, development of money and capital markets, enhancements in the regulatory and supervisory framework (Bawumia, 2010). The replacement program to FINSAP is Financial Sector Strategic Plan (FINSSP), which was effected from 2001 with almost the same aims and objectives but the latter sought to consolidate gains made under FINSAP and hence further, deepened the sector with improved financial service delivery (Bawumia, 2010).

Outcomes from both programs (FINSAP and FINSSP) have had significant positive effects on the banking and financial sector over the years under the implementation. The banking sector has seen a substantial increment in the number of banks from 10 banks in 1988 with 405 branches to 27 banks (with majority foreign investor ownership) with 696 branches in 2009. Total banking sector assets have seen a significant change that is, growing from 0.31% of GDP in the year 1993 to 0.66% in 2008, hence reflecting a more vibrant banking sector. Asset concentration and quality, capital adequacy, mobilization of savings (deposits) and allocation of sectorial credit, interest liberalization and financial deepening indicators have all shown significant progresses following the implementations of the FINSAP and FINSSP.

Although the banking system liabilities seem to have improved, non-performing loans still remains a key concern for policy makers in Ghana. Particularly the Credit to the private sector has outpaced credit to the public sector for at least a decade. Moving at an average rate of 3.12% (1981–1990), the private sector credit stands at 15.71% in the year 2010 (Bawumia, 2010). Data on key indicators used for the financial deepening shows significant deepening of the financial sector over the past decade following the various financial sector reforms. Broad money supply to GDP ratio increased from 16.50% between the years 1981 and1990 to 31.5% (2001–2005) and 29.79% in 2010. Many other financial deepening indicators have also shown some significant changes over the past three decades especially the periods that follows the post-reform of the financial sector (Table 2.1).

On the other hand, Real interest rates did not turn positive immediately following FINSAP and FINSSP. Real savings rates for instance, averaged −10percentage between the years 1988 and 2000 and -8.8% between the years 2000 and 2008. Real bank lending rates also turned positive averaging 9.1% in the year 1989 to 22% in 2000 and 9.1% between the years 2001 and 2008 (Bawumia, 2010). The large spreads in the interest rate (that is the difference in the lending and deposit rates) remains a main source of concern to many stakeholders in the country. More to the point, economic growth rates has been impressive and has seen significant changes following the ERP, FINSAP and FINSSP (Table 2.1).

Adu et al. (2013), in their paper "financial development and economic growth in Ghana: Does the measure of financial development matter?" examine the long-run growth effects of financial development in Ghana. They revealed that the growth effect of financial development is quite very sensitive to the proxy choice. They further elaborated that both the credit to the private sector as ratios to GDP and total domestic credit were conducive for growth, while broad money

stock to GDP ratio is not considered growth inducing. The indexes created from principal component analysis confirmed the sensitivity of the effect to the choice of proxy.

Their results suggested that the good or bad of financial development effects on growth will depend on the indicator used as proxy for financial development. The foregoing discussion suffices to conclude that even though significant changes has been seen in the financial sector following the FINSAP and FINSSP, further policy commitment is appropriate and important to further deepen the financial system.

Table 2.1: Economic growth and indicators of financial deepening (in percent).

Indicators	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006	2007	2008	2009	2010
Real GDP growth	3.04	0.52	2.28	4.3	5.04	6.4	6.46	8.43	3.99	8.01
Real GDP per capita growth	0.47	−1.76	−0.77	1.64	2.52	3.85	3.92	5.86	1.55	5.5
Private-sector credit/GDP	7.72	5.89	3.12	7.39	13.05	11.09	14.49	15.88	15.54	15.71
Private-sector credit/total credit	38.95	20.22	14.74	30.15	41.54	52.57	63.37	56.92	54.52	54.6
Broad money/GDP	20.44	24.58	16.5	21.68	31.05	22.62	24.91	26.71	27.96	29.79
Narrow money/broad money	78.05	70.04	75.05	55.83	52.38	49.52	51.11	47.16	40.65	46.74
Currency/*M*2+	41	35.21	39.33	30.86	28.82	24.1	22.58	20.64	20.35	21.26
Currency/GDP	8.38	8.65	6.45	6.76	8.93	5.45	5.62	5.51	5.69	6.34
Total bank deposit liabilities/GDP	7.51	7.92	4.16	5.15	7.36	5.75	7.04	7.08	5.67	7.6

Total credit/GDP	22.26	29.11	21.57	23.59	31.78	21.1	22.86	27.9	28.51	28.78

Sources: Bank of Ghana Statistical Bulletins (various issues); World Development Indicators (2011); International Financial Statistics CD-ROM (December 2011) and authors' construct.

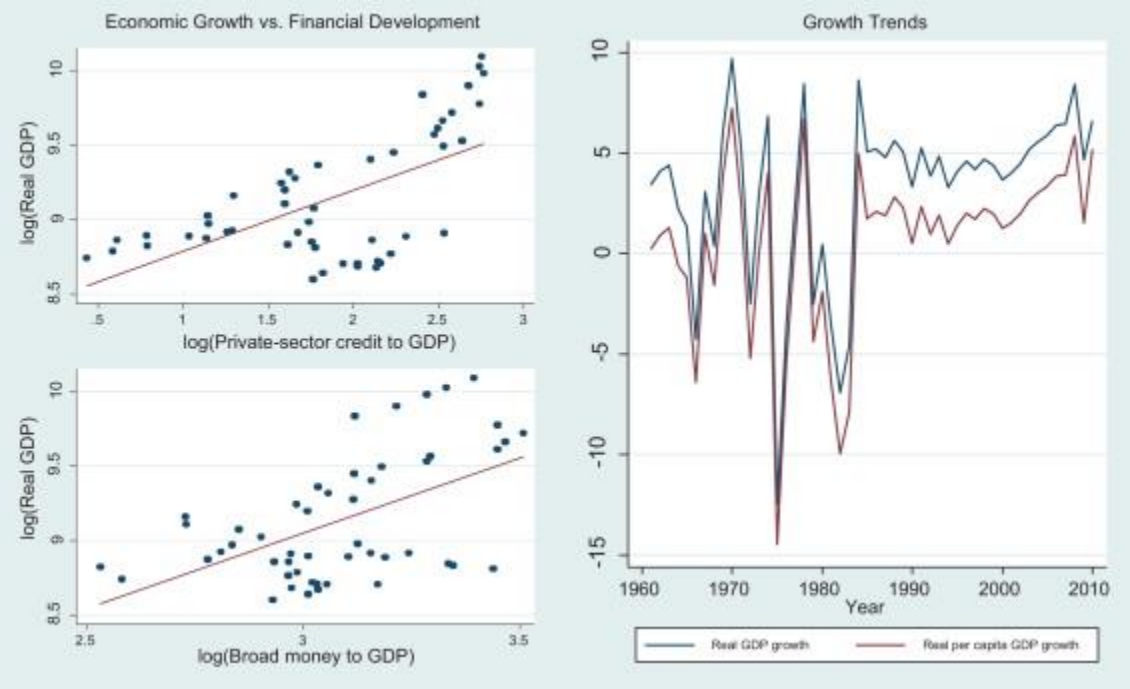


Fig. 2.1 Economic growth vs. financial development and growth trends

2.4 Problems facing financial institutions and the financial sector in general

Financial institutions in various countries all over the world tend to face problems that are usually caused by complex and multi-dimensional factors (Stephanou and Rodriguez, 2008). The constraints faced generally by these financial institutions, especially those in the less developed counties are low levels of savings, investment gap, huge amounts of money outside the banking

system and limited financial access by SMEs. (Seibel, 1996). Empirical studies in Ghana shows that, major constraints to financial sector development include the following: high financial exclusion and the higher cost associated with the intermediation of finance. This has led to the borrowing and lending rate in the country being so high.

Limited Financial Access by SMEs

The literature on SMEs finance has well documented the financing gad that exists for SMEs (Stephanou and Rodriguez, 2008). Evidence from various studies suggests that, financing gap is present in SMEs located all over the world (Aryeetey et al., 1994; Baah-Nuakoh, 2003; Beck and Cull, 2014). The major constraint facing SMEs is financial access according to the World Bank Enterprise survey (2013). According to Beck and Cull (2014), over 25% of firms located in Africa rate finance availability and cost as the central obstacle to their operation and growth. They also observed that African firms tend to use less financial services as compared to firms located in other regions of the world and this is particularly common among smaller and younger firms.

In Ghana, empirical studies that has been done by Aryeetey et al. (1994), in which 133 firms were sampled revealed that, most firms' future expansion and development is mostly delayed as a result of lack of financial access. They further established that approximately 60% of the firms viewed finance as their most serious obstacle. They also established that larger and newer firms do not lack financial access as compared to the smaller and older firms. Similarly, to the above, Baah-Nuakoh (2003) established that, the most frequently cited problem of most firms in Ghana is access to capital. More specifically, financial access was mentioned as a major limitation by micro firms (55 %), small firms (57%), medium-sized firms (29%) and large firms (32%). On a

scale of 1 (not important) to 5 (very important) to measure the extent of severity, lack of access to finance is the most severe constraint (3.80) among all firms, with micro firms (3.71), small firms (4.08), medium-sized firms (3.49) and large firms (3.21).

In addition, Baah-Nuakoh (2003) also revealed that 45% of agro-metal firms cited finance as the greatest constraint to their productivity. Obstacles relating to finance include lack of credit to finance raw materials and equipment, high interest rate and difficulty in dealing with bank (Baah-Nuakoh, 2003). This therefore confirms that finance is a serious problem, particularly among micro, small and new firms. Financial access is a binding limitation for smaller and immature enterprises. Matured, larger and foreign-owned firms report lesser financing obstacles (Beck et al., 2006). This is probably due to the fact that older firms have superior record, experience and contacts to get access to credit as compared to their younger counterparts (Baah-Nuakoh, 2003). According to Stephanou and Rodriguez (2008), lending is easier for retail customers and large enterprises.

Kempson et al. (2000) identify five ways by which firms may face challenges in terms of financing. Primarily, the cost of the screening process through which the eligibility of the loan applicant is assessed and the risk involved in case of loan default may be high. Secondly, circumstances attached to the credit such as high minimum deposits and administrative charges may make it inappropriate for the needs of some firms. Thirdly, the price or the cost of credit-high interest rate and other fees is a limiting factor to many SMEs. Fourthly, priority lending of credit to particular SMEs in certain industries may end up diverting credit towards SMEs who may not be less constrained financially. Lastly, self-exclusion may make some firms not to apply for credit because they believe that they would be denied.

