Monetary Versus Fiscal Policy Effects on SMEs Growth in Africa: Evidence from Ghana

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Abstract

The operations of Small Medium Enterprises have contributed immensely to the development of the economy of Ghana. The effectiveness of their operations depends highly on the economic environment they find themselves. Owners of SMEs rely hugely on capital raised from family members, personal savings or from financial institutions other than the government. The means of raising capital and other income to facilitate their operations especially, from the financial institutions comes with a cost.

This study focused its assessment on the impact of loan interest rates and tax pressures on SMEs' performance and growth in Ghana. Data for the study was collected randomly from 153 respondents (SMEs) using structured questionnaire. Both qualitative and quantitative methods were used to analyse the data. A multiple regression model was constructed with dependent variables being employment growth, and independent variables being lending rates, power supply, duration of business, type of business, tax pressures, gender and educational levels of owners. The study found a strong effect of monetary policy on firm performance in terms of employment growth. Thus, even though interest rates are generally high in Ghana, firms that manage to get slightly reduced lending rates have higher growth in terms of employment. Fiscal policy in terms of tax perceptions or pressures is less correlated with firm performance. Policy makers should continuously supervise the financial system in order to minimize huge spreads in lending rate in an environment of high rates, to enhance firms and economic growth.

Keywords: Lending rate, Tax pressures, Employment, SME Growth, Ghana
JEL Classification: O12, O16, H26

1. Introduction

The private sector has often been touted as the engine of growth for many economies (Agyapong, 2010). Small businesses are an important source of economic growth and job creation. Data available data from the Registrar General Department indicates that ninety-percent of companies registered in Ghana are micro, small and medium enterprises (Mensah, 2004). SMEs in Ghana provide, estimably, eighty-five percent of manufacturing employment contributes seventy percent of the Gross Domestic Product (GDP) and constitute ninety-two percent of businesses in Ghana (Abor and Quartey, 2010).

These SMEs contribute enormously to the development of the economy and act as a conduit for economic growth through taxes revenues, job creation, poverty reduction as well as the provision of services and products for individuals and organizations.

Access to credit is a critical issue for small businesses. Without sufficient capital, these small firms are unlikely to sustain production, develop new products and service or grow to meet demand. To make progress and achieve success, SMEs need to be constantly experiencing growth by expanding productivity and market size. The achievements of these objectives however are, to a large extent, only possible via the injection of capital, which at most times can only be accessed from mainstream financial institutions. Insufficient liquidity is a frequently cited cause of small business failure. In Ang (1991) and Weinberg (1994) study as cited in Coleman (2000), unlike larger publicly held firms, small firms typically cannot access the traditional capital markets. SMEs as an alternative to credit for business operations and or expansion may resort to bank loans, trade credit, and "informal sources of financing such as personal savings and loans from family and friends. For higher volumes of credit, SMEs resort to the financial sources for funding. The challenge however is that financial institutions consider granting credit to SMEs as a high risk investment priority. According to Lopez-Gracia and Sogorb-Mira (2008), SMEs are also challenged as to their ability to present credible documentation on their business activities and financial data to meet the paper requirements of most financial institutions. In situations where SMEs are able to have access to credit facilities, the cost of the credit, as represented by the level of interest can be devastating. To avoid the challenges that come with inability to service loans, most SMEs decline commercial loans with high interest rates in favor of going it small.

Interest charged by financial institutions on credit granted to SMEs is relatively high due to the risky nature of their (SMEs) operations. With impending challenges in the SME sector- dominated by limited access to credit from other alternatives besides credit from financial institutions- characterized by high interest rates- SMEs are put in a dilemma whether to depend on their own savings, family savings, friends' assistance, government and donor support of financial institutions to finance their operations (Bawuah, 2014). There has been assertions by some who are of the view that irrespective of the level of interest rates, SMEs demand for credit is established. Bawuah, Yakubu and Salakpi (2014) in their treatise on the assessment of existing financial opportunities and their influence on capital structure suggested that there are both direct and indirect relationships between the level of interest charged on credit and the ability of most SMEs to afford the credit. However these assertions alluding to the existence of a relationship did not establish the impact of these rates charged to credit on the performance of SMEs and their subsequent growth.

Small businesses perceive taxes pressures as an impacting factor on their operations and performance. Tax is a fiscal policy instrument imposed by regulatory bodies in the market and deemed as a necessary tool for the economy as it forms part of government's key policy instrument in generating revenue. However, as a deductible on the cash flow of business units particularly in the SME sector, taxes play an important role in the outcome of these enterprises. Thus, taxes have a direct effect on firms whilst high interest rates can be considered as having a potentially indirect effect.

Despite the extensive literature on the relationship that exist between interest rates and demand for credit, challenges that inhibit SME growth, with access to credit being the key determinant, there is little research that examines the link between interest rate at the firm level as well as taxes and their impact on SMEs. Hence this research focuses on interest rates charged on credit to SMEs, taxes imposed on their operations and how they influence the performance and growth of SMEs in Ghana.

As Bawuah et al (2014) asserted, the cost of capital in Ghana especially for the informal sector is too high to enable any SME which borrows at such steep interest rates to pay back comfortably. This difficult situation is worsened by the need for SMEs fulfil their tax obligations. The challenge with high interest rates is that it inhibits SME ability to capitalize thereby restricting SME capacity for growth and expansion.

Besides the real challenge of inability to pay back, do interest rate levels and taxes influence SME performance and growth? In the developed world, optimal levels of interest rates have positive influence on SME demand for credit and positively influences SME capitalization (Leippold, Vanini & Ebnoether, 2006). In Sub-Saharan Africa and Ghana, literature on the matter is neither plentiful nor explicit. The relationship between interest rate levels and imposed taxes on business operations, and their performance has not been put to much empirical tests. Neither is there much data on the impact of interest rates and taxes pressures on SME growth. The low availability of data on the subject necessitates empirical studies.

