SMES EXTERNAL FINANCING PREFERENCE AND ITS IMPACT ON GROWTH

BY
NANA SEFAAH KYEI-BOADU
(10552180)

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

JUNE 2017
DECLARATION

I hereby declare that this Thesis is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

Candidate’s Signature:…………………………

Candidate’s Name: NANA SEFAAH KYEI-BOADU

Date:…………………………
CERTIFICATION

We hereby declare that the preparation and presentation of the Thesis was supervised in accordance with the guidelines on supervision of Thesis laid down by University of Ghana.

Supervisor’s Signature: …………………

Supervisor’s Name: PROF. ANTHONY QUAME QUABITO ABOAGYE

Date: …………………

Supervisor’s Signature: …………………

Supervisor’s Name: PROF. GODFRED ALUFAR BOKPIN

Date: …………………
ACKNOWLEDGEMENT

I would like to acknowledge all the people who assisted me to successfully complete this Thesis

I wish to express my sincere thanks to Prof. AQQ Aboagye and Prof. Godfred Bokpin, my supervisors for their immense support towards the completion of this Thesis.

My deepest appreciation goes to all owners/ managers of the selected SMEs for participating in the survey.

I extend my warmest gratitude to my parents, Mr. and Mrs. Kyei- Boadu and my siblings, Kwaku, Nana Akyaa and Nana Bamea for their care and assistance.

Lastly, a big thank you to my colleagues, friends and family and especially my beloved, Pious for their support and encouragement.
ABSTRACT

As firms go about their operations and expand their activities, the retained earnings of the firm might prove insufficient to support its activities. Firms are forced to look for external finance and the ordeal lies with how to raise the needed funds. A financial contract design for small firms is chosen on the basis of the financial characteristics of the firm, the entrepreneur, the firm’s prospects and the associated information problems (Berger & Udell, 1998). Broadly, these factors that play a crucial role in determining the financial contract type (debt or equity) can be categorized into three. The firm characteristics which combine the financial characteristics of the firm and the firm’s prospects. The other categories are owner characteristics representing the entrepreneur’s factor and the control mechanisms present to deal with the associated information problems.

This thesis presents a study to examine the influence of firm characteristics, owner characteristics and control mechanisms for information asymmetry on the SMEs external financing preference and how this preference together with other firm determinants impact the growth of firms. This research was a cross-sectional study which relied solely on primary data. A binary logistic regression was used to analyze the data due to the dichotomous nature of the dependent variable- financial contract type and the objectives that needed to be achieved.

The empirical results suggest that firm characteristics play an important role in influencing the external debt preference of SMEs. Both legal status and age of the firm had a positive influence on SMEs preference for debt. In addition, the sector in which an SMEs operated and its growth category had a positive influence on its preference for debt. The study suggests that SMEs follows the pecking order theory. However, this preference for debt has a negative impact on the growth of firms. Therefore, SMEs should implement internal policies on debt management and have in place proper monitoring mechanism to mitigate the adverse implication of debt and its negative impact on growth.
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LIST OF ABBREVIATIONS

AGI- Association of Ghana Industries

ASeM- Alternative Securities Market

GAX- Ghana Alternative Market

GSS- Ghana Statistical Service

IFRS - International Financial Reporting Standards

NBSSI- National Board for Small Scale Industries

SEC- Securities and Exchange Commission

SME- Small and Medium Scale Enterprise
CHAPTER ONE

INTRODUCTION

1.1 Background

As firms go about their operations and expand their activities, the retained earnings of the firm might prove insufficient to support its activities. Firms are forced to look for external finance and the ordeal lies with how to raise the needed funds. A financial contract design for small firms is chosen on the basis of the financial characteristics of the firm, the entrepreneur, the firm’s prospects and the associated information problems (Berger & Udell, 1998). Broadly, these factors that play a crucial role in determining the financial contract type (debt or equity) can be categorized into three. The firm characteristics which combine the financial characteristics of the firm and the firm’s prospects. The other categories are the owner characteristics representing the entrepreneur factor and lastly, the control mechanisms present to deal with the information problems.

The firm characteristics include the age, size, asset structure and legal status. The preference for an external contract type is a function of the financing costs associated with the various sources of finance (Chittenden, Hall, & Hutchinson, 1996). These firm-specific features may affect the type of external finance a firm will prefer. Given the firm characteristics of SMEs, the financing costs associated with external financing may be relatively higher than their larger counterparts. For instance, the cost associated with the issue of public securities (especially equity securities) is essentially characterized by significant fixed cost. Therefore, the firm creates economies of scale by virtue of its issue size. As a result, it becomes difficult for SMEs to raise equity finance and tend to prefer debt financing.

However, efforts to improve SMEs access to external funding has led to the promotion of SMEs public market which lessens the listing requirement and transaction cost. Currently, there are a number of public markets available to SMEs in the form of SMEs market (a sub-market of the
main stock exchange) in many countries around the world. There are fifteen (15) SMEs market exchanges in Africa which include the Ghana Alternative Market (GAX) and Alternative Securities Market (ASeM) of Nigeria in West Africa both established in 2013. GAX has eight (8) listed companies with four of which issue debt securities and the other four issuing equity securities.

Unlike large firms that follow the standard corporate finance theory of separation of ownership and management, the management of SMEs is frequently dominated by one individual who also is usually the major investor (Pettit & Singer, 1985). This owner-managed attribute of SMEs makes owners have an influence on these firms’ investment and financing decisions. As a result, the attitudes and objectives of the owner/manager influence the SMEs external finance preference (Cassar, 2004). Usually, these owner-managers are driven by the quest to retain ownership and control and tend to prefer external debt finance.

SMEs are usually characterized by a greater level of information asymmetry and greater flexibility to change their asset base than large firms (Berger & Udell, 1998; Pettit & Singer, 1985). This concept suggests that managers have more information about the firm and its project viability than investors or financiers (Myers & Majluf, 1984). Therefore, financiers/investors tend to have incomplete information which makes the assessment of their clients (firms) and projects difficult and complicated. As a result, there are adverse selection problems where capital providers might deny projects with good prospects and finance ones with bad prospects (Scholtens, 1999; Tucker & Lean, 2003). Also, there is the moral hazard element where managers of SMEs might fail to perform or renege on their contract.

Reputation and relationship are control mechanisms used to reduce informational problems that arise in SMEs (Scholtens, 1999; Fluck, Holtz-Eakin & Rosen, 1998). Long term relationship between providers of funds and the firms improve information flow between the
two parties and beneficial to both parties. It enables the providers of funds to make a better assessment of the risk associated with the firms. On the other hand, the firms benefit from lower risk-premium and/or improved availability of funds (Scholtens, 1999). Also, the reputation of SMEs is enhanced as they develop a track record of their trading history in the form of financial statements. In order to promote and standardize SMEs’ financial reporting, the International Financial Reporting Standards (IFRS) for SMEs was issued in July 2009. This IFRS provides principles to guide the preparation of financial statements tailored to the capabilities of SMEs and their users. In Ghana, all SMEs are either permitted to use the IFRS for SMEs or full IFRS. The characteristics discussed above will induce SMEs to prefer debt to equity or vice versa. For instance, a small and young owner-managed SMEs might have a preference for debt financing in order for the owner-manager to retain ownership and control and avoid incurring unbearable transaction costs. This external finance preference has an implication on the firm depending on its associated costs and benefits. Considering that a financial resource plays a crucial role in firms’ growth (Zhou & de Wit, 2009), it implies that the type of external finance used will influence the growth. As these external financing options place differing demands on the firms it is likely to influence growth differently.