Low levels of savings

By African standards, there is low private savings in Ghana. Compared to many other African countries, Ghana's domestic gross savings expressed as percentage of GDP is quite low and averaged 15.72 per cent in 2016, whereas the equivalent figures were 37.59 per cent for Botswana, 17.36 per cent for Cameroon and 44.3 per cent for Nigeria. (World Bank 2016). Thus, mobilization of resource domestically has been quite low, in spite of all the improvements and developments within Ghana's financial sector.

Despite various developments, much have not been acquired in terms of mobilizing resources domestically including savings, hence it is not encouraging enough to help motivate private investment so as to achieve higher levels of economic growth. Savings as a percentage of GDP, which were 5.5 per cent in 1990, dropped to 1.3 per cent in 1992 and continually to showed oscillatory trends until the year 2000 when a savings–GDP ratio of 3.5 per cent was recorded. On an encouraging note, the savings ratio had improved constantly thereafter and, by 2002, had gotten to 7.4 per cent. The savings culture of the people of Ghana is still quite low which greatly inhibits the growth of the various financial institutions. Thus, the financial sector in general then shows a stunted growth rate.

High financial exclusion

There have been a phenomenal increment in the number of foreign banks in Ghana as well as an extension in bank branch penetration in recent years. The number of commercial banks , as of the middle of 2008, had risen from 11 in the year 1990 to 24 with over 500 branches across the nation. The total assets of the banking system at the end of the same year had also increased by about 88 percent in two years to reach $ 6,616.1 million (51.7 percent of GDP). Available data however shows that more than 80 percent of the country's population does not possess a basic

bank account and hence is financially excluded from mainstream financial institutions and the financial sector in general. A recent report by the World Bank (2008) substantiates this with the report that the adult population of (which contrasts sharply with the average of 95 percent of the developed world) that has a bank deposit account in the formal banking system is only 16 percent. Therefore, mobilization of savings very low particularly in the rural areas in Ghana where institutional organization is very low and positive return on saving is virtually non-existent (Aryeetey, 2004).

Huge amounts of money outside the banking system

The Central Bank's report on Macroeconomic and Financial Data for May 2017 revealed that the money outside the banking system had risen from 15.20 per cent in March 2016 to 22.30 per cent in March 2017. This is a major obstacle to the effective creation of credit by the financial sector of the economy and thus results in an increment in the cost of borrowing in the country.

In addition, mobile money had mobilized an amount of money reaching an amount of 2.3 billion Ghana Cedis as of the ending of December 2017, per the Central Bank's data. This amount represents a growth of 84.6 percent over the previous year's amount of 1.3 billion Ghana Cedis. All these huge sums of money out the banking system are key factors that increase the cost of borrowing in the country rendering the financial sector ineffective.

Lack of Access to Qualified Labour Force

Lack of adequate skilled and specialized labour also hinders the expansion of financial sector. This particular problem is exacerbated by the fact that, only few number of financial institutions especially the bigger institutions offer formal training to their labour force. Kayanula and Quartey (2000) notes that inadequate skilled labour supply can directly limit the specialization prospects, increase costs, and lower the flexibility in managing operations. Aryeetey E. (1994)

revealed that 7% of firms in the financial sector lacked skilled labour, and 2% had the same ubskilled labour problems. Some financial institutions especially the micro financial institutions lack qualified staff and managers to manage their operations. Even though these financial institutions can make use of support services, Kayanula and Quartey, (2000) reveals that these services are often relatively costly and moreover, lack of information and time hinders these institutions from taking advantage of existing services.

Equipment and Technology

Small financial institutions especially the 'susu collectors' lack the appropriate technologies to make their work easier as compared to the well-established banks. They also lack access to information on available techniques that will enable the collections and provisions of loans easy and smoothly. This forces many of them to rely on simple and outmoded practices, which usually involve walking for several hours from house to house just to collect 'susu'. Aryeetey E. (1994) reveals that 18% of the sampled firms that included small financial institutions still rely on old techniques and equipment and among the major constraints to expansion of the financial sector.

Low Level of Domestic Demand

Many financial institutions, especially the locally established and owned institutions cite low level of demand for their goods and services as a major obstacle to their income. For example, Baah-Nuakoh (2003) finds that low level of domestic demand is the second most serious obstacle facing most firms including the small financial institutions after access to finance. This is probably due to the competitions they face from their internationally owned counterparts. Local banks for instance face fierce competition from international banks. Moreover, inexperience in international marketing, lack of quality control and product standardization as well inadequate

access to international partners, hinder their extension into international markets (Kayanula and Quartey, 2000).

2.5 Employment Trends

Ghana's employment growth appears to lag behind its economic growth. Between the years of 1984 and 2000, the economy documented an annual average growth rate of 4.8% whilst the employment growth rate is averaged at 3.1% within the same time. Evidently, the sluggish growth rate of the economy, which is combined with lower investment rate, means overall labour demand will be relatively slow in growth. With the annual labour force growth rate at 5.8% coupled with the 1990s imperfect absorption capacity of the economy, it is not quite astonishing that there has been increasing unemployment rates in the economy since the year 1989. The agric sector used to be the chief employer with its share declining from 61% in 1984 to 51% in 2000 due to its slow-moving growth performance over the period.

Between 1984 and 2000, agric sector employment saw a growth 1.6% annually as against 5.5% in the service and 5.6% in the industrial sector particularly in the small-scale sub-sector. Within the same period, the agricultural sector averaged an annual growth of 3% as against 6.5% and 6.2% in the service and the industrial sector respectively. However, according to the September, 2015 Ghana Employment Report of the Ghana Statistical Service, the manufacturing and service sector absorbs 14.4 percent and 40.9 percent of the labour force respectively as compared to the 44.7 percent absorbed by the agricultural sector. Consequently, the share of employment in both the service and industrial sectors has risen appreciably as shown in table 2.2 and 2.3 respectively.

Table 2.2: Distribution of Economic Active Population by Industry (percentage)

Year	Agriculture	Industry	Service
1984	61.1	12.8	26.1
1992	62.2	10	27.8
1998	55	14	31
2000	50.7	16.3	33

Source: GLSS 3&4 and 2000 Population Census; GSS

The formal sector, which has been one of the most remunerative sectors witnessed its employment levels increase significantly between 1960 and 1984, and this can be as a result of the sector's faster employment growth rate as compared to the labour force. Nevertheless, the sector's employment performance experienced a noticeable diminishing averagely of 3.7% yearly between 1985 and 1991. At the same time, labour force grew at an average of 3.2% per year. This deteriorating performance of the formal sector can be attributed to various sources including public sector retrenchment exercise, privatization and liberalization, withdrawal of subsidies to loss making public enterprises as well as the reduction in tariff protection of local industry. The contraction of the formal sector employment especially in the public sector had an effect of shifting labour to the informal sector.

Table 2.3: Employment Trends in Ghana from 2000 to 2016

Year	Employment levels in industry	Employment levels in services	Employment levels to population ratio
2000	15.1	27.5	66.9
2001	14.7	27.5	68.2
2002	14.2	27.8	66.1
2003	13.8	27.7	67.1
2004	13.6	27.4	66.9
2005	13.2	27.5	66.2
2006	13.6	29.1	66.1
2007	13	29.7	63.2
2008	12.9	30.8	67
2009	12.8	32	66.1
2010	13.1	33.5	70.2
2011	14.1	37	71.5
2012	14.3	38.6	72.5
2013	14.4	40.9	72.6
2014	14.5	41.6	72.7
2015	14.4	42.2	72.8
2016	14.2	42.9	72.6

Source: World Development Indicators

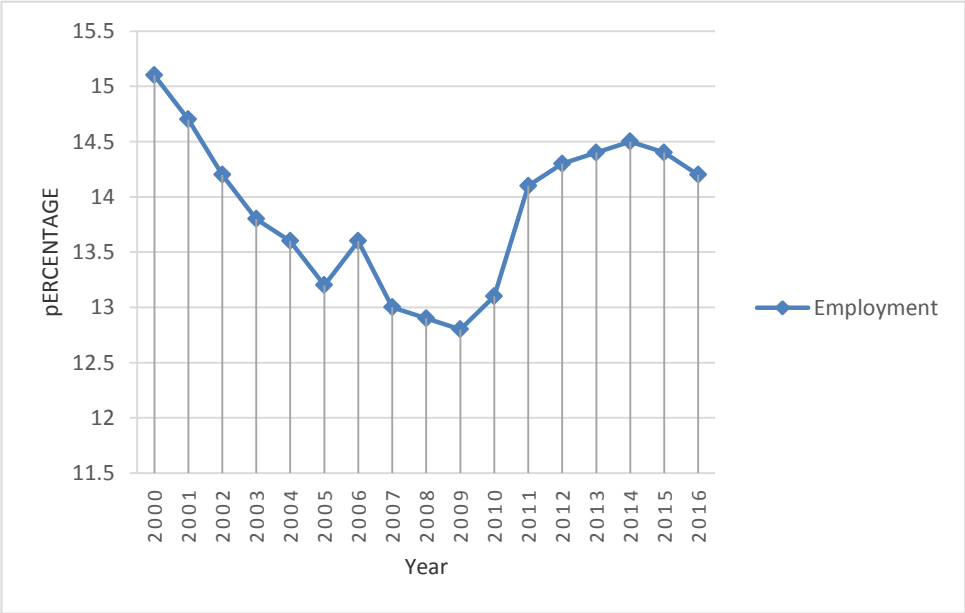
Lesser job requirements and the high degree of substitution between capital and labour in the informal sector made it easy for labour entry. Operators in the formal sector had their earnings being adversely affected by this movement. The formal sector employment bounced back after 1992 when there was a declining share of informal sector. As a result of the government's policies meeting the education and health needs of the growing population the overall public sector employment increased by 39.4% between 1992 and 2000

It is also argued in certain quarters that most of the retrenched workers found their way back into the public sector by getting appointment in different ministries, departments or regions therefore defeating the purpose of the exercise. The private formal sector still continues to remain the most

attractive sector and has therefore experienced some marginal improvement in its employment. This emanated from the Free Zones project, investment projects under Ghana Investment Promotion Centre (GIPC) and greatly improved the performance of some divested State-Owned Enterprises.

The focus of Ghana's industrialization strategy changed, throughout the first half of the years 2000s. Stabilizing the economy and creation of jobs particularly in the agro-based industries was basically the main goal. The industrial sector had a policy structure targeted at sponsoring agro-processing, enabling the development of commercially viable export and domestic market-oriented enterprises in the rural areas, improving agricultural marketing and improving access to export markets, improving the competitiveness of domestic industrial products, promoting industrial subcontracting and partnership exchange and promoting the development of the crafts industry for export.