The rest of the paper is organized as follows. Section 2 presents an extensive review of studies related to this research. In section 3, the research context and methodological design of the study is presented. It introduces the research context in terms of the study area, discusses the study design used, reflects on the fieldwork processes, broadly describes the data collection methods that were used to answer the research questions, and how analysis, presentation of the findings was done. Section 4 presents the data analysis, findings of the study and discussion of findings in relation to other studies for the purpose of leading to the establishment of facts. Section 5 makes draws conclusions whilst highlighting the limitations of the study.

2. Literature Review
2.1 Small and Medium Enterprises

The economy of developed countries have benefited largely from small firms and led to- in some instances- a total change in the economy. This is evidenced by multinational firms that have had small start-ups and scaled up to reap huge returns for these nations. The likes of technology companies such as Microsoft, Apple, Hewlett-Packard, social media companies like Facebook, Google, LinkedIn and trading companies like Amazon, eBay, Alibaba as well as bank, transport and media companies like UT Bank, Virgin, SpaceX, Tesla and General Motors indicate to this occurrence.

Nations and their citizenry need small and medium scale enterprises to grow and flourish. Thereby, (SMEs) can continue to play the critical role they (SMEs) play in both human and national development (Jensen & Uhl, 2008).

2.2 Definition of SMEs

The definition for SMEs is not premised on a single factor. These definitions vary depending on the target region and institutions involved. Some scholars have defined SMEs based on the number of employees whilst others premise their definition on performance measures such as annual turnover and Balanced Sheet Capital injection. Others define SMEs in terms of their legal status and method of production. The Bolton Committee (1971) first formulated an "economic" and "statistical" definition of a small firm. Under the "economic" definition, a firm is said to be small if it meets the following three criteria:

- It has a relatively small share of their market place;
- It is managed by owners or part owners in a personalized way, and not through the medium of a formalized management structure;
- It is independent, in the sense of not forming part of a large enterprise.

Under the "statistical" definition, the Committee proposed the following criteria:

- The size of the small firm sector and its contribution to GDP, employment, exports, etc;
- The extent to which the small firm sector's economic contribution has changed over time;
- Applying the statistical definition in a cross-country comparison of the small firms' economic contribution.

The Bolton Committee applied different definitions of the small firm to different sectors. Whereas firms in manufacturing, construction and mining were defined in terms of number of employees (in which case, 200 or less qualified the firm to be a small firm), those in the retail, services,

wholesale, etc. were defined in terms of monetary turnover (in which case the range is 50,000-200,000 British Pounds to be classified as small firm). Firms in the road transport industry are classified as small if they have 5 or fewer vehicles. There have been criticisms of the Bolton definitions. These criticisms center mainly on the apparent inconsistencies between defining characteristics based on number of employees and those based on managerial approach.

The European Commission (EC) defined SMEs largely in term of the number of employees as follows:

- Firms with 0 to 9 employees - micro enterprises;
- 10 to 99 employees - small enterprises;
- 100 to 499 employees - medium enterprises.

Thus, the SME sector is comprised of enterprises (except agriculture, hunting, forestry and fishing) which employ less than 500 workers (Abor & Quartey, 2010). In effect, the EC definitions are based solely on employment rather than a multiplicity of criteria. Secondly, the use of 100 employees as the small firm's upper limit is more appropriate, given the increase in productivity over the last two decades (Storey, 2016). Finally, the EC definition did not assume the SME group is homogenous; that is, the definition makes a distinction between micro, small, and medium-sized enterprises. However, the EC definition is too all-embracing to be applied to a number of countries. Researchers would have to use definitions for small firms which are more appropriate to their particular "target" group (an operational definition). It must be emphasized that debates on definitions turn out to be sterile, unless size is a factor which influences performance. For instance, the relationship between size and performance matters when assessing the impact of a credit programme on a target group (Storey, 2016).

Weston and Copeland (1998) hold that definitions of size of enterprises suffer from a lack of universal applicability. In their view, this is because enterprises may be conceived of in varying terms. Size has been defined in different contexts, in terms of the number of employees, annual turnover, industry of enterprise, ownership of enterprise, and value of fixed assets. Van der Wijst (2012) considers small and medium businesses as privately held firms with 1 – 9 and 10 – 99 people employed, respectively. Jordan et al (1998) define SMEs as firms with fewer than 100 employees and less than €15 million turnover. Michaelas *et al* (1999) consider small independent private limited companies with fewer than 200 employees and López and Aybar (2000) considered companies with sales below €15 million as small. According to the British Department of Trade and Industry, the best description of a small firm remains that used by the Bolton Committee in its 1971 Report on Small Firms.

The UNIDO also defines SMEs in terms of number of employees by giving different classifications for industrialized and developing countries (Elaian, 1996). The definition for industrialized countries is given as follows:

- Large - firms with 500 or more workers;
- Medium - firms with 100-499 workers;
- Small - firms with 99 or less workers.

The classification given for developing countries is as follows:

- Large - firms with 100 or more workers;
- Medium - firms with 20-99 workers;
- Small - firms with 5-19 workers;
- Micro - firms with less than 5 workers.

It is clear from the various definitions that there is not a general consensus over what constitutes an SME. Definitions vary across industries and also across countries.