1.2 Research Problem

The pecking order theory explains that the presence of information asymmetry between firms and potential capital providers will lead to firms preferring inside finance to debt and debt to equity (Myers & Majluf, 1984). Although the effect of information opacity favours inside finance over outside finance, the dimensions of information opacity according to Berger and Udell (1998) will influence either the use of debt or equity after insider finance. Therefore, the normal pecking order in which debt precedes equity can be reversed. Since SMEs are highly characterized by information opacity, it implies that they can either use debt or equity after inside finance. However, depending on the available control mechanisms in place to reduce the
effect of information asymmetry, the SMEs can be hindered from using any type of external finance. (Scholtens, 1999).

Aside this underlying principle, Petit and Singer (1985) argue that business firms of all sizes select their financial structure in view of the cost, nature and availability of financing alternatives. This implies that the characteristics of a business are key to the determination of its financial structure. SMEs have unique characteristics that affect their financing choice (Cassar, 2004). The main one - information asymmetry is the foundation of the underlying theoretical principles. The other characteristics include the owners/managers experience and knowledge base, and the firm-specific characteristics (Berger & Udell, 1998; Cassar, 2004). The magnitude of these characteristics present in a firm may or may not constrain the firm in its access to external finance. This suggests that in a well-developed private debt and equity market, the external financing of SMEs should reflect its characteristics (Berger & Udell, 1998).

In Ghana, research on SMEs has mainly focused on the debt to equity mix and problems faced in obtaining these finances (Abor & Biekpe, 2006; Abor & Biekpe, 2009). These studies have come up with a number of characteristics and problems of SMEs in Ghana. They include owner-managed, high-interest rates, collateral requirements, difficulty in finding out about available finance, lack of financial performance track records. Therefore, there is a fair idea of the factors that influence financial structure according to Petit and Singer (1985). However, the extent to which these factors influence the type of external financing used by SMEs is underexplored in Ghanaian literature. In addition, there has been a new development to improve SMEs access to finance like the introduction of GAX and IFRS. Therefore, there is the need for a holistic study to investigate the influences of external financing decisions. In particular, the influence of SMEs’ owner characteristics, firm characteristics and control
mechanisms are examined in the external finance preference of SMEs and how this preference together with other firm determinants impact growth.

1.3 Research Purpose

This paper presents a study to examine the influence of firm characteristics, owner characteristics and control mechanisms for information asymmetry on the SMEs external financing preference and how this preference together with other firm determinants impact the growth of firms. Investigating the issue of external financing will enhance SMEs financial management hence increasing their survival and their immense contribution to the growth of Ghana’s economy.

1.4 Research Objectives

The objectives of this study are:

- To investigate how the owner characteristics, firm characteristics and control mechanisms present to deal with information asymmetry influence SMEs’ external financing preference.
- To assess the impact of this preference and other firm determinants on growth.

1.5 Research Questions

The purpose of the study will be achieved by finding answers to the following questions.

- How does the owner characteristics, firm characteristics and control mechanisms present to deal with information asymmetry influence SMEs’ external financing preference?
- How does this preference together with other firm determinants impact SMEs’ growth?

1.6 Significance of Research

The findings of this study in practice will help SMEs to better understand their financial structure and the implication of their financial decisions on the growth of the firm. In addition,
the model proposed will help suppliers of funds to quantitatively assess their potential and existing clients which will reduce the level of uncertainties and help them make informed decisions. Also, the study will give policy makers a better understanding of the dynamics of SMEs financing which when incorporated in policies will enhance SMEs access to external finance.

1.7 Chapter Outline

The study is in five chapters. The first chapter introduces the study by giving a background to the research and placing it in the Ghanaian context. It also provides the focus of the study and its importance. Chapter two reviews the relevant literature to provide a theoretical framework. Chapter three discusses the methodology outlining the procedures, tools and strategy used in obtaining data. Chapter four analyzes and discusses the data gathered. Finally, chapter five concludes the paper and makes recommendations.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviews the relevant literature on SMEs, external financing and growth. It gives an explanation to the concept of SMEs and the associated theories of external financing.

2.2 Theories of Financial Structure

Relevant literature has identified the theories that explain the financial structure of SMEs. These include the agency theory (Jensen & Meckling, 1976) and the pecking order theory (Myers & Majluf, 1984). The agency theory holds that there exist an agency relationship in firms where the owners or capital providers are viewed as principals who contract managers (the agents) to act on their behalf. However, the agent does not always act in best interest of the principal leading to conflicts between the parties known as the agency problem. On one hand, there is a conflict of interest between the shareholders and debtholders. On the other hand, there exist an agency problem between the shareholders and managers. The owner-managed feature of SMEs tends to eliminate the latter conflicts, nevertheless the first conflict can be severe in SMEs given the high level of information opacity associated with small firms (Barnea, Haugen & Senbet, 1981). As a result, the cost of dealing with agency problems are likely to be greater for SMEs (Chittenden, et al, 1996).

The pecking order theory holds that firms in financing their activities will first resort retained earnings, then debt before equity due to the cost associated with information asymmetry. The pecking order theory already outlines the preference of firms’ financing which is likely to be more evident in SMEs. With the agency theory, it implies that a firm’s preference for a particular type of finance is informed by how best it can control its information asymmetry. According to Berger and Udell (1998), the dimensions of information problem will influence the type of finance SMEs prefer and use.
2.3 Overview of SMEs

Small and Medium Scale Enterprises (SMEs) do not have a unique definition as there are differences in definition by international institutions, definition by national laws and definition by industry (Berisha & Shiroka Pula, 2015). However, the concept SMEs connotes the classification of organizations based on a criteria that fall outside the definition of large enterprises. A number of criteria usually grouped into qualitative and quantitative is used to define SMEs. The term SMEs is used interchangeable with others like ‘small businesses’ and ‘micro small and medium enterprises.’ Using the quantitative criterion, size is the commonly used indicator. This is measured either using the number of employees, annual turnover (sales) and assets. Table 1 and Table 2 presents the size criterion for the European Union and Ghana respectively using the number of employees and asset. This study will use the NBSSI’s definition of SMEs hence only firms with six or more employees but less than one hundred will be examined.

<table>
<thead>
<tr>
<th>Enterprise Category</th>
<th>Head Count Annual Work Unit (AWU)</th>
<th>Annual Turnover or Annual Balanced Sheet Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium-Sized</td>
<td>&lt;250</td>
<td>≤ 50 million</td>
</tr>
<tr>
<td>Small</td>
<td>&lt;50</td>
<td>≤ 10 million</td>
</tr>
<tr>
<td>Micro</td>
<td>&lt;10</td>
<td>≤ 2 million</td>
</tr>
</tbody>
</table>

Source: European Commission (2005)

<table>
<thead>
<tr>
<th>Number of Employees</th>
<th>Non-Current Asset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>1-5</td>
</tr>
<tr>
<td>Small</td>
<td>6-29</td>
</tr>
<tr>
<td>Medium</td>
<td>30-99</td>
</tr>
</tbody>
</table>

Source: NBSSI

Qualitatively, SMEs are classified based on the characteristics of firms. Broadly, SMEs are characterized by the key role entrepreneurs play in ownership and management and their heavy reliance on internal funds and loans. These firms have a greater level of uncertainty, possible
flexibility of operations and greater differences in information held by insiders and outsiders (Pettit & Singer, 1985; Berger & Udell, 1998).