Industrial growth was buoyant in 2002, increasing from 2.9 per cent in 2001 to 4.7 per cent in 2002, and further to 5.1 per cent in both 2003 and 2004. The momentum of the sector continued in 2005, reaching a period peak of 7.6 per cent. Interestingly, the relatively stronger growth of the sector did not translate into higher contributions to aggregate economic growth. The contribution of the sector to GDP and employment growth fell in 2005 below the 24.7 per cent rate and 13.6 per cent respectively.

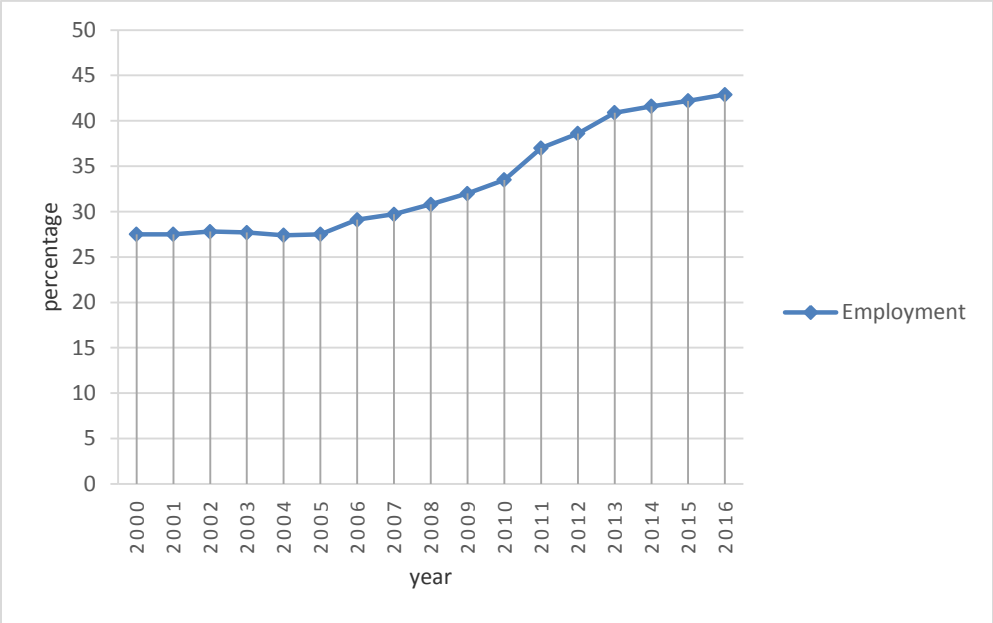


Source: Author's Construct

Fig 2.2: Employment trend in the industrial sector of Ghana (2000 - 2016)

The industry sector's contribution to GDP in 2005 was quite small and can be attributed to the fact that the sector had not fully improved from the decline that began after 2000**.** As Table 2.3 shows, the industry sector show a declining trend in it employment levels from the year 2000 to 2005. Despite improved performance in terms of its employment levels in 2006, the industrial sector faced challenges continually endangering its employment growth prospects. Costly credit reflecting high lending rates, unreliable power availability, and rising fuel prices compelled many firms, especially those operating in import-dependent manufacturing, to cut production. In addition, liberalization of external trade continued to expose many vulnerable domestic manufacturing firms to unfair competition from imported goods, making the sector less attractive to potential investments. So therefore, from 2006 it further declined until 2010 as figure 1show. The employment in the industry sector has been quite steady around 14.1 to 14.5 from the year

2011 to 2016 as shown by both table 2.3 and figure 2.2. As of 2017, it was reported to be at 14.2 per cent by the World Bank.



Source: Author's Construct

Fig 2.3: Employment trend in the service sector of Ghana (2000 - 2016)

The service sector on the other hand, over the years has seen a tremendous growth, displacing both the agricultural and industrial sectors in terms of the number employment opportunity it provides for the people. From the table 2.2 and table 2.3, it has been on an increase from back in the days till now. Figure 2.3 shows a trend that is continually on the rise from the year 2000 to 2016. Over the years, several Ghanaian service industries had remained strong and enjoyed positive earnings as a result of the favorable government actions and relative political and economic. However, infrastructure weaknesses and other issues hinder business activity in these same services industries and limit their contribution to growth in other sectors

2.6 Conclusion

The significant role played by various financial institutions cannot be overemphasized. Though there are variations in the definition of what constitute financial access, the common definition used by the world banks (2008) indicates that; financial access is the 'absence of price and non-price barriers in the use of financial services'. Empirical studies show that even though the financial institutions and the financial sector in general face numerous challenges such as lack of financial access, low demand for output, technology, raw materials, labour and management, infrastructure, institutional and regulatory obstacles, the problem of financial exclusion still remains a binding constraint. Governments have taken steps to help curb these constraints to ensure a smooth financial environment.

CHAPTER THREE
LITERATURE REVIEW

3.1 Introduction

This chapter reviews and gathers first-hand literature relevant and related to the subject matter; financial access and employment growth. It also provides an extensive theoretical review on access to credit, both in the developed and developing economies, with particular focus on Ghana. The definition and measurement of access to credit by firms is also examined. The theoretical underpinnings of various firms' financing constraints are also discussed. The reviews of the supply and demand for credit, focusing on the sources, determinants and the challenges faced by lending institutions are also discussed.

3.2 Definition of Access to Finance

Several of studies have tried to come up with a working definition of what really constitute finance. Financial access refers to the situation whereby financial products are easily made available to firm in a stress-free manner and cost-effective manner (Kunawotor, M. E. 2016). As noted by Graziani (1994), there are two aspects of supply of finance, that is, initial finance and final finance. Under initial finance, firms require an initial liquidity to enable them cover their current cost of production and the provision of such liquidity for any kind of production, whether it is consumption or capital goods is referred to as initial finance. On the other hand, concerning final finance, if firms are to be in equilibrium, they must get back through the sales on the market, that is, an amount of liquidity at least equal to their outlays. Final finance is therefore defined as placement of long-term securities on the financial market (Graziani, 1994).

Universal definition of financial access is nonexistent because of the different dimensions and schools of taught regarding what constitute financial access. Nkuahet. al., (2013), defines

Financial access (also referred to as financial inclusion) as the nonexistence of both price and price barriers regarding the usage of financial services. According to Claessens (2005), financial access can be defined considering three major factors: firstly, the availability of the financial service; secondly, the price or cost associated with the available credit, both explicit and opportunity costs; and lastly, the range, type and quality of credit being offered.

Financial access has been defined as the 'absence of price and non-price barriers in the use of financial services' (World Bank, 2008). In other words, access to finance refers to the obtainability of quality financial services at reasonable costs (Claessens and Tzioumis, 2006).Hence; it becomes necessary to differentiate between the usage and access to finance. Ganbold (2008) explains that financial access is the provision of financial services, while use of the services is determined by demand and supply. Financial access improvement means refining the degree to which financial services are made obtainable to all at a reasonable price (Ganbold, 2008).

3.3 Measurement of Financial Access of Firms and Financial constraint

Generally, the measurement of financial access is not quite easy. However, the financial depth (total outstanding loan/GDP) of a country can approximate it because an approximately greater depth is more likely to be associated with greater financial access among firms (Ganbold, 2008).

However, Claessens and Tzioumis (2006) also notes that because a well-developed financial system could provide access only to a few firms, financial depth indicators such as M2+ need not be good measures of access to finance by firms. Claessens and Tzioumis (2006) further notes that there are two main methods used to determine firms' access to finance, these include the

econometric analysis of their financial statements based on economic theory models and also through firm-level surveys.

For large firms with good financial data, econometric analyses of financial statements based on theoretical models are useful and adequate for measuring firms' access to finance. For small and medium sized firms, surveys are the preferred approach because of limited financial data, as most these SMEs are not obliged to publish detailed financial reports nor raise equity or debt in public markets (Claessens and Tzioumis, 2006). That is, the relying on the financial statements of these SMEs, especially those in transition and developing countries is often questionable. Empirically, a financially constrained firm could be identified by way of the sensitivity of their investment with respect to internal funds (Claessens and Tzioumis, 2006). Higher sensitivity of investment to internal funds suggests that financing constraints is present, as external funds are more costly than internal funds due to information asymmetries. Using balance sheet data, Beck and Cull (2014) explained, "a firm is defined to be financially constrained if a 'windfall' increases in the supply of internal funds result in a higher level of investment spending"

Most studies on firms' access to financing are based on firm-level surveys, which are based on the perceptions of entrepreneurs. Claessens and Tzioumis (2006), however, highlight the disadvantages of firm-level surveys used in measuring financing constraints. First and foremost, both the dependent and independent variables used in the empirical analyses are known to often share a common parameter that is omitted in the surveys as a result of self-selection and moreover, the cross-sectional nature of those surveys are closely associated with simultaneity bias between survey variables.

Secondly, there is an absence of a unified conceptual framework for data collection in measuring and evaluating the various firms' access to finance because of lack of consensus between theoretical models and empirical evidences on a commonly accepted framework for data collection. Lastly, the definition of financial access is somewhat ambiguous, because its measurement is influenced by several dimensions among which include reliability, convenience, continuity and flexibility

3.4 Theoretical Literature Review

Under this section, the various theories relating to access to credit by firms are explored. It further establishes theories relating to the influence of firms' financial access on their employment levels.

3.4.1 Financial Inclusion Theory

Financial inclusion refers to the process of ensuring access to appropriate financial products and services needed by all sections of the society in general and vulnerable groups such as weaker sections and low income groups in particular, at an affordable cost, in a fair and transparent manner, by mainstream institutional players (Chakrabarty, 2011). An inclusive financial sector provides 'access' to credit for all 'bankable' people and firms, insurance for all insurable people and firms, savings and payment services for everyone (United Nations, 2006). Inclusive finance does not require that everyone who is eligible use each of the services, but they should be able to choose them if desired. Kempson et al. (2004) reports that financial exclusion is most prevalent amongst those on low incomes. Unemployed people living on social security payments from the state are therefore especially vulnerable, as are low-income households from ethnic minority communities who may also have relatively low levels of engagement with the financial services industry.

Kempson et al. (2004), supported by evidence from the Family Resources Survey 2002-2005, report that uptake of financial products and services is lowest amongst African-Caribbean, Black, Pakistani and Bangladeshi households in UK. However, for some members of these groups religious beliefs may provide a partial explanation for this apparent exclusion. Worldbank (2008) has classified financial access barriers into four main categories; physical barriers, lack of documentation barriers, affordability barriers and lack of appropriate products and services. For geographic access, branches have been the traditional bank outlet, hence geographic distance to the nearest branch, or the destiny of branches relative to the population can provide a first crude indication of geographic access or lack of physical barriers to access (Beck, Dermirguc-Kunt and Martinez, 2007).