In defining small-scale enterprises in Ghana, Steel and Webster (1991), and Osei et al (1993) used an employment cut-off point of 30 employees. Osei et al (1993), however, classified small-scale enterprises into three categories. These are: (i) micro - employing less than 6 people; (ii) very small -

employing 6-9 people; (iii) small - between 10 and 29 employees. A more recent definition is the one given by the Regional Project on Enterprise Development Ghana manufacturing survey paper. The survey report classified firms into: (i) micro enterprise, less than 5 employees; (ii) small enterprise, 5 - 29 employees; (iii) medium enterprise, 30 – 99 employees; (iv) large enterprise, 100 and more employees (Teal, 2002).

2.3 Characteristics of SMEs in Developing Countries

Fisher and Reuber (2000) enumerate a number of characteristics of SMEs in developing countries under the broad headings: labor characteristics, sectors of activity, gender of owner and efficiency. Given that most SMEs are one-person businesses, the largest employment category is working proprietors. This group makes up more than half the SME workforce in most developing countries; their families, who tend to be unpaid but active in the enterprise, make up roughly another quarter. The remaining portion of the workforce is split between hired workers and trainees or apprentices. SMEs are more labour intensive than larger firms and therefore have lower capital costs associated with job creation (Anheier and Seibel, 1987; Liedholm and Mead, 1987; Schmitz, 1995).

In terms of activity, they are mostly engaged in retailing, trading, or manufacturing (Fisher and Reuber, 2000). While it is a common perception that the majority of SMEs will fall into the first category, the proportion of SME activity that takes place in the retail sector varies considerably between countries and, between rural and urban regions within countries. Retailing is mostly found in urban regions, while manufacturing can be found in either rural or urban centers. However, the extent of involvement of a country in manufacturing will depend on a number of factors, including, availability of raw materials, taste and consumption patterns of domestic consumers, and the level of development of the export markets.

In Ghana, SMEs can be categorized into urban and rural enterprises. The former can be subdivided into "organized" and "unorganized" enterprises. The organized ones mostly have paid employees with a registered office, whereas the unorganized category is mainly made up of artisans who work in open spaces, temporary wooden structures, or at home, and employ few or in some cases no salaried workers (Kayanula and Quartey, 2000). They rely mostly on family members or apprentices. Rural enterprises are largely made up of family groups, individual artisans, women engaged in food production from local crops. The major activities within this sector include:- soap and detergents, fabrics, clothing and tailoring, textile and leather, village blacksmiths, tin-smiths, ceramics, timber and mining, bricks and cement, beverages, food processing, bakeries, wood furniture, electronic assembly, agro processing, chemical-based products and mechanics (Osei et al., 1993; Kayanula and Quartey, 2000).

Majority of SMEs are female-owned businesses, which more often than not are home-based compared to those owned by males; they are operated from home and are mostly not considered in official statistics. This clearly affects their chances of gaining access to financing schemes, since such programmes are designed without sufficient consideration of the needs of businesses owned by females. These female entrepreneurs often get the impression that they are not capable of taking advantage of these credit schemes, because the administrative costs associated with the schemes often outweigh the benefits. Prior empirical studies in Ghana have shown that female-owned SMEs often have difficulty accessing finance. Females are mostly involved in sole-proprietorship businesses which are mainly microenterprises and as such, may lack the necessary collateral to qualify for loans (Aryeetey et al, 1994; Abor and Biekpe, 2006).

Measures of enterprise efficiency such as labor productivity or total factor productivity vary greatly both within and across industries. Firm size may be associated with some other factors that are correlated with efficiency, such as managerial skill and technology, and the effects of the policy environment (Abor & Quartey, 2010). Most studies in developing countries indicate that the smallest firms are the least efficient, and there is some evidence that both small and large firms are relatively inefficient compared to medium-scale enterprises (Little et al., 1987). It is often argued that SMEs are

more innovative than larger firms. Many small firms bring innovations to the market place, but the contribution of innovations to productivity often takes time, and larger firms may have more resources to adopt and implement them (Acs et al., 1999).

SMEs are characterized by high failure rates, produce intermediate low value added goods, and are mostly informal and semi-formal enterprises that usually lack corporate business acumen Caner (2014). Further, there are allusions made with concern to SMEs normally hiring unreported labor and being prone to tax evasion issues.

2.4 Sources of Finance

Access to finance is a dominant constraint to small scale enterprises in Ghana. Empirical evidence from a research conducted by Aryeetey et al (1994) reported that 38% of the SMEs surveyed in Ghana in their research alluded to credit constraint. This mainly stems from the fact that SMEs have limited access to capital markets, both locally and internationally. Partly because of the perception of higher risk, information barriers, and higher costs of intermediation for smaller firms. A World Bank study found that about 90% of small enterprises surveyed stated that credit was a major constraint to new investment (Parker et al. 1995). Levy (1993) also found that there is limited access to financial resources available to smaller enterprises compared to larger organizations and the consequences for their growth and development.

SMEs rely mostly on personal savings as well as that from family members and informal sources. They resort to banks for capital and financial institutions be it commercial banks or Non-Bank Financial Institutions (NBFI) in capital markets characterized by under developed capital markets for large and capital intensive projects. According to Mankiw (2016) financing constraints such as the cost of borrowing, can prevent firms from taking up profitable investments. The demand for credit from these financial institutions affects the rates of interests in these economies.

Trends from the global picture reveal that most of the SMEs depend on internally generated funds which most of the time is meager and insufficient for the productive undertakings. Thus their heavy reliance on financing from financial institutions such as banks and NBFIs.