Globally, SMEs represent the highest number of organizations as it accounts for over ninety-five percent (95%) of the total number of organizations (O.E.C.D, 2000). They also account for the largest number of organizations and are instrumental to economic development. In Ghana, the Integrated Business Establishment Survey phase 1 report conducted in 2014 shows that SMEs accounts for 99.7% of the businesses in Ghana (Ghana Statistical Service, 2015). In the report, these SMEs are mainly owned by Ghanaians and usually either take the form of a sole proprietorship, partnership or private limited company. They are largely concentrated in the Greater Accra Region and predominates the service sectors specifically the wholesale and retail trade sector.

2.4 Characteristics of SMEs

Typically, SMEs have certain unique features that can affect the investment and financing decisions. Whereas the concept of separation of management from ownership is mandatory in large firms, SMEs typically have a management team that is dominated by one individual who is the major investor. Therefore, the character of the owner plays a key role in the decision making of SMEs. SMEs are also characterized by certain firm-specific features that are unique and can affect their investment and financing decisions. Lastly, SMEs put in place mechanisms to attenuate the information problems they face in order improve their access to external finance. The following sub-sections discuss the three broad categories of characteristics into detail.

2.4.1 Owner Characteristics

The owner-manager characteristic of the SMEs implies the managers typically make large investments both in financial and human terms (Pettit & Singer, 1985). This huge investment
is reinforced by other investors who use the management commitment as an assurance that the manager will act in their own best interest. As a result, most wealthy owner-manager investment portfolios are tilted towards an abnormal reliance on the firm they manage (Pettit & Singer, 1985). In effect, the selection of investment and financing options is dependent on the owner-manager’s need for diversification and risk-return preferences which are in turn influenced by the owner/manager’s education, experience and gender. The personal characteristics of the owners/managers have the propensity to affect their ability to obtain the needed finance (Fluck, et al, 1998). Education and experience may provide a signal for better human capital whereas gender relates to the risk aversion of individuals (Cassar, 2004).

2.4.2 Firm characteristics

Size plays an important role in financing decisions because financing decisions have risks and cost implications. Due to the high level of information asymmetry and flexibility of SMEs operations, they are deemed to be riskier than large firms (Pettit & Singer, 1985). Therefore, investors/financiers will require high risk-premium before extending capital to SMEs. As a result, the cost of capital of SMEs becomes relatively high which induces SMEs preference for the source of finance it deems relatively cheaper. Again, the availability of the various sources of fund is a factor to consider in financing decisions. The size of SMEs restricts their access to certain type of funds especially those in the capital market. For instance, the scale required to issue equity securities place SMEs out of the scope. However, in recent times, the introduction of the SMEs market is gradually bridging the access to the capital market gap. Also, the fixed cost element of transaction costs causes transaction costs to be relatively high for small firms hence placing them outside some financing options (Scholtens, 1999; Cassar, 2004). In previous empirical studies, the size of a firm is measured either by the log of total assets or the number of employees. Authors like Sogorb-Mira (2005), Cassar (2004), Mateev and Ivanov (2011) and Abor and Biekpe (2009) found a positive relationship between size and leverage.
while other authors found a negative relationship (Chittenden, et al, 1996; Michaelas, Chittenden & Poutziouris, 1999)

As the SME advance in age, it establishes itself as continuing business thereby increasing its capacity to retain more profits and take on external funds (Abor & Biekpe, 2007; Abor & Biekpe, 2009). This is because young firms are usually seen to lack collateralizable assets, trading history and have limited internal equity (Berger & Udell, 1998; Mateev & Ivanov, 2011) which might limit their ability to raise the needed funds leading to survival issues. With time, firms are able to gradually accumulate trading history and enhance their creditworthiness signals. Age is measured by the number years the business has been in existence. Previous studies have found a positive relationship between age and leverage.

SMEs usually take the form of either a sole proprietorship, partnership or private limited liability. Generally, sole proprietorship and partnership are not incorporated except in cases where partnerships are organized as limited liability partnership (i.e. audit firms). The choice of legal form (i.e. incorporation) is dependent on the trade-off between benefits of credibility and taxation variation and the cost of statutory audits and public information (Cassar, 2004). Incorporation may be a positive signal for credibility, the formality of operations and an indicator of future growth.

2.4.3 Control Mechanism for Information Asymmetries

In the presence of market imperfections, there are differences in the information available to insiders (managers) and outsiders (investors/financiers) of a firm of which the insiders have better or more information (Fluck, et al, 1998). Therefore, financiers/investors tend to have incomplete information which makes the assessment of their clients (firms) and projects difficult and complicated. As a result, there are adverse selection problems where capital providers might deny projects with good prospects and finance ones with bad prospects
(Scholtens, 1999; Tucker & Lean, 2003). Also, there is the moral hazard element where managers of SMEs might fail to perform or renege on their contract.

This information asymmetry is greater for smaller firms because SMEs are not publicly held firms and therefore are not subject to public disclosure regulations (Gregory, Rutherford, Oswald & Gardiner, 2005). Again, SMEs do not often have audited financial statements and in some cases do not even prepare the financial statement at all. Therefore, it becomes difficult for investors/financiers to distinguish between viable and profitable business. In effect, well-deserving investment projects may not be financed and undertaken at all or may not obtain funding at a reasonable cost (Scholtens, 1999). However, once the SME can attenuate the information problems, it can obtain the necessary external finance support (Fluck, et al, 1998).

A mechanism used to reduce information asymmetry is when the SMEs build a close relationship with investors/financiers. The capital providers especially banks and venture capitalist monitor the SMEs closely and learn about its abilities (Fluck, et al, 1998). This is because it is difficult to write complete contracts and not easy to ensure enforcement of these contracts. With a close and long-term relationship, SMEs can open up the potential for contracts that allows the financiers to produce information and ensure compliance easily than direct monitoring (Scholtens, 1999). In addition, the improved information between both parties will enable the capital provider to make a better assessment of the SME and control moral hazard. Another way to attenuate the information problem is for SMEs to supply audited financial statements.

2.5 Overview of External Financing

External financing is used by SMEs to embark on viable investment projects and to run their operations when the owners’ capital and retained earnings are insufficient. External finance mainly constitutes debt or equity raised from formal and informal sources. External equity
funding can in the form of love money from family friends and fools (3F). It also includes business angel financing, venture capital financing, private equity and public equity. The love money and business angel financing are informal sources of equity whiles the other three are formal sources. SMEs that have the preference for external equity financing usually resort to the informal sources (Walker, 1989; Berger & Udell, 1998; Gudov, 2013). In some cases, high-growth and those in a strategic sector are likely to attract equity financing from venture capitalists (Mac an Bhaird & Lucey, 2011). The external debt financing includes trade credit, bank overdrafts, bank loans, leasing and loans. Entities that prefer debt financing have a high reliance on trade credit and bank overdrafts and loans.

Usually, the external equity financing is not preferred by SMEs because the owner-manager is reluctant to relinquish ownership and control. Again, the relatively high cost associated with equity financing makes firms prefer debt more. Despite these disadvantages associated with equity financing, SMEs that assume equity financing benefit from their investors especially venture capitalist expertise as they tend to partake in strategic and operational decisions. In addition, SMEs using external equity financing are not obligated to make periodic payments.

On the other hand, firms that prefer debt financing retain the ownership and control and obtain financing at a relatively cheaper cost with some enjoying tax benefits. The owners of such firms are portrayed to be unable to understand the appropriate type of finance and have unrealistic expectations of deals involving the introduction of new equity (Hamilton & Fox, 1998). However, SMEs with the preference for debt are exposed to the possibility of bankruptcy cost and increase financial risk. Again, this type of financing usually need to be guaranteed by the firms’ current financial position (Gudov, 2013).
2.6 External Financing and Growth

Several factors impact the growth of a firm which is either measured by growth in sales, employment or profitability of which availability of financial resource is crucial (Zhou & de Wit, 2009). The argument is that financial resource can be converted into other form of resources. For instance, once a firm has ample financial resource it can acquire the needed human capital, machinery or technology to expand its operations and/or outperform its competitors. Considering the two contract types of financing and its associated advantages and disadvantages already discussed, it implies that the differences in the type of finance matters. Becchetti and Trovato (2002) found that firms with high availability of finance that is debt financing grow more than their counterparts.