3.4.2 Minimalist Approach

Under this approach, only credit access is the mean to success of SMEs. Minimalists base their approach on the premise that there is a single "missing piece" for enterprise to grow, usually considered to be lack of affordable and accessible short-term credit (Ledgerwood, 1999). Minimalist approaches normally offer only financial intermediation such as savings, credit, insurance, credit card and payment systems. Credit provision is restricted to those who can secure it with tangible collateral, commercial banks and non-bank financial institution use this approach. The approach operates on the principle that credit is the most important constraint to entrepreneurs. Micro credit is most often extended without traditional collateral.

Physical collateral is a requirement for borrowing which lock out many firms from accessing credit. The group-based approach can use either newly formed groups or already existing ones. Group based approach is also referred to as joint liability. Members make a weekly contribution

to a joint account in the name of the group, which acts both as a savings account for each member and a loan guarantee fund. Members can only receive a second and bigger loan after the first loan is repaid. The responsibility for loan administration by the group provides per pressure, which keeps up repayment. Firms can use this approach to improve their access to credit.

3.4.3 Imperfect Information Theory

According to Robinson (2001), this theory is based on the assumption that Banks cannot differentiate cost effectively between low risk and high-risk loan applicants. In addition, it is thought that formal financial institutions are unable to compete successfully with informal lenders because such lenders have access to better information about credit applicants than formal institutions can obtain cost effectively. Imperfect information theory suggests that it would be difficult for banks to both operate profitability in developing countries credit markets and to attain extensive outreach. Based on this model, it would be difficult for economists, bankers, financial analysts, donors and government decision makers to muster much enthusiasm for advocating entrance of commercial banks into micro credit markets.

3.4.4 Capital-labour Market Theory

The theory suggests that since labour has a permanent cost component that requires financing so as to bridge its upfront costs associated with training and hiring, we should therefore expect to see credit markets affect employment decisions of firms. Theoretically, when external finance is made easily available, then the firms' employment decisions should be influenced for various number of reasons. Firstly, whenever there is a mismatch between payments to labour and the ultimate generation of cash flow, firms will need to finance their labor activity throughout the production process (Greenwald and Stiglitz (1988)). As such, when the ability to finance working capital deteriorates, firm employment should fall.

Frictions in capital markets will also affect firm employment decisions when labor is not solely a variable factor of production but rather has a fixed, or quasi-fixed cost component (Oi (1962), Farmer (1985), Hamermesh (1989), and Hamermesh and Pfann (1996)). As first described in Oi (1962), such fixed costs include investments associated with hiring and training activities. Finally, the availability of external finance may affect employment indirectly through its impact on firm level investment. Specifically, as in the investment-cash-flow sensitivity literature, in the presence of capital market frictions investment is limited by the availability of internal funds, and due to complementariness between labor and capital, employment is adjusted for the decline in capital.

3.5 Empirical Literature on Financial Access and Employment Growth Nexus

This section reviews works and literature that has been done on the connection that relates financial access particularly external credit and firms' employment growth. The discussion starts with the insightful and seminal work of Ayyagari et al (2016) whose findings revealed that the effect of access to finance on employment is predominantly large for firms in industries, that are more reliant on external finance. Using data from 50,000 firms across 70 developing countries, they established that the relationship between finance access and job growth is stronger among micro, small, and medium Enterprises (MSMEs) than among large firms. MSMEs are more financially constrained than large firms, thereby exhibit higher employment growth with an increment of their access to finance.

The findings of Mai et al., (2017) did not differ much from that of Ayyagari et al (2016). In their IMF working paper "Finance and Employment in Developing Countries: The Working Capital

Channel", they showed that the effect of relaxing financial constraint on job creation is greater, the smaller the firm scale and the more labor-intensive its production structure. Mai et al., (2017) established alternative channel, that is, the working capital channel to show how financial constraints in the form of borrowing limit affects firm's employment growth.

Study by Fowowe, B. (2017), also shows that lack of finance hinders the development of African firms and hence their employment levels. Their study unlike others employed the subjective and objective measure of financial access. Using data across 30 African countries, with about 10,888 firms, the result of the subjective measure established that financial access constraint exerts a significant negative effect growth of firms and thus their employment levels. In addition, the objective measure results showed that firms that are not credit constrained experience a faster growth than credit-constrained firms. Again Ayyagari et al., (2007) discovered through a sample of 17, 000 firms in 47 countries that, external finance plays a very important role in firms" innovation whereas Ali et al., (2015) found line of credit and savings to be positively related to productivity measured by Total Factor Productivity (TFP) and thus affecting the employment levels of firms involved.

Furthermore, in relation to the above discussion, Gatti and Love (2006) used data from a cross section of Bulgarian firms to establish a relation between financial access and the level of productivity of Bulgarian firms. Using Ordinary Least Square (OLS), they found financial access to be positively and strongly associated with the Total Factor Productivity of the firms under consideration. This in turn translates in to higher employment levels of Bulgarian firms.

In addition, the study by Beck and Demirguc-Kunt (2006), revealed that financial and institution development aid in the alleviation of the growth constraints faced by various small and medium-

size enterprises (SMEs') and also increase their access to external finance, thereby leveling the playing field between firms of different sizes. Related to the above, Study by Krishnan, Nandy and Puri (2014) also shows that increment in the access to bank financing has a positive impact on the productivity of smaller and financially constrained firms, thus encouraging employment growth among these firms. Unlike others, their study was based on a natural experiment of both private and public manufacturing firms located in the United States of America, right after there was an interstate banking deregulation, which led to an increase in access to bank financing.

Robb and Robinson (2014) had similar line of thought to that of Nandy and Puri (2014) as they established that an increase in access to bank finance played a very critical role in firms" productivity, especially for small and start-up firms who need bank finance to operate. It is therefore evident in their study that a large proportion of small firms, particularly start-ups rely heavily on bank debt financing. More to the point, Goedhuys, Janz and Mohnen(2006) opined that financial access leads to a higher TFP of Tanzania manufacturing firms, whereas Levine and Warusawitharana (2014) established debt finance to be closely associated with a higher Total Factor Productivity in four major European countries; France, Spain and the United Kingdom.

In China, using a large survey of Chinese firms, Du and Girma (2012), observed that Chinese firms that had access to domestic bank loans had higher productivity and employment growth as compared to those that did not. In addition, they established that, self-finance was instrumental to the growth of smaller and medium firms as well as domestically private owned firms. Though, the literature has it that financial access has a direct effect on the productivity and employment growth of firms, there are limitations as to the interpretation of these results that needs to be addressed (Krishnan, Nandy&Puri, 2014). So many concerns arise which includes reverse

causality and endogeneity concerns as to whether it is easy financial access that makes firms employ more or higher employing firms seek access to additional finance.

In some studies, the finance variable is measured as a constraint. For instance, Ali et al. (2015) established that the more severe the perceived financial access is an obstacle for a sample of firms in 33 African and developing countries, the lower productivity and employment growth. In addition, the more access to external finance they are granted, the better their productivity and employment growth levels. International Finance Corporation (2013) also revealed that, the lack of financial access is a major hindrance to enterprise growth and productivity especially among small and medium sized ones. The findings of Arnold et al. (2008) did not differ. They established that the more firms are delayed from exploiting productivity-enhancing investment opportunities, the more pervasive it is for them to get credit facilities especially from banks

3.6 Empirical Evidence on the Determinants of Financial Access

There exists numerous literature conducted on the determinants of Financial Access. Whilst some of these determinants are country level or industry level determinants, others are firm level determinants. It should however be indicated here as a reminder that this study's focus is on firm-level determinants. Ahmed et al. 2011 revealed that formal credit access encompasses of two main factors: firstly, the availability of credit provision infrastructure and secondly, the risk perception lending organizations have on borrowers. Thus, banks assess an establishment on the ground of its present-day financial position as reflected by its accounts or turnover.

This sub-section presents detailed description of the factors that influence firms' financial access. Concerning the determinants of firms financial access several research work have been done (Kumah, 2011; Alhassan and Sakara, 2014; Osei-Assibey, 2014). According to Pandula (2011),

most financial institutions and organizations usually consider the creditworthiness of various firms, which depends on firm-specific characteristics, owner/manager's characteristics and financial characteristics of the firm. Access to credit is therefore influenced mainly by the observable socio-economic characteristics of the owner(s) of the firm and also firm's characteristics (Osei-Assibey, 2014).

In their investigation on the determinants of financial access, Alhassan and Sakara (2014) revealed that firms characteristics including fixed asserts possessed, the size and the sector of business in the economy are crucial factors in accessing finance from banks in Ghana. Related to the above, Osei-Assibey (2014) also established that, among rural non-farm enterprises in Ghana, the age, asset structure and ownership of a bank account are key factors that could increases the chances of a firm having access to finance.

Concerning firm's performance, Aryeetey et al., 1994 revealed that higher performing firms are most likely to pay back loans and are therefore creditworthy, making financial access easier for them as compared to lower performing firms. Measurement of firm's performance has so many indicators which includes labour productivity, increment in salaries or turnover ratio is, firm capacity utilization and profit as well the growth in its export within a given period of time. (Aryeetey et al., 1994; Baah-Nuakoh, 2003; Bebczuk, 2004). In addition, Pandula (2011) used an alternative measure of firm's performance, that is, the average yearly sales growth for the past three years. This alternative measure gives an enhanced indication of financing needs than those of just a single year. Moreover, empirical studies provide evidence, which indicates that better sales and profits are closely linked with greater financial access (Aryeetey et al., 1994; Bebczuk, 2004). More to the fact poor firm performance is one of the major reasons for lack of credit.

Baah-Nuakoh (2003) reveals that credit limitation is one of the major problems of stagnant and diminishing firms.

In addition, one criteria that also used to assess the creditworthiness of a firm by financial institutions is its size (Pandula, 2011; Kumah, 2011). Empirical studies by Pandula (2011) reveals that firms, particularly small firms are more credit constrained as compared to the large firms because of their lack of financial information that used by the financial institutions for screening and mostly, the small firms lack audited financial statement credentials. Moreover, smaller firms lack enough assets to be used as collateral and also they tend to have high risk rate in terms of their failure as compared to the large firms. Ahmed and Hamid (2011) corroborates this finding which reveals that, particularly small and medium firms are, respectively, 12.2 and 7.4 percent less likely to have access to external finance compared to large firms, all things being equal. Aryeetey et al. (1994) also establishes that medium-sized businesses and older firms easily acquire credit three times more often than smaller firms do.

One major key factor that the various lending institutions, particularly those formal financial institutions usually take into concern is the closeness of the firm to their formal place of establishment (Kumah, 2011). Ahmed and Hamid (2011) revealed that there is a significant relationship between a firm's location and its accessibility to credit. In their study, Ahmed and Hamid (2011) established that firms usually situated in metropolitan cities tend to have a greater probability of access to credit compared to other firms that are located in rural areas or less industrious areas. This can be attributed to the fact that the nature of the rural market is very limited and dispersed (Deakins et al., 2010). Pandula (2011), in defining firm location by its population density, did not find any concrete evidence of any major connection between the

firms' location and the probability of it having a bank loan which is usually because of the closeness of firms' location to a market.