Figure 1: Global Funding Sources for SMEs

Source: Africa Center for Economic Transformation
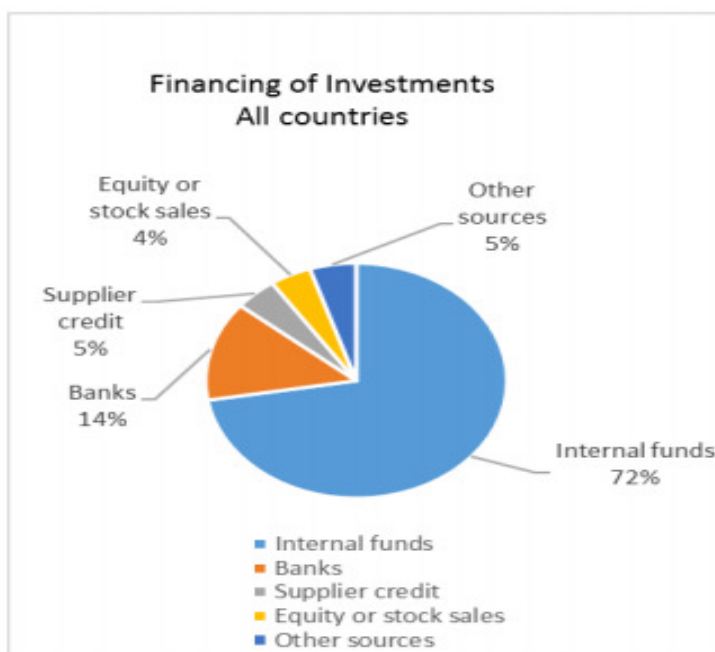
The chart in Figure 1 shows the share of funding types used globally by SMEs – taken from the Enterprise Survey data (for both investment and for working capital). The reliance on internal or "own" funds is significantly higher in developing countries – a factor which, in the absence of alternative funding modalities, stunts their growth and overall economic development.

2.5 Interest Rates and Demand for Credit by SMEs

In the context of demand for credit by SMEs, several factors are taken into accounts. According to Funkor (2000), some of these factors include high inflation, cost of intermediation, high credit risk, exchange rates, high bank rates and high Treasury bill rates. The average Ghanaian business operator in the private sector, views interest rate as a measure of the price paid by a borrower to a lender for the use of financial resources for a time interval.

Financial Institutions charge different rates to SMEs and there seems to be disagreements over the level of interest rates charged by financial providers because of the factors that go into these calculations. It is widely suggested that cost of funds of financial institutions, operating expense contingence reserves (provision for bad loans) are among some of the determinants of interest rates set by the financial institutions. Others posit that tax expense, profits earned by banks, inflation rates and completion are some of the factors that influence the interest rates set by financial institutions. H. S. Houthaker & P. J. Williamson (1996) suggest that different rates of interest are charged for the same sum of loan for the same period because of the fact that some loans involve more risk, more inconvenience and more incidental work.

A basic determinant of interest rate by economist is the real rate of interest, or the rate at which capital grows in the physical sense. In addition to the real rate of interest, market interest rate is also affected by various risk premiums which investors may demand. In order to undertake risky investments, lenders may require one or more risk premiums to be paid over and above the real rate of interest to induce them to lend their funds when the risk is prevalent. Since the interest rates and loans are typically in nominal money quantities, rather than real physical quantities, the nominal interest rate must contain an allowance for the rate of price changes so that lenders' wealth is not corroded by inflation. The level of interest rate is determined by;

Nominal or market interest rate = real rate of interest +
various interest rate possible risk premium + expected rate of return   (Eq.1)

Deutsche, Bundes bank Monthly Report July 2001, indicated that in a monetary economy in which money is the unit of measurement for all prices, it is not only important how many monetary units are obtained in return for forgoing immediate access to goods ("saving"), but also how many goods those units will be able to buy in the future; much the same applies to investment. Hence the money interest or nominal interest is adjusted to take account of the price changes which occur during the observation period and saving and investment decisions are based on the real interest rate. Analyses of real and nominal interest rates yield similar results only when the rate of inflation is stable and low. The use of nominal rather than real interest rates can lead to wrong decisions, particularly over longer periods.

The Fisher parity links the real interest rate and the nominal interest rate:

$$r = i - \pi^e$$ (Eq.2)

Where r = real interest rate, i = nominal interest rate and; π^e = expected inflation

Through this relations, the effects of inflation on real and nominal interest rates can be determined.

It is posited that high interest rate could compel small businesses to reduce inventories, incur high production cost and experience sharp falls in sales which ultimately affect their profit margins and growth. In contrast to SMEs, larger firms have the ability to uphold debt levels, increase inventories, and experience a considerably smaller decline in their turnover and growth due to high interest rates as

opined by Ehrmann (2000). However, at the micro-level little is known about how interest (lending) rates impacts SME growth in terms of employment growth. The question here is whether or not in high interest rate economies like Ghana (lending rates hovering around 30%), small reduction in the rate at which SMEs obtain credit can make a big difference in fostering firm growth.

2.6 Taxation as a Fiscal Policy Instrument

Taxation is a powerful instrument of fiscal policy in the hands of public authorities which greatly affect the changes in disposable income, consumption and investment. The structure of tax rates is varied in the context of conditions prevailing in an economy. Taxes determine the size of disposable income in the hands of general public and therefore, the quantum of inflationary and deflationary gaps. During depression tax policy has to be such as to encourage private consumption and investment; while during inflation, tax policy must curtail consumption and investment (Diptimai, 2016).

2.6.1 Taxation in Ghana

The tax regime in Ghana has seen a number of changes in recent times. The widening of the markets makes it necessary for the government to review its tax bracket and make room for new areas of the market that can serve as an avenue to generate revenue for the state. The table below shows the tax rates for corporate entities.