Generally, the determinants of growth can be categorized into individual determinants, firm determinants, strategic determinants and environmental determinants (Zhou & de Wit, 2009; Fadahunsi, 2012). Firm determinants which include factors like age, size, ownership form, financial resource and sector has an impact on growth (Zhou & de Wit, 2009). Although the Gibrat’s law suggests that a firm’s growth is independent of its age and size (Zhou & de Wit, 2009; Fadahunsi, 2012; Becchetti & Trovato, 2002). Previous Empirical studies have found a negative relationship between age and size on growth implying that smaller and younger firms grow faster than their counterparts.

In conclusion, previous studies on SMEs financing has mostly highlighted on the determinants of capital structures and financing challenges of SMEs. These studies have come up with a number of determinants and challenges which include owner-managed, age, size, high-interest rates, collateral requirements, difficulty in finding out about available finance, lack of financial performance track records. According to Berger and Udell (1998) a financial contract design for small firms is chosen on the basis of the financial characteristics of the firm, the entrepreneur, the firm’s prospects and the associated information problems. However, previous
studies tend to focus the firm specific determinants and also do not show the extent to which these factors influence the type of finance used by the SMEs. Also there is little in literature on how the availability or use of a particular financial contract type affects growth of a firm. This study fills these gaps by presenting a holistic study to examine the influence of firm characteristics, owner characteristics and control mechanisms for information asymmetry on the SMEs external financing preference and how this preference together with other firm determinants impact the growth of firms.
CHAPTER THREE

METHODOLOGY

3.1 Introduction

The methodology used in conducting the research is outlined under this chapter. That is, it explains who the participants are and how they were selected, the instruments used and how data was collected and analyzed.

3.2 Research Design

The purpose of this research is to examine the influence of owner characteristics, firm characteristics and control mechanisms on SMEs external financing preference. It further investigates the effect of this preference and other firm determinants on growth. Thus the purpose of the research will emphasize the study of a situation in order to explain the relationship between the variables of interest. Therefore, it implies that this research is an explanatory study which seeks to show the relationship between owner and firm characteristics of SMEs and their external financing preference. The researcher conducted a cross-sectional study using a survey strategy and a quantitative approach in both the data collection process and data analysis.

3.3 Population and Sample

In this study the researcher adapted NBSSI’s definition of SMEs hence examined only firms with six or more but less than one hundred employees. The population for this research is restricted to registered SMEs in the database of Association of Ghana Industries (AGI), operating in the Greater Accra Region. This is because the Greater Accra region has the highest number of registered SMEs and AGI is an association with readily available information on SMEs. Given the purpose of the study, which required a statistical estimation of the characteristics of the population, the probability sampling was deemed the most appropriate technique to use. The use of probability sampling meant that the researcher needed to identify
the suitable sampling frame. Given that existing databases are usually associated with problems such as incompleteness, inaccuracy and out of date information, the researcher eliminated all SMEs with any incomplete, inaccurate or out of date information from the AGI’s list of SMEs. After ensuring that the sample frame was suitable for the study, the researcher had a list of two hundred and fifty (250) SMEs.

Following the sampling approach of Sanders, Lewis, and Thornhill (2009) and using a confidence level of 95% and a margin of error of 5%, the appropriate sample size was one hundred and fifty-one (151) as shown in Appendix 1. The sample was selected using the simple random sampling technique. Previous works on SMEs has noted a low response rate of about 35%, (Hamilton & Fox, 1998). Therefore, the actual sample size required to accommodate this low response is four hundred and thirty-one (431) but is not feasible since the sampling frame for this study is two hundred and fifty (250). In response to the possible low response rate, the researcher consistently followed up on the respondents in order to attain a high turnout. Nevertheless, the noted low responses are considered to be sufficient for the statistical analyses (Hamilton & Fox, 1998).

3.4 Data Source and Data Collection Tools

The data used in this study was collected directly from the selected SMEs by administering questionnaires to the manager/owners of the SMEs. The researcher deemed the use of questionnaires as the most appropriate tool for collecting data solely made up of behavioural and attribute variables. In addition, the wide coverage capability advantage of questionnaires contributed to the adaptation of this tool in this study. Lastly, the questionnaires provided the researcher with a consistent and uniform measure of characteristics of SMEs and their external financing choice which was easily transformed for the quantitative analysis. The questionnaires were carefully designed to ensure that the accurate data was collected with ease. The
questionnaires consisted of clear and precise closed-ended and opened ended questions with clear instructions. Refer to Appendix 2 for a copy of the questionnaire used in this research.

3.5 Method/Procedures

The researcher administered the questionnaires to the selected SMEs over a period of 6 weeks from the last week in February to the first week in April. However, due to the busy schedule of the owners/managers, the collection of the answered questionnaires lasted up to end of April.

3.6 Model Framework and Design

The researcher employed the use of descriptive statistics and regression analysis to perform the data analysis. Stated differently, this study seeks to predict the financial contract type (i.e. debt or equity) an SME will choose given its firm characteristics, owner characteristics and information asymmetry control mechanisms available. Taking into consideration this objective and the categorical nature of the dependent variable, the researcher deemed the logistic regression as the most appropriate model to use. Cassar (2004) in a similar study used a logit regression to determine the influence of a selected independent variable on the choice of a type of financing.

To examine the influence of owner characteristics, firm characteristics and control mechanisms on the choice of external financing, the researcher used a binary logistic regression model to analyze the relationship between the dichotomous dependent variable - debt or equity external financing and it independent variables - the owner characteristics(owner/top manager’s educational level and experience), firm characteristics(age, size and legal status) and control mechanisms (financial statements and number of years in relationship with capital providers). The control variables used in this model are the stage of development and sector in which the SME operates. A firm’s stage of development is usually classified into four namely the start-up stage, the growth stage, maturity
stage and decline stage. According to Tucker and Lean (2003), the stage of development may play an important role in the determining or constraining the type of external finance SMEs use. Lastly, the different sectors of the economy do matter in empirical results (Zhou & de Wit, 2009). In our case, it is likely that more capital intensive firms will prefer debt than less intensive firms based on the pecking order and agency cost theory.