Numerous studies conducted have argued that matured firms are most likely to face fewer constraints in accessing credit compared to newer firms. For example, Beck and Cull (2014) revealed that older firms that have been in operation for more than 15 years, are likely to have access to a loan compared to mid-aged firms with operation between 6 and 15 years. These mid-aged firms also have a higher probability of having a loan as compared to the younger firms with years of operation five or less years.

All these is due to the fact that, the matured firms tend to have greater reputation, which raises their chances of accessing credit (Osei-Assibey, 2014). Aryeetey et al. (1994) find out that, only 10 % of start-up firms that are located in Ghana could obtain bank loans. Baah-Nuakoh (2003) on the other hand, revealed that financial access is a severe limitation particularly among new and immature firms. This is because of the lack of adequate information on their financial performance, making it difficult for lenders to approve their credit demand (Adomako-Ansah, 2012). Also, at the time of granting credit the information usually required by the lenders may be limited for immature firms mainly because of the lack of recognized track record, thus making the costs of transaction associated with lending to younger firms relatively higher (Pandula, 2011). In addition to the above, the collateral requirements of the banks are less likely to be met by these newer and younger firms because they might have not accrued enough fixed assets (Pandula, 2011; Adomako-Ansah, 2012).

Most empirical studies have revealed that, the service sector firms are more likely to have access to credit compared to firms in the agricultural sector mainly because of the low risk and

the relatively rising trends in the sales level and revenue associated with the former (Kumah, 2011). In addition, Deakins et al. (2010) establishes that manufacturing firms particularly SMEs tend to have less access to credit because there are more information required of them, particularly in situations involving new products, new technology and diversification. This finding is very consistent with that of Baah-Nuakoh (2003), whose study of 200 manufacturing firms located in Ghana, has revealed that financial access is a severe constraint among firms particularly those manufacturing wood, garments and furniture.

One of the crucial determinants of financial access is Collateral security, and it is emphasized in the literature on SME finance (Stiglitz and Weiss, 1981; Berger and Udell, 2006). This is mainly attributed to the high risks and transaction costs related with SMEs lending (Berger and Udell, 2006). Lenders are protected against defaulting borrowers through the collateral security. Empirically, firm's possession of tangible fixed asset usually serves as its measure of asset structure (Kumah, 2011; Pandula, 2011; Osei-Assibey, 2014).This is mainly because fixed assets can be used as collateral, which drastically reduces the potential losses of the lenders especially banks and discourages moral hazard behavior of borrowers (Bebczuk, 2004). Conversely, some argued that, the more liquid the assets of the firm are, the easier it is for them to withdraw the money from the firm and transfer their risk to the lender in the event of default.

For example, Osei-Assibey (2014) revealed that ownership of a land by a firm could be used as a proxy of its asset structure, which is a key determinant of access to credit among rural non-farm enterprises located in Ghana. This is because this collateral protects the lenders if the borrowers default their payment. It is indeed confirmed by the study of Adomako-Ansah (2012), which showed that out of 15 banks and non-bank institutions located in Ghana, 13 of them consider collateral as one of the most important factor in approving loans.

However, Pandula (2011) established that there is no significant relationship between asset tangibility (measured as the ratio of tangible net fixed assets to total assets) and access to credit among 228 Sri Lankan SMEs. He further explained that, this is because tangibility of an asset does not necessarily reflect collateral availability since the personal assets of the proprietor or partner, which represent a crucial component in the security offered for bank loan, are not shown in the balance sheet of the business. This finding is very much consistent with the study of Bebczuk (2004) whose study reveals that asset tangibility of the firm is not an important determinant of access to credit because banks are willing to take a risky position when making loans to firms.

CHAPTER FOUR
METHODOLOGY

4.1 Introduction

This chapter outlines and describes the methods used in this study. It also presents the main source of data, the sample size, scope of the study, approaches to estimation techniques, empirical model, description and justification of variables.

4.2 Data Source

The main source of data for the study was acquired from the 2013 Ghana Enterprise Survey of the World Bank, which uses a common questionnaire and a uniform sampling methodology to produce survey data on manufacturing and service sector firms. The data set contains information on 720 firms in Ghana.

The Ghana Enterprise survey data set contains firm-level information on employment levels, employment growth rate, access to loan and other firm characteristics. The sampling for this study covers all the 720 firms in both the manufacturing and service sector in Ghana.

4.3 Estimation Techniques

The study uses the Ordinary Least Square method to estimate the first and second objectives, that is, reveal the effects financial access have on firms' employment levels as well show how the manufacturing and service sector vary in their employment levels as result of firms' financial access. The OLS is suitable for this estimation because, the employment growth, which is the dependent variable, is continuous.

The second estimation model of this study is to address the third objective set out at the beginning. It establishes the determinants of firms' access to credit and the probit estimation

technique is used. This is because of the discontinuity of the dependent variable. In this case, it is whether a firm has access to finance or not.

4.4 Model Specification

4.4.1 Model One (1)

To address the first and second objectives set out at the beginning, the study will adopt the models of Ayyagari et al. (2016) and Fowowe (2017), that were used to examine the relationship between access to finance and job growth across firms in developing countries and Africa respectively.

We specify the dependent variable (Employment Growth) as function of access to finance, firm characteristics and the industry type below:

$$EMP = f(ACCESS, FC, IND) \quad (1)$$

Where, EMP means the employment growth, calculated as log difference between the current number of permanent employees and the number of permanent employees three years before the survey year, divided by the difference between the years; $ACCESS$ is an objective measure of access to finance which indicates whether firms are constrained in obtaining credit or not;FC means firm characteristics (firm age, firm size, ownership status, power and firm location) and IND represents the industry dummy (services versus manufacturing).

Consequently, equation (1) can be specified as:

$$EMP_i = \beta_0 + \beta_1 ACCESS_i + \beta_2 LOC_i + \beta_3 AGE_i + \beta_4 SIZE_i + \beta_5 OWNERSHIP_i + \beta_6 IND_i + \beta_7 POWER_i + \in_i$$

EMP is a continuous variable showing the level of employment growth of various firms in Ghana; $ACCESS$ is dummy and takes the value of one(1) if a firm has access to finance and zero if it does not; LOC is a dummy which indicates whether a firms is in the business city or not; AGE is continuous variable which indicates the number of years a firm has been in existence; $SIZE$ is a continuous variable which measures the total annual sales of firms; $OWNERSHIP$ is a dummy which takes the value of one (1) for firms that have at least 10% foreign stake and zero (0) for firms that have less than 10% foreign stake; IND is dummy which shows the sector a particular firm belongs to, it takes the value of one(1) if it's in the service sector and zero if it's in the manufacturing sector. $POWER$ is a continuous variable.

4.4.2 Definition and Measurement of Variables

The variables used in the model are defined as follows:

- **Employment Growth (EMP):** it is the dependent variable for outcome model of interest. It's a continues variable calculated as log difference between the current number of permanent employees and the number of permanent employees three years before the survey year, divided by the difference between the years. The impact of outliers are reduced when employment growth of the firms are calculated in this manner. Thus, the employment growth rates of each firm we obtain is symmetric around zero.

- **ACCESS:** it is a dummy which shows whether a firm has access to finance or not. It takes the value of value of one (1) if a firm has access to finance and zero (0) if it does not. In this study, firms are said to have access to finance if they have applied for loan and their application has been approved otherwise they do not have access to finance. Firms that

have their application approved are considered as having access to finance where as those that have their application rejected are regarded as not having access to finance.

- **LOCATION (LOC):** This denotes to the geographical location of the firm. It is a dummy and indicates whether a firm is situated in the industrial city (Accra or Tema) or otherwise. Location assigns the value 1 for firms located outside the business or industrial city and zero (0) for firms located in the business city that is Accra or Tema.

- **AGE:** This is continuous variable, which measures the number of years a firm has been in operation. The age is a continuous independent variable included because it gives an idea about the perpetuity of the firm. The age of the firm provides a measure of its reputation according to Osei-Assibey et al. (2012). Hence, higher access to credit is expected among older firms

- **SIZE:** This variable gives an indication as how big a firm is in terms its sales per annum. Under this study, the size of the firms measures the total annual sale. According to Pandula (2011), information about the size of a firm provides an intuition in to the value of its assets that can be used as collateral in accessing finance. Hence, lager firms are expected to have a better access to finance.

- **POWER OUTAGE:** This continuous variable takes into account the number of time firms experience power outage. It establishes average number of days in a month, power outage occurs to various firms within the year.

- **OWNERSHIP:** Under this study, the nationality of the highest shareholder defines the ownership of the firms under consideration. This variable indicates whether a resident or

a foreigner owns a firm locally. Firms with at least 10% of ownership held by foreigners are considered to have a foreign ownership where as those with less than 10% foreign ownership is considered to be domestically owned. It's a dummy which takes the value of one (1) for foreign ownership and zero (0) for domestic ownership.

- **INDUSTRY (IND):** under this study, the industry variable represents the sector in which a particular firm belongs to. It is defined as a dummy variable and assigns one (1) for firms engaged in the retail and service sector and zero (0) for firms engaged in the manufacturing sector. According to Kumah, 2011, firm's sector of operation affects their access to finance because of their risk and profitability involved and also their ability to pay back loans

Table 4.1: Table showing variables to use in the regression and priori expectations

Variable	Classification	Expected Sign (+/-)
Access	Dummy Variable	+
Location	Dummy Variable	+
Age	Continuous Variable	+
Size	Continuous Variable	+
Power Outage	Continuous Variable	-
Ownership	Dummy Variable	+
Industry	Dummy Variable	+

Source: Author's Construct

4.4.3 Model Two (2)

To address the third objective, the study employs probit regression with sample selection to estimate the factors that determine firms' likelihood of having access to credit in Ghana. In this study, firms are said to have access to credit only if they have applied for credit and their application has been approved. However, as noted by Krasniqi (2010), firm's access to credit can be estimated if and only if they applied for credit. It would be difficult to estimate the access to credit for firms that did not apply for credit for various reasons. We specify the dependent variable (Access to credit) as function various firm characteristics and the industry type below;

$$ACCESS = f(\,FIRM\ CHARACTERISTICS, INDUSTRY) - - - - - -(a)$$

Where $ACCESS$ is an objective measure of access to finance, which indicates whether firms are constrained in obtaining credit or not; firm characteristics include firm age, firm size, asset structure, firm innovation, top manager's gender, owner's experience, audited financial records and firm location. The industry dummy (services versus manufacturing) is also included.