Table 1:   Corporate Tax in Ghana

ENTITY/ACTIVITY	2015 %
AGRO-PROCESSING COMPANIES	
i. First five years(for new businesses from 1 January 2004)	0
ii. After five years and located in Accra/Tema	20
iii. After five years and located in other regional capitals ,excluding Tamale, Wa and Bolgatanga	10
iv. After five years and located outside regional capitals	0
v. Located in Northern and Upper east and Upper West Regions	0
Companies listed on the GSE on or after 1 January 2004 for the first three years only/other companies	22/25
Rural Banks- first ten years/after ten years	0/25
Free-zone enterprises/Developers- first ten years in operation	0
Free-Zone Enterprises/Developers- after ten years in operation	Up to 25
Venture capital financing company for the first ten years only	0
Manufacturing Companies Located	
i. in Accra/Tema	25
ii. in all other regional capitals	18.75
iii. elsewhere	12.5
Hotels (a company principally engaged in the hotel industry)	20
Financial institutions- income derived from loans granted to farming enterprises or leasing companies.	20
Companies engaged in mining business	35
Companies engaged in upstream petroleum business	35
Companies engaged in Non-Traditional exports	8
Companies engaged in waste processing for the first seven years only	0
Real Estate Companies	
Income derived from construction for sale or letting of low-cost affordable residential premises(subject to approval from the Ministry of Works and Housing):	
i. First five years only	0
ii. after first five years	25
Agriculture	
Farming tree crops for first ten years only	0
Livestocks (other than Cattle), fish farming or cash crop farming, for first five years only	0
Cattle farming for first ten years only	0
Cocoa farming	0

Source: PWC, 2015

The table above indicates the various tax for corporation and entities in the business environment in Ghana. It encompasses the three classifications of economic activities, namely; the primary, secondary and tertiary sectors of the business environment. The rates given by the authorities' shows leniency towards newly established entities so as to encourage their development, growth and maturity.

Taxation of the informal sector (i.e. the largest employer of the active Ghanaian labour force) has been extremely difficult for all past and present governments. With the ever growing pressure on the government to meet the socio-economic and infrastructural developmental needs of the society, there is an urgent need for government to generate more local revenue. One potential source of the much needed revenue is the large informal sector which largely remains untaxed. The government of Ghana continues to lose billions of cedis if not trillions in tax revenue from the informal sector (World Bank, 2002). The paper examines the extent to which taxes impacts SMEs in a developing country context. Given the difficulty in collecting income taxes from the informal sector, we rather examine tax constraint i.e., comparing firms that perceive taxes to negatively impact their business to those who think otherwise. We consider those who think otherwise as those who are less taxed.

3. Data and Empirical Model

The purpose was to generate data about the opinion and perceptions of SMEs owners in relation to the effectiveness of loans interest rates and taxes on the performance of their enterprises. Data for the study was obtained from primary sources during field survey carried between the fourth weeks of April, 2017 throughout mid-May, 2017. The data mostly related to how much loans SMEs have contracted between the years 2012 to 2017, their prevailing interest rates, number of employers over the year, firm characteristics and other information related to offered financial services were collected. The interview was highly formalized and structured using standardized questions for each respondent. See Appendix for the questionnaire. Additionally secondary data from other surveys, organizational records and data were used to augment the collected primary data. This was done to appreciate the theoretical and conceptual framework of the subject under study.

3.1 Empirical Model

A multivariate regression model for this study will be:

$$Growth_i = \beta_0 + \beta_1 LendingRate_i + \beta_2 Power_i + \beta_3 Taxes + \beta_4 BusinessDuration_i + \beta_5 BusinessType_i + \beta_6 Education_i + \beta_{76} Gender_i + \varepsilon_i \qquad \text{(Eq.3)}$$

Where,

Growth represents SME growth measured by the increase in the number employees in the SME since its inception; **LendingRate** represents the average interest rate financial institutions charge on loans or credit that have been given to SMEs; **Power** represents whether or not the SME have had consistent Power (electricity) over the years to SMEs; **Taxes** represents the taxes charged to SMEs denoted by the extent to taxes is perceived to have constrained the business on a 5 point Likert scale with being the highest constraint; **BusinessDuration** represents the number of years the SME has been in operation; **BusinessType** represents the type of business the SME operator is engaged in; **Education represents** the highest education of the manager; Gender represents the gender of the owner; ε_i = error term, i denotes individual firms. β_0 is the regression constant; $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ represent regression coefficients.

Equation 3, states that SME growth depends on the average interest rate, power supply, taxes charged to SMEs, duration of business, business type, gender of owner, educational background of manager as well as other factors that have been captured by the error term ε_i.

The model will be tested to determine if there is a relationship between the average lending rate and firm growth, as well as tax constraint and firm growth.

H_0 = No relationship between average lending rate, tax constraint and firm growth.

H_1 = Positive correlation between average lending rate, tax constraint and firm growth.

4. Results and Discussion

This section presents the results of the regression outlined in the preceding section with respect to impact of lending rates and tax constraint on SMEs growth. The section also elaborates how these findings meet the research objectives as outlined in Chapter 1. It begins by highlighting characteristics of the population sample and their views on the topic, descriptive statistics on the nature of the data and outlining key observations. Thereafter the empirical results of the impact of lending rates on SMEs growth as measured by the firm employee growth variable is presented and discussed.

The research uses employee growth level ranging over a 6 year period from 2012 to 2017 from the primary data gathered. The section concludes by discussing the implications of these results and how they answer the research objectives.

4.1 Characteristics of Sample Respondents

Table 2 presents the background information of the surveyed sample population, where age range of the respondents between the age group of over 41 years accounted for 3.9 percent, while 47.1 percent of the population were between 36 to 40 years. In the gender aspect, the study has revealed the male population to account for 66 percent while 34 percent account for female population. In the area of level of education attained, majority (35.9 percent) had attained SHS education while 34.0 percent of the surveyed population had attended up to an HND level. Majority of the business were sole proprietorships while a private limited companies received reasonable percentage. Most of these businesses were into retail and trade and was also dominated by businesses dealing in electronics. (Refer Table 2).