The binary logistic regression model is given as follows with the definition of variables presented in Table three (3):

\[
\ln \left( \frac{\pi_{\text{debt}}}{1-\pi_{\text{debt}}} \right) = \alpha + \beta_1 TMX_i + \beta_2 TMU_{grad_i} + \beta_3 TMP_{post_i} + \beta_4 Bag_{e_i} + \beta_5 B_{size_i} + \\
\beta_6 Inc_i + \beta_7 CM_{FS_i} + \beta_8 CM_{yr_i} + \beta_9 ST_{devG_i} + \beta_{10} ST_{devM_i} + \beta_{11} Sec_{M_i} + \beta_{12} Sec_{C_i} + \\
\beta_{13} Sec_{W_i} + \varepsilon \]

(1)

\[
\pi_{\text{debt}} = \frac{e^\gamma}{1 + e^\gamma} \]

(2)

Where,
\[
\gamma_i = \alpha + \beta_1 TMX_i + \beta_2 TMU_{grad_i} + \beta_3 TMP_{post_i} + \beta_4 Bag_{e_i} + \beta_5 B_{size_i} + \beta_6 Inc_i + \\
\beta_7 CM_{FS_i} + \beta_8 CM_{yr_i} + \beta_9 ST_{devG_i} + \beta_{10} ST_{devM_i} + \beta_{11} Sec_{M_i} + \beta_{12} Sec_{C_i} + \beta_{13} Sec_{W_i} + \varepsilon
\]
Table 3: Definition of variables in External finance preference model

<table>
<thead>
<tr>
<th>Variables</th>
<th>Notation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>External finance preference</td>
<td>Y</td>
<td>1 if preference is debt or 0 if preference is equity</td>
</tr>
<tr>
<td>Intercept</td>
<td>a</td>
<td>The intercept term</td>
</tr>
<tr>
<td>Odd ratio</td>
<td>$\beta_1, \beta_2 \ldots \beta_{13}$</td>
<td>The odd ratios for the respective independent variable</td>
</tr>
<tr>
<td>Top manager’s experience</td>
<td>TMX</td>
<td>The number of years in managerial position</td>
</tr>
<tr>
<td>Top manager’s level of education</td>
<td>TMUgrad</td>
<td>1 if educational level is an undergraduate or 0 otherwise (Reference category: educational level below undergraduate)</td>
</tr>
<tr>
<td>Top manager’s Level of education</td>
<td>TMPost</td>
<td>1 if educational level is graduate/post graduate or 0 otherwise (Reference category: educational level below undergraduate)</td>
</tr>
<tr>
<td>Age of firm</td>
<td>Bage</td>
<td>Number of years since commence of business</td>
</tr>
<tr>
<td>Size of firm</td>
<td>Bsize</td>
<td>Number of employees of the SME</td>
</tr>
<tr>
<td>Incorporation status</td>
<td>Inc</td>
<td>1 if firm is incorporated or 0 if not</td>
</tr>
<tr>
<td>Financial Statements</td>
<td>CMFs</td>
<td>1 if firm has financial statements or 0 if not</td>
</tr>
<tr>
<td>Length of relationship with capital providers</td>
<td>CMyr</td>
<td>Number of years the SMEs has been in a relationship with capital provider</td>
</tr>
<tr>
<td>Stage of development of firm</td>
<td>StdevG</td>
<td>1 if the SME is in the growth stage or 0 otherwise (Reference category: start-up)</td>
</tr>
<tr>
<td>Stage of development of firm</td>
<td>StdevM</td>
<td>1 if the SME is in the maturity stage or 0 otherwise (Reference category: start-up)</td>
</tr>
<tr>
<td>Firm’s sector</td>
<td>SecM</td>
<td>1 if firm operates in the manufacturing sector or 0 otherwise (Reference category: Other services sector)</td>
</tr>
<tr>
<td>Firm’s sector</td>
<td>SecC</td>
<td>1 if firm operates in the construction sector or 0 otherwise (Reference category: Other services sector)</td>
</tr>
<tr>
<td>Firm’s sector</td>
<td>SecW</td>
<td>1 if firm operates in the wholesale and retail trade sector or 0 otherwise (Reference category: Other services sector)</td>
</tr>
</tbody>
</table>

To assess the impact of external financing preference on growth, the researcher restricted the determinants of growth to only the firm determinants. The influence of firm growth was narrowed to firm determinants as the organizational determinants were seen as the most important influence on growth and the variable of interest (external finance preference) is an organizational factor.

The dependent variable—firm growth was measured by the trend in sales growth of the SMEs. This was categorized into positive growth or negative/constant growth. This dichotomous
The independent variable was regress on its independent variables (firm determinants of growth) in a binary logistic regression. The independent variables are namely, external finance preference, firm size, firm age, business form and sector controlled by the growth category. The researcher in assessing the impact of external finance on growth controlled for the firm characteristics that had a confounding effect.

The binary logistic regression model used in this study is given below with the definition of variables presented in Table 4:

\[
\log \left( \frac{\pi_{\text{growth}, i}}{1 - \pi_{\text{growth}, i}} \right) = \alpha + \beta_1 \text{Exfin}_i + \beta_2 \text{agecat}A_i + \beta_3 \text{agecat}M_i + \beta_4 \text{sizecat}_i + \beta_5 \text{Sec}M_i + \beta_6 \text{Sec}C_i + \beta_7 \text{Sec}W_i + \beta_8 \text{BFP}_i + \beta_9 \text{BFLL}_i + \beta_{10} \text{Gmidmkt}_i + \beta_{11} \text{Ghigh}_i + \epsilon \quad \ldots \ldots (3)
\]

\[
\pi_{\text{growth}} = \frac{e^\gamma}{1 + e^\gamma} \quad \frac{1}{\ln(\text{odds})} = \beta_1 \text{Exfin}_i + \beta_2 \text{agecat}A_i + \beta_3 \text{agecat}M_i + \beta_4 \text{sizecat}_i + \beta_5 \text{Sec}M_i + \beta_6 \text{Sec}C_i + \beta_7 \text{Sec}W_i + \beta_8 \text{BFP}_i + \beta_9 \text{BFLL}_i + \beta_{10} \text{Gmidmkt}_i + \beta_{11} \text{Ghigh}_i + \epsilon \quad \ldots \ldots (4)
\]

Where,

\[
y_i = \alpha + \beta_1 \text{Exfin}_i + \beta_2 \text{agecat}A_i + \beta_3 \text{agecat}M_i + \beta_4 \text{sizecat}_i + \beta_5 \text{Sec}M_i + \beta_6 \text{Sec}C_i + \beta_7 \text{Sec}W_i + \beta_8 \text{BFP}_i + \beta_9 \text{BFLL}_i + \beta_{10} \text{Gmidmkt}_i + \beta_{11} \text{Ghigh}_i + \epsilon
\]

### 3.7 Limitations

The researcher anticipated that the result from the regression analysis may be subjective due to the measure of the control variables. Therefore, the researcher tried to be as objective as possible by relying on accurate indices. Also, some of the respondents might not answer some of the questions while others might not have the time or refuse to partake in the study. Therefore, the researcher crossed check the questionnaires when collected and gave the respondents ample with consistent reminders and follow-ups. Lastly, this research is strictly on small firms and medium firms hence the findings are applicable to firms that fall in this category.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Notation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth in Sales</td>
<td>y</td>
<td>1 if growth in sales is positive or 0 if not</td>
</tr>
<tr>
<td>Intercept</td>
<td>α</td>
<td>The intercept term</td>
</tr>
<tr>
<td>Odd ratio</td>
<td>$\beta_1, \beta_2 \ldots \beta_{11}$</td>
<td>The odd ratios for the respective independent variable</td>
</tr>
<tr>
<td>External finance preference</td>
<td>Exfin</td>
<td>1 if preference is debt or 0 if preference is equity</td>
</tr>
<tr>
<td>Age of firm</td>
<td>agecatA</td>
<td>1, if SME is an “adult” firm (6 to 10 years) or 0 otherwise (Reference category: young firm(1 to 5 years) )</td>
</tr>
<tr>
<td>Age of firm</td>
<td>AgecatM</td>
<td>1, if SME is a “matured” firm (above 10 years) or 0 otherwise (Reference category: young firm(1 to 5 years) )</td>
</tr>
<tr>
<td>Size of firm</td>
<td>sizecat</td>
<td>1 if the SME is a small firm or 0 if it is a medium-sized firm</td>
</tr>
<tr>
<td>Firm’s sector</td>
<td>SecM</td>
<td>1 if firm operates in the manufacturing sector or 0 otherwise (Reference category: Other services sector)</td>
</tr>
<tr>
<td>Firm’s sector</td>
<td>SecC</td>
<td>1 if firm operates in the construction sector or 0 otherwise (Reference category: Other services sector)</td>
</tr>
<tr>
<td>Firm’s sector</td>
<td>SecW</td>
<td>1 if firm operates in the wholesale and retail trade sector or 0 otherwise (Reference category: Other services sector)</td>
</tr>
<tr>
<td>Business form of the firm</td>
<td>BFP</td>
<td>1 if SME is a partnership or 0 otherwise (Reference category: sole proprietorship)</td>
</tr>
<tr>
<td>Business form of the firm</td>
<td>BFLL</td>
<td>1 if SME is a limited liability or 0 otherwise (Reference category: sole proprietorship)</td>
</tr>
<tr>
<td>Growth category of firm</td>
<td>Gcmidmkt</td>
<td>1 if firm is categorized a middle-market firm or 0 otherwise (Reference category: lifestyle firm)</td>
</tr>
<tr>
<td>Growth category of firm</td>
<td>Gchigh</td>
<td>1 if firm is categorized as a high-growth firm or 0 otherwise (Reference category: lifestyle firm)</td>
</tr>
</tbody>
</table>
CHAPTER FOUR