Consequently, equation (a) can be specified as:

$$Probit(ACCESS_i = 1) =$$

$$\beta_0 + \beta_1 OWNEXP._i + \beta_2 LOC_i + \beta_3 AGE_i + \beta_4 SIZE_i + \beta_5 OWNERSHIP_i + \beta_6 IND_i +$$

$$\beta_7 AUDFIN_i. + \beta_8 ASSET._i + \beta_9 TOPMAN._i + \beta_{10} FIRMINNO._i$$

$ACCESS$ is dummy variable which takes the value of one (1) if a firm has access to finance and zero if it does not; LOC is a dummy which indicates whether a firms is in the business city or not; AGE is a continuous variable which indicates the number of years a firm has been in existence; $SIZE$ is a continuous variable which measures the total annual sales of firms;

$TOPMAN$. is the Top Manager's or Owner's gender. It's a dummy which takes the value of one (1) for firms female managers or owners and zero (0) for firms that have male managers or owners; IND is dummy which shows the sector a particular firm belongs to, it takes the value of one(1) if it's in the service sector and zero if it's in the manufacturing sector; $ASSET$.Is the asset structure of the firm and it's a continuous variable; $OWNEXP$. is the owner's or manger's experience and reveals the number of years a manager have spent on the job; $AUDFIN$. Is the audited financial records of the firm. It is a dummy and shows whether a firm has an audited financial record or not; $FIRMINNO$ represents firm's innovation. It is a dummy as well and reveals whether a firm is innovative or not.

4.4.4 Definition and Measurement of Variables

- **ACCESS: T**he second model takes Access the dependent variable and assigns the value of 1 when a firm has financial access and 0, if otherwise. In this regard, firm's financial access measures the extent to which they have accessibility to an overdraft facility, a line of credit or a loan facility.
- **TOP MANAGER'S GENDER:** This is a dummy which accounts for the sex of the top manager of the firm. The value 1 is assigned for firms managed by females and 0 for firms managed by males. It's an explanatory variable because of the differences in the efficiency as well as performance levels of male and female owned firms which may affect their ability to pay back loans. According to Cole and Mehran (2009), private firms owned by females in America are efficient but they tend to be more credit constrained than the male owned firms.

- **FIRMS' AGE:** Similarly, it is a continuous variable and takes account of the life span of firms' operation. It tells us how many years firms having been operating.

- **FIRM SIZE:** This variable gives an indication as how big a firm is in terms its sale per annum. Under this study, the size of the firms measures the total annual sale. According to Pandula (2011), information about how big a firm is provides an intuition in to the value of its assets that can be used as collateral in accessing finance. Hence, lager firms are expected to have a better access to finance.

- **OWNER'S EXPERIENCE:** This measures the duration in terms of years, the owner or top manager has spent on the job. It's measured as a continuous variable. The owner's experience is a direct indicator of the level of efficiency of that particular firm and gives an insight as to its ability to repay loans [Pandula (2011); Kumah (2011)]. Therefore, financial institutions will be willing to give out loans to experience managers than the inexperienced ones because the former has a higher probability of success. More experienced firm owners are expected to have better access to credit.

- **AUDITED FINANCIAL RECORD:** This variable is defined as a dummy variable of 1, if the firm has an audited financial record in the last financial year and 0, if otherwise. This variable is used because it indicates the firm's transparency, which lending institutions can use to assess the creditworthiness of a firm (Krasniqi, 2010). Audited accounts build confidence in financial institutions since it provides information on the financial performance of the firm. Also, firms with audited financial records can provide it when seeking credit from financial institutions

- **ASSET STRUCTURE:** This is a proxy for land ownership by the firm. It is measured as a dummy and takes a value 1 if the firm fully owns the land on which it operates and 0 if, otherwise. This variable is used because the ownership of land which is a tangible fixed asset can be used as collateral for loan, hence is a measure of credit worthiness of a firm (Osei-Assibey, 2014).

- **FIRM INNOVATION:** This is also measured as a dummy that assigns the value 1, if the firm has introduced new or significantly improved products or services or improved methods of manufacturing products or offering services during the last three years. Innovation in firm is expected to increase the demand for credit because of the capital requirement needed in adopting and adjusting to new technologies and changing situations.

- **LOCATION:** This denotes to the geographical location of the firm. It is a dummy and indicates whether a firm is situated in the industrial city (Accra or Tema) or otherwise. Location assigns the value 1 for firms located outside the business or industrial city and zero (0) for firms located in the business city that is Accra or Tema.

- **INDUSTRY:** Under this study, the industry variable represents the sector in which a particular firm belongs to. It is defined as a dummy variable and assigns one (1) for firms engaged in the retail and service sector and zero (0) for firms engaged in the manufacturing sector. According to Kumah, 2011, firm's sector of operation affects their access to finance because of their risk and profitability involved and also their ability to pay back loans.

Table 4.2: Table showing variables to use in the second model and priori expectations

Variable	Classification	Expected Sign (+/-)
Top Manager's Gender	Dummy Variable	-
Firm's Age	Continuous Variable	+
Firm's Size	Continuous Variable	+
Top Manager's Experience	Continuous Variable	+
Audited Financial Record	Dummy Variable	+
Asset Structure	Dummy Variable	+
Firm's Innovation	Dummy Variable	+
Industry	Dummy Variable	+
Location	Dummy variable	+

Source: Author's Construct

CHAPTER FIVE
RESULTS AND DISCUSSIONS

5.1 Introduction

This chapter begins by presenting the correlation matrixes and descriptive statistics for all the variables used in model one as well as variables used in model two. It addresses the endogeneity issues in the in first model and reports the results of the Two Stage Least Square estimation employed to solve the endogeneity concerns. It further touches on the main empirical findings of the probit estimation of the second model and provides detailed discussion of the various regression results in both the first and second model.

5.2 Correlation Matrix of Variables

The correlation matrix of all the variables and dependent variable used in the first Model is presented in Table 5.1. The correlation between Employment Growth and the explanatory variables is of no concern and all the variables came out with their expected signs. In addition, there is no alarming concern for high correlation among the explanatory variables, since none of the variables had a correlation value of 0.5 or more except for the size of the firm with a correlation value of 0.508. This high correlation value between Employment Growth and the firm's size can attributed to the fact that larger firms with huge annual sales tend to employ more as compared to smaller firms, hence, the high correlation between the two variables.

Table 5.1: Correlation Matrix for Model one

	EMPLOYMENT GROWTH	ACCESS	INDUSTRY	OWNERSHIP	POWER	SIZE	AGE	LOCATION
EMPLOYMENT GROWTH	1							
ACCESS	0.3077	1						
INDUSTRY	-0.0673	-0.0532	1					
OWNERSHIP	0.2831	0.0727	0.0506	1				
POWER	0.0183	0.0069	-0.0468	-0.1252	1			
SIZE	0.5082	0.251	0.1553	0.3365	0.0129	1		
AGE	0.2182	0.2423	-0.104	0.1	0.0205	0.3422	1	
LOCATION	-0.026	-0.1016	-0.0081	0.1937	-0.2289	0.1885	-0.0051	1

Source: Author's Construct

Furthermore, the correlation matrix of the variables in the second regression is also presented in Table 5.2. Relationship between Access to finance and the explanatory variables shows an almost perfect correlation with the expected signs of the variables. The correlation value of the variables did not exceed 0.5 except for the correlation between owner's experience and firm's age with a significantly high correlation value of 0.5487.

This is because, the more time an owner or manager spends working with the same firm, the more experience he could gain, hence, over time will be experienced. Older firms usually tend to have experienced managers or owners, who have been working with them over the years, thus the high correlation between owner or manager's experience and the age of the firm.

Table 5.2 : Correlation matrix for the second model

	ACCESS	SIZE	AGE	FIRM'S INNOVATION	ASSET STRUCTURE	AUDITED FIN. RECORD	TOP MAN. GENDER	OWNER'S EXP.	LOCATION	IND.
ACCESS	1									
SIZE	0.2071	1								
AGE	0.1752	0.1795	1							
FIRM'S INNOVATION	0.2622	0.1093	0.092	1						
ASSET TRU	0.1546	0.1835	0.1356	0.0794	1					
AUDITED FIN. RECORD	0.2078	0.4101	0.0594	0.1545	0.222	1				
TOP MAN. GENDER	0.0024	-0.0548	0.0566	0.0102	0.0227	-0.1097	1			
OWNER'S EXPERIENCE	0.0293	0.1099	0.5487	0.0143	0.0545	0.0697	0.0067	1		
LOCATION	-0.1597	0.2075	0.0034	-0.0874	-0.0292	0.0368	0.0433	0.0304	1	
IND.	-0.0074	0.0973	-0.0779	-0.0297	-0.122	0.0887	0.0042	-0.1058	0.0234	1

Source : Author's Construct

5.3 Descriptive Statistics of variables

The descriptive statistics of the variable used in the first model of the study (Firm Performance – Financial Access Nexus) are presented in the Table 5.3. The average growth rate in terms of employment level for the firms was at 47.3 percent with the maximum employment growth rate of a single firm being 17.7 percent. This reveals the low absorbing nature of the labour force by the firms in Ghana resulting in persistent higher unemployment levels in the country.

Only 33.3% of the firms had access to finance, providing a clear picture of the higher levels of financial exclusion in the country. The percent of foreign ownership of a firm in Ghana is very low and accumulated at just 16.1 percent with the remaining firms being owned by Ghanaians. The average size of the firms is approximately 12.4 with largest firm being 20.1. The oldest firm for this particular study was approximated at 4.6 years with an average age for all firms being 2.4 years.

The average number of days in a month that a firm experiences power outage was 2.3 days with a maximum of 4.6 days in a month. The study also shows that a large number of the firms are concentrated in the business cities (Accra and Tema). Out of the 720 firms, about 71.7 percent were situated in Accra or Tema confirming the large volumes of business transactions going on at these two cities. The service sector accounted for 47.6 percent of the firms and the rest being in the manufacturing sector.

Table 5.3: Descriptive Statistics for the Variables

Variable	obs.	Mean	Std. Dev.
EMPLOYMENT GROWH	336	0.47345	0.360083
ACCESS	720	0.33333	0.471732
INDUSTRY	720	0.47639	0.499789
OWNERSHIP	720	0.16111	0.367889
POWER	526	2.0325	0.853522
SIZE	555	12.3695	2.359184
AGE	710	2.44439	0.771499
LOCATION	720	0.71667	0.45093

Source: Author's Construct

The study further provides the descriptive statistics of the variable used in the second model of the study (Determinants of access to credit) and it is presented in the Table 5.4. Out of the 720 firms under consideration, only 33.3% had access to finance conforming to the literature about the low levels of financial inclusion in sub-Saharan African countries. (Osei-Assibey, 2009).