Table 2:   Background information of respondents (N=153)

Description	Respondents	Percent
Age of Respondents		
Less than 25 years	2	1.3%
25 to 30 years	51	33.3%
31 to 35 years	22	14.4%
36 to 40 years	72	47.1%
41 +years	6	3.9%
Gender		
Male	93	60.8%
Female	60	39.2%
Highest Level of Education		
No Education	0	0.0%
Primary Level	15	9.8%
JHS Level	12	7.8%
SHS Level	55	35.9%
HND	52	34.0%
First degree	17	11.1%
Post graduate	2	1.3%
Nature of Organization		
Private Ltd	23	15%
Public Ltd	0	0%
Partnership	0	0%
Sole Proprietor	130	85%
Family Owned Business	0	0%

Description	Respondents	Percent
Kind of Organization		
Retail trading	108	70.6%
Export	0	0.0%
Manufacturing	29	19.0%
Services	16	10.5%
Real Estate	0	0.0%
Farming	0	0.0%
Classification of Business		
Food	40	26.1%
Electronics	55	35.9%
Clothing	28	18.3%
Building	15	9.8%
Transportation	5	3.3%
Medical	5	3.3%
Financial Services	5	3.3%
Period of Business Existence		
1 to 5 years	60	39.2%
6 to 10 years	63	41.2%
11 to 15 years	15	9.8%
16 to 20 years	15	9.8%
20+ years	0	0.0%
Number of Employees at Start-up		
1 employee	31	20.3%
2 employees	92	60.1%
3 employees	30	19.6%

Source: Research Findings

4.2 Views on Loan Acquisition

Table 3 summarizes enterprises' demand for credit facilities and the reasons behind the loan services they contract or desist from. Findings presented in Table 3 particularly section I shows majority (70 percent) of the surveyed population have applied for credit facilities before, while the minority have desisted from such action. Section II of the table shows the responses given as reasons why they have not patronized loan services. The outcome indicates that majority desist from acquiring loans because they just do not like loan facilities. A reasonable proportion also desisted from loan facilities because they perceived the interest rates to be high. Less than 5 percent alluded to their inability to provide collateral for the loans.

    The table shows that SMEs that have acquired a loan facility before gave the general view that the interest rates charged were high. 57 percent of the population indicated that the interest rates were very high with a sizeable proportion also indicating that rates were high. However, some of the respondents were satisfied with the rates charged as a 14% of the population asserted to it.

Table 3:   Acquisition of loan services and pertinent views

Has your company ever applied for credit from a Bank of NBFI?		
Yes	107	70%
No	46	30%
	153	
If No, why Not		
Do not like Bank Loan	29	63.0%
Interest Rate is too High	15	32.6%
No collateral to pledge	2	4.3%
	46	
If Yes, how do you assess the lending rates from the financial institution?		
Very Low	0	0%
Low	0	0%

Satisfactory	15	14%
High	31	29%
Very High	61	57%
	107	

Source: Research Findings

4.3 Loan Interest Rates on SMEs' Performance and Growth

Table 4 presents summaries of areas in the perspective to examine loan interest on SMEs performance. In this regard, respondents were requested to show if there is any negative significant effect of loan interest to business SMEs performance and growth. The reasons given for the negative impact of the interest rate charged on the loans was topped by the fact that "All earnings had to go back into repaying the loan" as over 40 percent attested to this.

However, the population with the view that there was not a significant negative effect on their performance alluded to the fact that the rates do not crowd out their earnings entirely (32.3 percent), it gave them more capacity to expand their operations (19.4 percent), and finally they have developed the capacity to recover the cost of the loan (48.4 percent).

Table 4: Loan interest rate on SMEs" performance and growth

In your opinion, do you think the interest rates being charged for your borrowing negatively affected your performance?		
Yes	76	71.0%
No	31	29.0%
	107	
If Yes, what are the negative effects		
All earnings had to go into paying loan	31	40.8%
It affected price and thus my customer base	11	14.5%
It added to our operating cost	19	25.0%
We operated on less profit	15	19.7%
	76	
If No, what are the explanations regarding the charged interest on your business performance and growth		
It does not crowed out my earnings entirely	10	32.3%
I am able to recover the cost of the loan	15	48.4%
I get the income to expand my operations	6	19.4%
	31	

Source: Research Findings

4.4 Taxes Pressures on Smes' Performance and Growth

Tax rates have an impact on the prices of goods and services especially in the SME sector. In a theoretical framework, taxes lead to higher production, distribution and selling costs which lead to higher prices and as a result changes in consumer behavior. People with normal demand react to the higher prices by buying less of the product. One of the important questions asked in the survey is for respondents to rate how impactful taxes have been on their performance. Results from this question has been presented in the Figure 2 below. It was observed that 43% of the respondents gave taxes a 5th level rating indicative of severe effect of taxes on growth followed by 1st level rating. Ten percent (10%) of the respondents however did not rate tax as a determinant of growth i.e., effect of taxes pressures on their business. However, there is the need to statistically determine how significant the levels of rating the tax rates impacts growth in the SME sector. These results also reflects the extent to which firms are exposed to taxation.