DISCUSSION OF RESULTS

4.1 Introduction

This chapter analyzes the data gathered on the SMEs in the Greater Accra Region. It presents demographics, descriptive and regression analysis used to examine the influence of owner characteristics, firm characteristics and information asymmetry control mechanisms on external financing preference and its impact on growth. The analysis included eighty-four (84) out of ninety-three (93) responses from target sample size of one hundred and fifty-one (151). The nine (9) responses were excluded because these SMEs did not use external financing. In effect, the SMEs used in the data analysis comprise approximately fifty-six percent (56%) of the targeted sample size. However, the results are deemed to be sufficient for statistical analyses (Hamilton & Fox).

4.2 Characteristics of SMEs

A main distinguishing feature of SMEs is that such firms are owner-managed. The case might be slightly different in Ghana. This section discusses the characteristics of SMEs based on size, age and whether or not the firms are owner-managed across the type of organizations. Table 5 presents the size of the firm and whether or not it is owner-managed. It can be observed from Table 5 that approximately fifty-four percent (54%) of small firms are owner-managed which was just a little bit above half. With medium-sized firms (i.e. firms with 30-99 employees) just about thirty-eight percent (38%) are owner-managed. In total owner-managed SMEs are approximately fifty-one percent (51%) hence the case of SMEs generally being owner-managed is different in Ghana. The differences might because the term SMEs can be used interchangeable with micro, small and medium enterprises. Micro firms usually account for the largest percentage of SMEs (i.e. firms different from large firms). For instance, in Ghana micro firms account for about seventy-nine percent (79%) of all the business other than large firms.
Micro firms sometimes referred to as one-man business are owner-managed and the huge number of micro firms will impact the owner-managed attribute in totality.

Table 5: Size classification based on whether owner-managed or not

<table>
<thead>
<tr>
<th>Size Category</th>
<th>Owner-managed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>no</td>
</tr>
<tr>
<td>small</td>
<td>33</td>
</tr>
<tr>
<td>medium</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
</tr>
</tbody>
</table>

Source: Field data 2017

Table 6 presents whether SMEs are owner-managed or not across the different types of organization. Surprisingly, a majority of the sole proprietorship are not owner-managed which may be as a result of the trend in Ghana where the working class start small businesses on the side and get others usually a family member or friend to run the business. Partnership on the other is mostly owner-managed which fall in line with the norm where the partners that form partnership are the ones that run its affairs. With respect to private limited company, about sixty-one percent (61%) are owner-managed which may be as result of the entrepreneurial era where individuals or group of entrepreneurs preferred to use limited liability to signal credibility and seriousness.

Table 6: Type of organization whether owner-managed or not

<table>
<thead>
<tr>
<th>Owner-managed</th>
<th>Type of Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sole Proprietorship</td>
</tr>
<tr>
<td>No</td>
<td>21</td>
</tr>
<tr>
<td>Yes</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
</tr>
</tbody>
</table>

Source: Field data, 2017

4.3 Descriptive and Frequency Statistics

The variables in the external finance preference model for the study is made up of continuous and categorical variables. Out of the ten (10) variables, four are continuous variables and the
rest are categorical variables. Therefore, Table 7 presents the descriptive statistics for the four continuous variables while Table 8 presents the frequency statistics for the categorical variables.

In Table 7 it can be observed that on average owners/managers have about eleven years’ experience in managing firms. On the average, SMEs in the sample has a size of approximately nineteen (19) employees. Averagely, SMEs in this sample are approximately nine (9) years old which implies they can be classified as adult firms per Abor and Biekpe (2006) or middle-aged per Berger and Udell (1998). The average years of relationship with their financiers or investors of about seven (7) years suggest that the SMEs adopt external finance in their early stages. This is consistent with Fluck and others (1998) findings that SMEs at some point in their early stage are able to develop a reputation that enables these to get access to external finance.

### Table 7: Descriptive statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std.Dev</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top manager’s experience (TMx)</td>
<td>84</td>
<td>11.3926</td>
<td>7.7148</td>
<td>1</td>
<td>42</td>
</tr>
<tr>
<td>Business size (bsize)</td>
<td>84</td>
<td>18.7976</td>
<td>16.4381</td>
<td>6</td>
<td>95</td>
</tr>
<tr>
<td>Business age (bage)</td>
<td>84</td>
<td>8.5833</td>
<td>5.5973</td>
<td>1</td>
<td>28</td>
</tr>
<tr>
<td>Length of relationship with financier/investor (cmyr)</td>
<td>84</td>
<td>7.2202</td>
<td>6.4127</td>
<td>0</td>
<td>28</td>
</tr>
</tbody>
</table>

Source: Field Data 2017

In Table 8, about seventy-six percent (76%) of the SMEs in the sample had a preference for external debt finance specifically bank loans. Reasons for this preference was mainly because the owners/managers viewed this source of finance as cheaper, easy to access or owners/managers did not have to relinquish control or ownership. Although these SMEs complained of the high cost of debts in the form of high interest rates, the external source of debt was viewed as cheaper because the cost of equity was even much higher due to the severity of the agency problem in small firms.
Ordinarily, SMEs are known not to prepare financial statements. However, the frequency statistics on the financial statements in the sample suggests the contrary. Table 8 shows that approximately seventy-one percent (71%) of the SMEs prepare financial statements of which about fifty-four percent (54%) are audited. This is as result of the number of firms incorporated in the sample and hence are likely required by law to prepare statements. Also, about seventy-one percent (71%) of the SMEs are in the growth stage hence have probably accumulated trading history usually in a documented financial statement to facilitate access to external finance especially from the banks.