The average size of the firms is approximately 12.4 with largest firm being 20.1. The oldest firm for this particular study was approximated at 4.6 years with an average age for all firms being 2.4 years. An average of 51.4 percent of the firms was innovative in one way or the other with only 35.6 percent owning the land they operated on as an asset.

Concerning the availability of an audited financial record, an average of 58.2 percent of the firms possessed one, whereas the rest had nothing to show as audited financial records. Just a few firms had their top managers or owners as females, representing an average of 14.9 percent with the rest being males. The study also shows that a great number of the firms are situated in the business cities (Accra and Tema). Out of the 720 firms, about 71.7 percent were situated in Accra or Tema confirming the large volumes of business transactions going on at these two cities. The service sector accounted for 47.6 percent of the firms and the rest being in the manufacturing sector.

Table 5.4: Descriptive Statistics for the Variables

Variable	Obs.	Mean	Std. Dev.
ACCESS	720	0.33333	0.471732
SIZE	555	12.3695	2.359184
AGE	710	2.44439	0.771499
FIRM'S INNOVATION	717	0.51464	0.500134
ASSET STRUCTURE	720	0.35556	0.479014
AUDITED FIN. RECORD	713	0.58205	0.493569
TOPMAN. GENDER	720	0.14861	0.355952
OWNER'S EXPERIENCE	720	15.9264	9.501123
LOCATION	720	0.71667	0.45093
INDUSTRY	720	0.47639	0.499789

Source: Author's Construct

5.4 Endogeneity Concerns

Endogeneity concerns may arise in the first model, which addresses the issue of how Access to Finance affects firms' Employment Growth. It is quite ambiguous in identifying the direct causality that exists between Employment Growth of a firm and its' Financial Access. For instance, Employment Growth could be driving firms' Access to finance (i.e., financial institutions might be more likely to lend to growing firms and similarly growing firms are likely to demand more financing to sustain their operations) or there could be other variables that drive both employment growth and access to finance.

However, this study corrects for this endogeneity issue by employing the use of Two Stage Least Square regression. After choosing two instrumental variables; Firm's Innovation and Firm's Audited Financial Records, the predicted variable of Access was obtained as ACCESSr. Table 5.3 provides the estimation results of the predicted ACCESS that is ACCESSr. It can be observed from table 5.5 that ACCESSr is highly significant and hence confirming the presence of endogeneity in the first model.

Table 5.5: Endogeneity test between Employment Growth and Access to Finance (From the First Model)

	Aggregate level (All firms)		Disaggregated level (Services firms)		Disaggregated level (Manufacturing firms)	
Predicted Access	Coefficient	Linearized SE	Coefficient	Linearized SE	Coefficient	Linearized SE
ACCESSr	0.429**	0.184	0.0149	0.239	0.949***	0.274
Observations	216		99		117	

Where, ***p<0.01 **p<0.5 *p<0.1

Source: Author's computation using the data

5.5 Research Findings and Discussion of Results

The results from the two model are presented. The two stage least square is employed in the first model whereas the probit estimation technique is used in the second model

5.4.1 Model one

Consequently, having established that there is endogeneity between Employment Growth and Access, we estimate a Two Stage Least Square (2sls) regression in order to account for the endogeneity. The result of the Two Stage Least Square regression is presented in table 5.6 for all firms in the model as well as for manufacturing and services respectively.

Table 5.6: Two Stage Least Square (2LS) estimation of the Determinants of Employment Growth

	All Firms	Services	Manufacturing
	(1)	(2)	(3)
VARIABLES	EMP	EMP	EMP
ACCESS	0.484***	0.122	0.691***
	(0.178)	(0.279)	(0.247)
OWNERSHIP	0.124**	0.0791	0.117
	(0.0592)	(0.0685)	(0.0985)
SIZE	0.0510***	0.0645***	0.0468**
	(0.0140)	(0.0200)	(0.0199)
AGE	-0.0510	-0.0403	-0.0790
	(0.0488)	(0.0611)	(0.0753)
LOCATION	-0.0445	-0.220**	0.0524
	(0.0728)	(0.0934)	(0.118)
POWER	0.00554	-0.0387	0.0376
	(0.0303)	(0.0430)	(0.0449)
INDUSTRY	0.0733		
	(0.0506)		
CONSTANT	-0.184	-0.121	-0.275
	(0.186)	(0.268)	(0.254)
Observations	216	99	117
Prob>chi2	0	0	0
R-squared	0.158	0.276	0.258

Source: Author's Construct.

First and Foremost, from table 5.6 there exist a positive and significant nexus between Employment Growth (EMP) and ACCESS. This shows that a one-unit increment in a firm's financial access results in a 48 percent increment in its employment growth. This finding means that firms are more productive when they have easy access to lower cost sources of external finance and hence tend to employ more than those who do not. It makes sense that firms that can easily have external sources of finance will quickly tap into it when needed and exploit it well for the firms' benefit. These firms are able to expand their production hence employing more workers. The result from this study conforms to that of Ayyagari et al. (2016), who established that increased access to finance results in increased job growth in developing countries. However, financial access in the service sector is less significant and plays no role in service sector firms' employment growth levels. The firms in the manufacturing sector on the other hand, improves their employment growth levels by 69.1 percent because of a one-unit increment in their financial access.

Secondly, foreign ownership just like firms with financial access is statistically and highly significant with a positive sign as expected, indicating that firms with one unit increment in their foreign stake increase their employment levels by approximately 12 percent as compared to those that are wholly domestically owned or with less foreign control. The intuition behind this is that, foreign-owned firms bring foreign expertise and skills to bear on the local scene and make firms more productive hence employing more workers, not neglecting the fact that foreign-owned firms enjoy certain preferential treatments and facilities that local firms may not enjoy. The positive nexus for foreign ownership and firms' employment growth levels is completely in line with the findings of Arnold et al. (2008), whose study is based on 10 Sub-Saharan African countries. Girma et al. (2004), also revealed that foreign owned firms in the UK outperform

locally owned firms in terms of productivity and employment levels. With the service and manufacturing sectors, the nationality of the owner plays less role in employing workers as the results in table 5.4 shows.

In addition to the above, the size of a firm has a strong positive relationship with its employment level as in conformity with the priori expectations and is statistically significant. This means that larger firms with huge annual sales tend to employ more workers as compared to smaller firms. From the two stage least squared regression results in table 5.4, a one-unit increase in a firm's size, results in an approximately 5 percent increase in its employment growth levels. This can be attributed to the fact that, larger firms have bigger production levels hence more workers are needed as compared to their smaller counterparts and it is in conformity with the findings of Ali and Najman (2015). They found lager and medium sized firms to play a highly significant role in firms' productivity and hence their employment levels. Similarly, concerning larger firms in the service and manufacturing sectors, they also have higher employment growth levels of 6.4 and 4.6 percent as a result a unit increase in their sizes respectfully.

Turning briefly to the other variables, which turned out to be insignificant, it can be observed from Table 5.6 that age, location, power, are all insignificant determinants of employment growth. This means that whether the firm is old or young it has no burden on the firm's employment growth. Another very important variable that seems to surprisingly have no impact on firms' employment growth and is highly insignificant is the location of the firm. Firms that are located outside the business cities (Accra or Tema) employ less than those that are located business cities. This result is quite amazing and unexpected since firms located in the business cities are expected to employ more because of the large volumes of transactions they undertake

Arnold, Mattoo and Narcisso (2008) found a positive effect of location in capital city on productivity and employment levels contrary to this finding.

The last but not the least determinant of firm productivity, which was not statistically significant and had an unexpected positive sign is power outage. The expected negative nexus on power outage implied that firms are adversely affected in terms of their employment levels when they experience frequent power outages and more so, when there are no alternative sources of power or the alternative sources could be too costly. The result from this study however shows that power outages does not affect firms' employment growth which is contrary to that of Qureshi and Velde (2007). They revealed that power outages adversely affect productivity among 200 Zambian firms and hence their employment levels**.**

Lastly, industry is not a significant determinant of firms' employment growth but it however shows that firms in the service sector has an employment growth rate of approximately 7 percent higher than those in the manufacturing sector. This result is in line with recent literature showing how the service sector of Ghana has been growing and employing more workers than any other sector in Ghana.

5.4.2 Model Two

The results obtained from the probit selection shows that access to credit is significantly influenced by firm's innovation, owner's or top manager's experience, availability of an audited financial record, location, the age of the firm as well as the size. In addition to these factors, the top manager or owner's gender, asset structure and the industry the firm belongs to plays no role in the financial access of the firm.

Table 5.7: Marginal Effects on the Determinants of Access to Finance

	All firms	Services	Manufacturing
	(1)	(2)	(3)
VARIABLES	ACCESS	ACCESS	ACCESS
OWNER'S EXPERIENCE	0.00499**	0.000611	0.00890***
	(0.00253)	(0.00394)	(0.00328)
LOCATION	-0.208***	-0.171**	-0.204***
	(0.0537)	(0.0799)	(0.0750)
TOP MANAGER'S GENDER	0.0281	-0.0107	0.0930
	(0.0600)	(0.0815)	(0.0919)
AUDITED FIN. RECORD	0.117**	0.120*	0.121*
	(0.0465)	(0.0671)	(0.0648)
FIRM'S ASSET STRUCTURE	0.0677	0.0210	0.107*
	(0.0459)	(0.0677)	(0.0625)
FIRM'S INNOVATION	0.194***	0.200***	0.182***
	(0.0400)	(0.0583)	(0.0553)
FIRM'S AGE	0.120***	0.0870*	0.149***
	(0.0350)	(0.0496)	(0.0486)
FIRM'S SIZE	0.0300***	0.00192	0.0517***
	(0.0104)	(0.0153)	(0.0151)
INDUSTRY	0.00432		
	(0.0430)		
Observations	542	249	293
Prob>chi2	0.0000	0.0024	0.0000
Wald Chi2	80.96	23.93	62.28

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

source: Author's Construct

Firstly, access to credit is significantly related to firm's innovation. The positive coefficient implies that firms that have introduced new products and services or improved method of production or delivery of services are more likely to have better access to credit than firms that are not innovative. The marginal effect calculated after the standard probit estimation shows that generally, innovative firms' increase their probability of having access to finance by approximately 19.4 percent compared to firms that are not innovative. This is because innovative firms that adopt new techniques tend to be more productive and profitable due to the lower cost of production; hence, there is a higher probability of repaying the amount of loan borrowed. This finding however contradicts the results found by Freel (2007), where firms that are innovative have less financial access than less innovative ones because of the bias towards less innovative firms. Similarly, innovative firms in the service and manufacturing sector increase their chances of having financial access by 20 and 18.2 percent respectively as compared to their less innovative counterparts.