Figure 2: Tax levels and their impact on growth
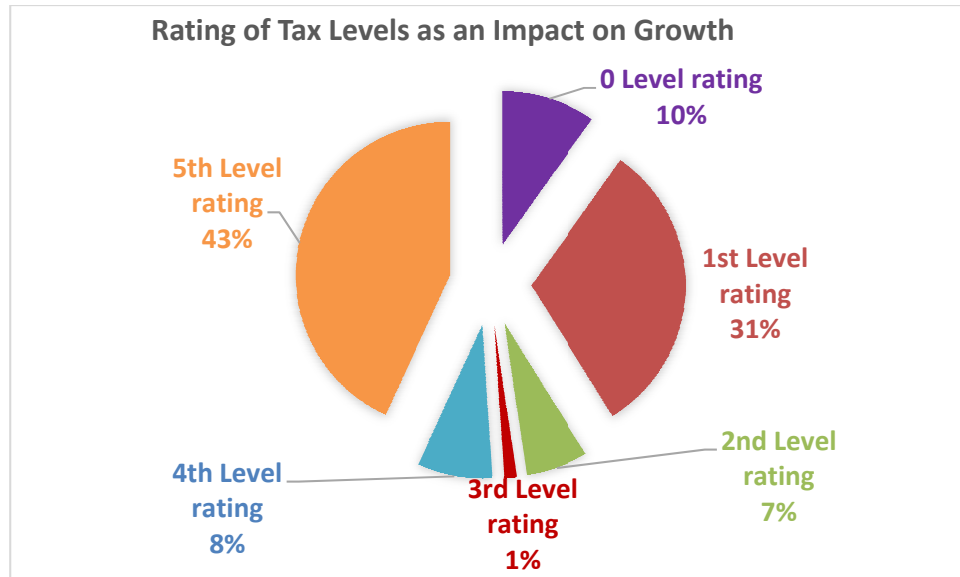
Source: Research Findings

4.5 Analysis on Econometric Model

4.5.1 Descriptive Statistics

In attempting to answer the main research questions, we did run a regression to test the importance of Lending Rates and tax pressures on SME growth by controlling for covariates that may also impact growth. Table 5 below presents the summary statistics of the variables under investigation.

Table 5:   Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
EMP_GROWTH	153	.9624837	.8351547	0	2.5
LENDING_RATE	153	.3813072	.328811	0	1
POWER_SUPPLY	153	1.503268	1.396067	0	5
TAXES	153	2.954248	2.007682	0	5
AMTOFCREDIT	153	5625.817	6254.578	0	400000
BIZ_DURATN	153	6.117647	4.102216	1	20
KINDOFBIZ	153	1.797386	1.247943	1	4
EDUCATION	153	4.79085	1.558734	2	8
GENDER	153	.6078431	.4898347	0	1

Source: Research data

The major variables are employment growth, lending rates and tax pressures. Results in Table 5 shows that, the Average Employment Growth over the period is 0.96 with a minimum employee growth of zero percent and 2.50 being the maximum growth. This implies that employment since inception has increased on average 96 percent whilst highest growth firm has recorded a growth rate in employment of 250 percent.

The average lending interest rate over the period among SMEs in the sample was 0.381. This means that on average, the lenders charged SMEs a high interest rates of 38.1%. Some lenders charged lending rates as high as 100%. Even though interest rates are quite high in developing countries, Ghana probably has one of the highest lending rates in Africa.

4.5.2 Pearson Correlation Analysis

After the descriptive analysis, the study conducted Pearson correlation analysis to provide us with initial information on the relationship among covariates. It also provides us with first indications of the strengths of association in the model.

Table 6: Correlation matrix

	EMP_GR~H	LENDING~E	POWER_~Y	TAXES	AMTOFC~T	BIZ_DU~N	KINOF~Z	EDUCAT~N	GENDER
EMP_GROWTH	1.0000								
LENDING_RATE	-0.3884	1.0000							
POWER_SUPPLY	0.1583	-0.0431	1.0000						
TAXES	-0.1241	-0.0862	-0.0997	1.0000					
AMTOFCREDIT	0.6247	-0.2573	-0.0460	-0.0733	1.0000				
BIZ_DURATN	0.3352	-0.3099	0.219	0.0478	0.2636	1.0000			
KINDOFBIZ	0.1822	-0.0261	0.2855	-0.0169	0.1507	0.0407	1.0000		
EDUCATION	0.4288	-0.1427	-0.1690	-0.0304	0.5167	0.0368	0.1100	1.0000	
GENDER	-0.0002	-0.0515	-0.2964	0.1021	0.0810	0.0395	-0.4752	-0.0823	1.0000

Source: Research data

From the Table 6, it can be observe that there was a negative and significant correlation between growth and lending interest rate, and taxes pressures with correlation coefficients (R) of -0.388 and -0.124, respectively. There is a positive correlation between Growth and Power Supply, Duration of Business, amount of credit, and educational level of owner. The correlation between amount of credit and growth rate is very high.

4.5.3 Analysis of Linear Regression

The econometric model is adopted is a regression model where SME employment growth is a function of the average lending rate, power supply, amount of credit to SMEs, duration of business, business type, gender of owner as well as other factors that have been captured by the error term. This is a multiple regression model and is commonly used in research to establish whether a causal relationship exists among the underlying variables. Table 7 presents the results from the estimation of Equation 2.