Table 9 presents the descriptive statistics of the variables in the growth model. From the table, seventy-five (75%) of the sampled SMEs have experienced growth in sales. The high percentage of younger firms (70.24%) and smaller firms (85%) can be linked to recorded percentage in growth. Typically, smaller and younger firms have been reported to grow more than their counterparts. However this notion should be used with caution as age may not be a reliant predictor of growth and size might differ (Fadahunsi, 2012).
<table>
<thead>
<tr>
<th>Table 8: Frequency Statistics for variables in external finance preference model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External Finance</strong></td>
</tr>
<tr>
<td>--------------------</td>
</tr>
<tr>
<td>Equity</td>
</tr>
<tr>
<td>Debt</td>
</tr>
<tr>
<td><strong>Top Manager education level (TMedu)</strong></td>
</tr>
<tr>
<td>Below Undergraduate</td>
</tr>
<tr>
<td>Undergraduate level</td>
</tr>
<tr>
<td>Post graduate level</td>
</tr>
<tr>
<td><strong>Incorporation (Inc)</strong></td>
</tr>
<tr>
<td>Not incorporated</td>
</tr>
<tr>
<td>Incorporated</td>
</tr>
<tr>
<td><strong>Financial Statement (FS)</strong></td>
</tr>
<tr>
<td>No financial Statements</td>
</tr>
<tr>
<td>financial Statements</td>
</tr>
<tr>
<td><strong>Stage of Development (Stdev)</strong></td>
</tr>
<tr>
<td>Start up</td>
</tr>
<tr>
<td>Growth</td>
</tr>
<tr>
<td>Maturity</td>
</tr>
<tr>
<td><strong>Sector of Operation (Sec)</strong></td>
</tr>
<tr>
<td>Manufacturing</td>
</tr>
<tr>
<td>Construction</td>
</tr>
<tr>
<td>Wholesale and Retail trade</td>
</tr>
<tr>
<td>Other Services</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

Source: Field Data 2017
Table 9: Frequency statistics of variables in growth model

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Cum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Growth in Sales</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>63</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>no</td>
<td>21</td>
<td>25</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>External Finance (Exfin)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt</td>
<td>64</td>
<td>76.19</td>
<td>76.19</td>
</tr>
<tr>
<td>Equity</td>
<td>20</td>
<td>23.81</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Age Category (agecat)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Young</td>
<td>29</td>
<td>34.52</td>
<td>34.52</td>
</tr>
<tr>
<td>Adult</td>
<td>30</td>
<td>35.71</td>
<td>70.24</td>
</tr>
<tr>
<td>Mature</td>
<td>25</td>
<td>29.76</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Size Category (sizecat)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>71</td>
<td>85</td>
<td>85</td>
</tr>
<tr>
<td>Medium</td>
<td>13</td>
<td>15</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Sector of Operation (Sec)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td>5</td>
<td>5.95</td>
<td>5.95</td>
</tr>
<tr>
<td>Construction</td>
<td>9</td>
<td>10.71</td>
<td>16.66</td>
</tr>
<tr>
<td>Wholesale and Retail trade</td>
<td>14</td>
<td>16.67</td>
<td>33.33</td>
</tr>
<tr>
<td>Other Services</td>
<td>56</td>
<td>66.67</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Business Form</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sole proprietorship</td>
<td>26</td>
<td>30.95</td>
<td>30.95</td>
</tr>
<tr>
<td>partnership</td>
<td>11</td>
<td>13.10</td>
<td>44.0</td>
</tr>
<tr>
<td>private limited liability</td>
<td>47</td>
<td>55.95</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Growth Category (Gc)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifestyle</td>
<td>24</td>
<td>28.57</td>
<td>28.57</td>
</tr>
<tr>
<td>Mid- market</td>
<td>44</td>
<td>52.38</td>
<td>80.95</td>
</tr>
<tr>
<td>High Growth</td>
<td>16</td>
<td>19.05</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Field Data 2017

4.4 Diagnostic Tests

In running a logistic regression, certain assumptions are key and must be checked to reduce biases in the results. These key assumptions are linearity of logit and multicollinearity. With the linearity of logit, if there is no linearity between the relationship of the log odds outcomes and each explanatory variable then the model will be considered inaccurate. The Hosmer and Lemeshow test can be used to test for linearity of logit. The model fit of the data (Hosmer and
Lemeshow test) of the two models is shown in Table 10. In the table, the test is not statistically significant implying that the researcher has fitted a good model and there is no problem of linearity of logit.

Table 10: The Hosmer and Lemeshow test

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Source: Field Data, 2017

Lastly, the explanatory variables must not be highly correlated with each other. A correlation matrix helps to identify multicollinearity. Table 11 and Table 12 displays the correlation matrix for the external preference explanatory variables and growth explanatory variables respectively. In Table 11, the correlation coefficient of 0.59 between top managers’ experience (tmx) and age (bage) is as a result of the same measure for both variables. Both variables were measured in years. With Table 12 there is no correlation coefficient greater than 0.5. Therefore, both models fit and are free from bias.
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<th>tmpost</th>
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<th>inc</th>
<th>cmfs</th>
<th>cmyr</th>
<th>stdevG</th>
<th>stdevM</th>
<th>secM</th>
<th>SecC</th>
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Source: Field Data 2017
Table 12: Correlation matrix of variables in growth model

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<th>agecatM</th>
<th>sizecat</th>
<th>BFP</th>
<th>BFLL</th>
<th>gcmidmkt</th>
<th>gchigh</th>
<th>secM</th>
<th>SecC</th>
<th>SecW</th>
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<td>-0.113</td>
<td>-0.155</td>
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</tbody>
</table>

Source: Field Data 2017

4.5 Empirical Results

Table 13 presents the output of the binary logistic regression used to examine the influence of owner characteristics, firm characteristics and information asymmetry control mechanism of the SMEs external finance contract type preference. This model explains 54.4% of the variation in the outcome. In Table 13, the factors that influence the likelihood of SMEs to choose debt-type contract over equity are the sector of operation (sec), incorporation status (inc), age (bage) and length of relationship with financers (cmyr). All these above-mentioned characteristics were positive influences that favours the use of external debt-contract type with the exception of the length of relationship with financers.

With respect to the sector of operation, the wholesale and retail trade sector (OR=15.32) was statistically significant and positively associated with the choice of external debt over equity. The odds of SMEs in the wholesale and retail trade sector preference for external debt is about fifteen (15.32) times greater than SMEs in the other services sector. The preference for debt may be as a result of the possible capital intensive nature of businesses in this sector hence the need for huge amount of finance to support its activities. This implies that these firms will resort to external finance when their internal funds are used up. Following the pecking order theory and agency cost theory, firm in the wholesale and retail trade sector will choose debt
over equity. Again, the wholesale and retail trade sector usually operate their business on trade credit where they buy goods on credit from their suppliers.

The next influential variable in SMEs preference for external debt finance is the incorporation status (OR= 5.62) of the SME. The odds of an incorporated SME choosing external debt finance is six (5.62) times greater than SMEs without incorporation status. This is consistent with Cassar (2004) where incorporation positively affected the use of bank financing. Incorporation is usually seen as a good signal for credibility and formality of operations. As a result, debt financiers will find it easier and safer to extend credit to incorporated SMEs than not incorporated ones.

The last statistically significant variable that positively affects SMEs preference for external debt is the age (OR= 1.52) of the SME. This implies that as the SMEs increases in age, the odds of preferring debt finance will increase by fifty-two percent (52%). This positive relationship is similar to that of Abor and Biekpe (2007). As SMEs increases in age, they become more transparent and easily gain access to credit than their newer counterparts. Given the pecking order and agency cost theory, these older firms will prefer debt to equity.

Length of relationship with financers (OR=0.70) was the only variable that negatively affects SMEs preference for external debt. As the length of lending relationship between SMEs and their financers increase, the odds of preferring external debt to equity decreases by three percent (3%). This might be the case because the length of relationship between SMEs and their financiers reduce informational opacity and increases the SMEs attractiveness for less informed investors (Berger & Udell, 1998). Therefore, the SMEs now have various equity financing options at their disposal and that will tend to reduce their preference for debt.

Surprisingly, Size was not statistically significant in the study but exhibited a negative influence on preference for debt to equity. The negative relationship may be as a result of the
greater investment opportunities available for smaller firms than their counterparts (Fluck, et al, 1998). The owner characteristics were not significant and may suggest that the financiers prioritize the firms’ characteristics more than the owner characteristics (Cassar, 2004). The results suggest that among the three categories that influence SMEs external financing preference, firm characteristics play an important role. The sector of operation and is also very instrumental in influencing the external contract type preferred by SMEs.