Secondly, there is a positive and statistically significant relationship between firms having audited financial statements and access to credit. The results obtained from the marginal effects calculated after the probit estimation shows that generally, firms with audited financial statements increases their likelihood of having financial access approximately by 11.7 percent compared to firms without audited financial records. This is because these firms are transparent; hence, information about their financial performance can be obtained for purposes of loan evaluation. The reason for this is that lending institutions have access to peruse the financial statements of borrowing firms to boost their confidence in providing credit to those firms. This finding contradicts the study by Kumah (2011) which finds that keeping accounting records does not significantly influence firms' access to credit because not all financial institutions give

priority to financial records. Under the service and manufacturing sector, firms with audited financial records also increases their access to finance by 12 and12.1 percent respectively as compared to firms without it in the same industry.

Furthermore, the probit estimation shows that firm's location significantly increase firms' financial access. The marginal effects indicates that firms located outside the business or industrial cities (that is Tamale, Takoradi and the rest except Accra and Tema) decreases their chances of having access to finance by approximately 20.8 percentage relative to the firms situated in these industrial or business cities. This is because most financial institutions are situated in areas with huge demand and market size, which are usually these industrial cities with lots of business transactions going on daily. The result conforms to that of Fatoki and Asah (2011). They revealed that urban city firms tend to be very much successful in financial access compared to their counterparts located in the rural areas. The distance that exists between lenders and borrowers tend to result in an enhanced form of environmental scrutinize that assist firms to obtain credit from lenders. Subsequently, a positive relationship connects firm's location and access to debt financing by SMEs. Firms belonging to the service and manufacturing sector that are located out the business cities show similar results with a reduction in their access to finance by 17.1 and 20.4 percent as compared to their counterparts located in the business cities.

In addition, firms with experienced managers or owners have their likelihood of having access to finance increase by 0.4 percent compared to those firms with inexperienced managers. As revealed by Pandula (2011) and Kumah (2011), the owner or manager's experience is a direct indicator of the level of efficiency of that particular firm and gives an insight as to its ability to repay loans. Financial institutions will be willing to give out loans or credit to experienced managers than the inexperienced ones because the former has a higher probability of success.

The service and manufacturing sector with experienced managers reveal the related increment in their access to finance as compared to the firms with inexperienced owners or managers.

Similarly, older firms that have been in operation for a while tend to have experienced managers or owners. The marginal effect after the probit estimation shows a strong and positive relationship between a firm's age and its financial access. Older firms increase their probability of having access to finance by 12 percent as compared to the newer and younger firms. Firms at the early stage of operation usually have trouble in access to debt finance because of information disparities. The firm starts to operate and grows with business performances on a trade, which create a reputation on credit history. Credit reputation reduces the moral hazard dilemma hence create a path to access debt finance. The finding conforms to that of Chandler (2009). He revealed that the longevity of the firm stays in operation, the more persistence to unpleasant economic circumstances and hence the better its chances of financial access.

Finally yet importantly, the firm's size that is denoted by its annual sales tends to significantly affect its financial access from the probit estimation. Enormous firms tend to be well diversified in their operations which influence their stability; thereby size can be substituted for insolvency. Hence larger firms with huge annual sales increase their chances of having access to finance by 3 percent as compared to the smaller ones. Small firms find it more expensive in solving problems associated information asymmetry with lenders and hence lower financial access. The result obtained from this study is similar to that of Fatoki and Asah (2011). They find out that firm size impacts firm's access to debt finance from commercial banks whereby small firms are less favored to the large firms.

Lastly, contrary to expectations, owner or manager's gender, do not significantly influence firms' access to credit. This can be attributed to the fact that most financial institution are more concerned about the efficiency of a firm and its ability to repay loans on time that whether the manager is a male or female. Moreover, there is no substantial connection between the ownership of land as a collateral and financial access among firms in Ghana. This is probably because financial institutions on other movable assets like machinery and account receivables place more emphasis. In addition, the industry sector is not a statistically significant determinant of access to credit among firms in Ghana.

5.5 Conclusion

This study sought to find out the effect of access to finance on firms' employment growth and to establish the determinants of financial access in Ghana. The results using the Two Stage Least Square regression method shows that, financial access measured by access to a line of credit/loan or an overdraft facility positively impacts on firms' employment levels. On the Other hand, statistically significant determinants of firms' access to finance include firm's innovation; owner's or top manager's experience, availability of an audited financial record, location, the age of the firm as well as the size.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This is the last chapter of the study and it is of essence because it summarizes the whole study in few paragraphs, draws relevant conclusion and suggests plausible and sound policy recommendations for stakeholders

6.2 Summary

Enough writings indicate that finance is very important in the economic development of nations across the globe. Studies have been conducted starting with the study by Schumpeter way back in 1911. Ever since then, many more researches have been done whose result do not differ from earlier ones, but for changes in variable measurements, methodology and time periods. The exact straits through which financial development, financial deepening and financial inclusion affects economic growth is in high dearth though few recent studies have attempted to explore it.

Many of the studies that explored this however, mainly used data set of their respective countries, which are cross-sectional in nature with its inherent limitations of estimating job growth over time. This subject matter is also not in abundance on the African continent probably due to data collection issues, though the continent has been known to have the highest unemployment levels and policies emanating from research done in the developed world might be of little relevance to the developing economies. This study sought to find the effect of financial access on the employment growth of firms in Ghana and the determinants of firms' likelihood of having access. The study used a firm-level survey of 720 firms conducted by the World Bank in Ghana in 2013.

The study employed the two-stage least square regression model in addressing the employment growth and financial access nexus. The regression was model was used because of the endogeneity concerns between employment growth and access to finance. The use of the ordinary least square would have rendered the coefficients biased with wrong regression results hence wrong interpretations and discussions.

Under the first model, the study established that indeed access to finance affects firms' employment decisions strongly and hence their employment levels. Firms with access to credit can expand their production levels to absorb their workers. Access to finance therefore affects firms' employment growth.

In addition to the above, the study also revealed that firms with foreign ownership had higher employment growth levels than those owned locally. The size of a firm in terms of its annual sales also had a significant impact on a firm's employment levels. Larger firms had higher employment growth levels than smaller firms.

However, firm characteristics such firm's age did not affect its employment growth levels. The location of a firm did also affect its employment levels but the study further showed that firms located in the industrial cities employed more workers than those located outside these cities (Accra and Kumasi).

Surprisingly, the type of industry a firm belongs to as well as the power outages its experiences did not affect its employment decisions. Concerning the industry, the study revealed that the service sector employed more workers than the manufacturing sector, which is conformity with recent literature.

The probit regression model was employed to establish the determinants of firms' financial access. This estimation technique was adopted because of the discontinuity of the dependent variable (access to finance). The study finds that access to credit is significantly influenced by firm characteristics.

Firstly, firms that are innovative in introducing new products or services or adopting new methods of production are more likely to have access to finance. This is because their adoption of new techniques tends to make them more productive and profitable due to the lower cost of production; hence, there is a higher probability of repaying the amount of loan borrowed.

Secondly, there was a positive and statistically significant connection between firms having audited financial statements and access to credit. This was related to the fact that these firms are transparent; hence, information about their financial performance can be obtained for purposes of loan evaluation.

Thirdly, firms' location also significantly increases firms' access to credit. The firms located outside the business or industrial cities decreased their chances of having access to finance as compared to their business or industrial city counterparts.

Moreover, firms with experienced managers or owners had higher probability of having financial access as compared to those firms with inexperienced managers. The owner or manager's experience could be used as a direct indicator of the level of efficiency of that particular firm and gives an insight as to its ability to repay loans. Firms' size as well its age all showed significant impacts on their likelihood of having access to finance.

On the contrary, the top manager or owner's gender and the asset structure measured by firm's ownership of a land do not bear any significant relationship with their likelihood of having

access to finance. Surprisingly, the industry the firm belongs to is a not significant determinant of its likelihood of having access to finance in Ghana.

6.3 Conclusion of the study

There exists extensive literature in corporate finance that establishes the connection between finance and growth at the macro level (country economic growth and industry growth) and micro level (firm sales growth). However, quite a few is known about the connection between finance and the labor markets. Firms may grow or expand by increasing investment, productivity, and thus output from greater access to finance without ever increasing labor, a case of "jobless growth" that is of particular concern after the global financial crisis of 2008.

The findings of this study is unswerving from previous results and shows that access to a finance is strongly and positively related to firms' employment growth. In addition, firms should broaden their scope of annual sales by exporting more of their products to take advantage of economies and broaden their horizon by granting part ownership to foreigners and working hard to gain access to the necessary certifications as well audited financial records will not be a wrong step.

In addition, the study reveals that financial access is influenced mostly by specific characteristics of the firm such firm innovation, location, possession of bank account and having audited financial statements. However, owner's gender as well as ownership of land, which can be used as collateral, does not have significant influence on firms' access to finance. Finally, the study concludes that determinants of firm's access to finance is influenced by a mixture of firm characteristics.

6.4 Policy Recommendations

The study humbly recommends the following based on its finding;

Firstly, governments should provide a conducive business environment for firms to thrive especially concerning relaxing credit constraint. This can be achieved by reducing the prime rates, which serves as the basis for on lending to firms. This suggestion stems from the positive effect of access to credit on employment growth.

Moreover, policies should be geared towards diversifying credit towards long-term credit facilities to firms at moderate interest rates since this seems to be more reliable and gives firms a longer operation period. Providing training to owners and managers of firms in such areas as preparation of financial accounts would not only promote their demand for finance but also increase their access to credit. Firms must have their financial accounts examined by independent external auditors.

Lastly, Firm owners or top managers should be encouraged to adopt new technologies and innovations as this increases their chances of having access to finance. This will require capacity building and development of firms so that new technologies and innovations can be adapted.

The successful implementation of these recommendations however requires effective mechanism for co-ordination between government's efforts and that of the private sector including the various financial institutions and other stakeholders who are contributing towards provision of finance to firms. An enabling regulatory framework is essential to sustain and significantly improve access to finance in Ghana to reduce various unemployment problems.

6.5 Limitation of the study

The study has one key limitation, which is that the data used does not embrace many characteristics of the owner/ manager including educational level and affiliation to business associations, which are also important factors that are considered in loan evaluation process.

In addition, the study includes only firms in a few areas in Ghana that is Accra, Tema, Takoradi and Tamale. The survey does not properly cover rural enterprises. However, comparing the enterprises in the rural and urban areas would have been possible if there was proper survey on these rural firms. In spite of these limitations, the findings and recommendations of this study will be useful in providing insight for further studies.

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