Table 7: Estimates of the Equation 2 using OLS

INDEPENDENT VARIABLES	(1) EMP_GROWTH	(2) EMP_GROWTH
LENDING_RATE	-0.669***	-0.669***
	(-3.86)	(-4.26)
POWER_SUPPLY	0.0985*	0.0985**
	(2.28)	(2.91)
2nd .TAXES	-0.0928	-0.0928
	(-0.34)	(-0.36)
3rd .TAXES	-0.0657	-0.0657
	(-0.13)	(-0.11)
4th .TAXES	-0.566*	-0.566*
	(-2.16)	(-2.33)
5th .TAXES	-0.137	-0.137
	(-0.71)	(-0.74)
BIZ_DURATN	0.0432**	0.0432**
	(3.03)	(3.15)
KINDOFBIZ	0.0822	0.0822*
	(1.63)	(2.00)
EDUCATION	0.210***	0.210***
	(5.82)	(5.85)
GENDER	0.219	0.219

INDEPENDENT VARIABLES	(1) EMP_GROWTH	(2) EMP_GROWTH
	(1.71)	(1.92)
_cons	-0.408	-0.408
	(-1.34)	(-1.34)
Robust Standard Errors	No	Yes
Observations	153	153
R-squared	0.437	0.437
adj. R-squared	0.393	0.393
Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. 5th level tax is highest and 1st level tax is least		

Source: Research data

The outcome of the estimates indicates that the independent variables namely; lending rate, power supply, length of operation of business, type of business, taxes, education and gender have to a large extent a profound impact on the growth of SMEs. However, the impact of the type of business, and gender of the manager were not significant. The results further assert the negative effect of lending rates on SMEs growth. From this analysis, lending rates have a significant negative correlation with employment growth at the 1% significance level, therefore the null hypothesis of no effect is rejected. The lending rate coefficient of -0.669 entails that a 1% increase in lending rates with all other variables held constant causes employment growth to reduce by approximately 66.9% and vice versa.

Additionally, the supply of power showed a positive correlation with growth at 5% significance level. Its positive coefficient of 0.0985 entails that a 1% fall in electricity supply to firms culminates into approximately a 9.85% fall in firm growth and vice versa holding all other variables constant. This supports the assertions of erratic electricity supply as affecting growth in Ghana as observed by the ISSER (2015) mission.

The study showed that there is a general negative relationship between taxes pressures and growth. However, the effect is not generally significant across the different tax level. Thus, SMEs that experiences higher tax burdens (5th level) are not significantly different from SMEs those that experiences less taxes or with less tax pressures in terms of employment growth. Thus, all the tax burden perception by respondents on the various levels were not statistically significant with the exception of the 4th level tax which was marginally statistically significant at the 10% level of significance. However we see a general negative effect of lending rates on employment growth. This tends to explain that monetary policy instruments such as interest rates have more impacts on business growth than fiscal instruments such as taxes.

Also, the duration of the business has a positive relationship with growth at a 5% significance level as well as the type of business operated by the manager at a 10% significance level. This further explains that the null hypothesis is not accepted and that the explanatory variables do explain the outcome of the model which in this case is growth of SMEs.

Education of the owner came out as a strong predictor of growth which is significance at the 1% level, suggesting that the higher the educational level of owner, the higher employment growth. Gender (male) of the manager similarly had a strong relationship with growth of the enterprises at a significance level of 10%. A positive coefficient of 0.239 was noted indicating that a 23.9% difference in growth between male and female own firms.

Accordingly, the regression model thus becomes:

$$Growth_i = -0.408_0 - 0.669_1 LendingRate_i + 0.0985_2 Power_i - 0.566_3 Taxes_i + 0.0432_4 BusinessDuration_i + 0.0822_5 BusinessType_i + 0.210_6 Education_i + 0.219_7 Gender_i + \varepsilon_i$$

$$\text{(Eq. 3)}$$

As highlighted in the Enterprise Surveys (2013), among the major growth constraints faced by SMEs, access to finance which is accompanied with high interest rate, taxes and power supply, ranked on top of the others. These results empirically prove the causal link between lending rates and tax constraint, and firm growth. They also suggest a significant correlation between electricity usage with

firm performance and growth as well as the length of operation of the business, type of business embarked on, education of manager and the gender of the owner or manager of the enterprise. In summary, the regression results present strong grounds to reject the null hypothesis and emphatically suggest a high probability of a causal relationship between market lending rate and SME growth in Ghana. For SMEs in developing countries (usually in the informal sector), the constraint of taxation on growth is very small.

5. Summary and Recommendations

This study set out to investigate the impact of lending rates and tax pressures on the growth of small and medium enterprises. The research contributes to existing empirical knowledge on SME growth. Small and medium enterprises have been identified as engines of growth and building blocks of the bigger economy. Policy makers have contributed to this phenomenon be it negatively or otherwise by setting rates which influence lending rates. Some of these policies have had detrimental effect on the growth of the small and medium enterprise industry in Ghana. This has negatively affected their ability to access credit as it raised the cost of borrowing. The situation has been exacerbated by the erratic supply of electricity in the previous years' affecting enterprises operating below capacity thereby failing to consistently supply energy to the productive sector, of which the Small and Medium Enterprises require a good deal of it, finally access to finance from institutions for business transaction, and competition for foreign nationals especially the Chinese.

The regression coefficient on lending interest rate shows a negative impact of lending rate on firm growth in the form of employment hrowth. The regression coefficient for taxes pressures showed a negative relationship between tax burden and growth. However the perceived effect of taxes on growth on SMEs (usually in the informal sector) is very small. This tends to explain that monetary policy instruments such as interest rates have more impact on SME business growth than fiscal instruments such as taxes.

In terms of other predictors of growth, there was a positive correlation between power supply, duration of business, type of business, educational background of the manager and gender as independent variables and employment growth. That is, increase in lending interest rates yields negative impact on growth, while stable power supply, duration of business, type of business and gender (male) of owner or manager yield positive increase SMEs growth.

The perception of taxes by enterprises and its effect on growth is lower than that of lending rates. Thus monetary policy instruments have stronger effects than fiscal instruments on SMEs predominant in the informal sector of Ghana. Hence, monetary policy in developing countries should be designed in such a way to stimulate employment growth. Also, policy makers should continuously supervise the financial system in order to minimize huge spreads in lending rate particularly in an environment of high rates, to enhance firms and economic growth.

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