In Table 14, the logistic output of the impact of external finance preference on growth is displayed. From the table, it can be observed that the model explains thirty-nine point four percent (39.4%) of the variation in the outcome. The odds ratio of firms that prefer external debt to equity is 0.163. This implies that the odds of growth in SMEs that prefer debt-type contracts are about eighty-four percent (83.7%) less likely than firms which prefer equity-type contracts. This observed negative relationship might possibly be because debt comes with implicit and explicit cost obligations that reduce profitability and hence tend to reduce the return on equity which gradually reduces the firm’s growth rate and finally resulting in the reduction of growth in sales. Again, it can be argued that the high leverage due to debt financing increases the SMEs financial risk and tendency of bankruptcy cost. Therefore, such firms will find it difficult to sustain its growth level and support future growth.

The results in Table 14 also show that firms classified as high growth firms have a negative impact on growth. The odds ratio of 0.045 implies that the odds of growth for high growth are about ninety-six percent (95.5%) less likely than lifestyle firms. Lastly the odds of growth in an adult firm is about eighty-two percent (82.2%) less likely than young firms. The likely flow the lifecycle of growth for firms where firms grow at a fast rate during its early stages of existence and this growth gradually slows down as the firm advances in years of existence.
Table 13: Logistic regression output on influence of external finance preference

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<th>Exp(B)</th>
<th>S.E.</th>
<th>Sig.</th>
<th>95% C.I. for EXP(B)</th>
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<th>Nagelkerke R Square</th>
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Source: Field Data 2017
Table 14: Logistic regression output of impact of external finance on growth

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<th>S.E.</th>
<th>Sig.</th>
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N  | -2 Log likelihood | Cox & Snell R Square | Nagelkerke R Square
84 | 68.500<sup>a</sup> | .266               | .394

Source: Field Data 2017
CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the researcher presents a summary of the findings, draw conclusions and make necessary recommendations.

5.2 Summary of the Study

This thesis presented a study to examine the influence of firm characteristics, owner characteristics and control mechanisms for information asymmetry on the SMEs external financing preference and how this preference together with other firm determinants impact the growth of firms. This research was a cross-sectional study which solely used primary data collected through questionnaires that were administered to the selected Greater Accra regional based small and medium scale firms within the AGI database. A binary logistic regression was used to analyze the data due to the objectives that were needed to be achieved.

The empirical results in this study suggested that some factors mostly comprising firm attributes can positively or negatively influence SMEs preference to use external debt. Firstly, the most influential factor that positively affected firms’ preference for debt was the sector of operation. The study revealed that the SMEs in the wholesale and retail trade sectors odds of preferring debt to equity was about fifteen (15.32) times more than that of firms in the other service sectors. The firm characteristics that positively influence SMEs for external debt were the incorporation status and age of the firms. The researcher found out that incorporated firms’ odds of preferring debt to equity was about six (5.62) times more than firms that had not been incorporated. In addition, as SMEs grow in age, the odds of the firm preferring debt to equity increase by fifty-two (52%). On the other hand, the length of relationship between SMEs and financers negatively influenced the firms’ preference for debt. The odds of firms’ preference
for debt decreased by three four percent (3.75%) as the length of relationship between SMEs and financiers increased.

The empirical results also revealed that three factors had an impact on the growth of firms. SMEs who had the preference for external debt finance had a negative impact on growth as they recorded an odds ratio of 0.163. This implied that the odds of growth in SMEs that prefer debt-type contracts are about eighty-four percent (83.7%) less likely than firms which prefer equity-type contracts. Also adult firms and high growth had negative impact on the growth firms. The latter odds ratio of 0.178 implied that adult firms’ odds of growth is about eighty-two percent (82.2%) less likely than young firms. Lastly, high growth firms odds of growth is about ninety-six percent (95.5%) less likely than lifestyle firms.

5.3 Conclusion

This paper presented a study to examine the influence of firm characteristics, owner characteristics and control mechanisms on the SMEs external financing preference and how this preference together with other firm determinants impact the growth of firms. SMEs preferred external debt financing to equity which follows the pecking order and agency cost theory. Out of the three categories of influences on this preference, the firm characteristics was the most influential factor. The owner characteristics did not play any role in the influencing SMEs preference for debt. This might suggest that financiers/investors place emphasizes on the firm characteristics than the owner characteristics (Cassar, 2004). Also the control mechanism for information asymmetry (in particular length relationship with financiers/investors) had a positive influence on SMEs preference for debt. Aside these characteristics, the sector of operation of a firm plays a very important role in firms’ preference for debt. Firms in the wholesale and retail trade sector greatly influenced firms’ preference for debt which might possibly be the capital intensity of these sectors compared to other service
sectors. Finally, the most important firm determinant of growth was the SMEs preference for debt.

5.4 Recommendations

As observed from the findings, older firms tend to employ more debt in financing its operations than relatively younger firms. A cautionary measure that SMEs who employ more debt should note is the increasing likelihood of liquidity risk exposures which result in the firms being unable to meet their debt obligations when they fall due. As such managers of SMEs are advised to keep a consistent open eye through laid down policies and proper monitoring mechanism (such as auditing) of financial information in order to identify and address any issue of liquidity.

Again the SMEs must be mindful of the adverse implications such as bankruptcy cost and financial risk associated with external financing. These firms must strategically come up with safeguards to deal with the downside effect of debt financing. In addition, organizations like AGI and NBSSI should implement and run financial management programs and sessions to better equip managers’ skills to deal with implications of debt financing.

Given that external debt financing negatively impact the growth of firms. SMEs must perform a cost-benefits analysis of the external debt finance they employ in order not to escalate the negative impact on growth causing these firms to struggle with survival. More importantly, as external finance provides a negative externality to SMEs, SME management ought to maintain proper records of their financial transactions and structure, to create confidence in their shareholders and other strong financial institutions to help in financing their businesses.

Lastly, the Securities and Exchange Commission (SEC) in collaboration with the AGI or NBSSI or any other related institutions should organize a campaign to educate the public on the Ghana Alternative market so as to induce the use of external equity financing as excessive
use of debt might be detrimental to growth and survival of SMEs. If possible SEC should consider revising the listing requirement for the GAX that is tailored made to suit SMEs in Ghana and provide exit strategies from the market.
REFERENCES


Appendix 1- Sample size selection table

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Source: Saunders, Lewis and Thornhill (2009)
I am Nana Sefaah Kyei-Boadu, a second-year MPhil Finance student at the University of Ghana Business School, Legon. I am currently working on my thesis entitled: SMEs’ External Financing choice and its impact on growth. Kindly take moment to complete this survey. Your response is greatly appreciated. The data collected would be strictly confidential and solely used for academic purposes. You are kindly requested to give your candid answers to the questions below. You can contact me on +233207700553 or nskyei-boadu@st.ug.edu.gh for further clarification.

**Instructions**: Please check the appropriate box or write in the space provided
SECTION A - FIRM DEMOGRAPHICS

1. What is the core activity of your firm?
   - Manufacturing
   - Transport and Storage
   - Building and Construction
   - Financial and Insurance
   - Wholesale or Retail Trade
   - Arts, Entertainment & Recreation
   - Accommodation & Food
   - Education
   - Real Estate
   - Professional, Scientific and Technical
   - Other (Please Specify)

2. How many employees are currently employed in your firm? (Both full time and part time)

3. In which year did your establishment commence business?

4. What is the legal status of your organization?
   - Sole Proprietorship
   - Partnership
   - Private Limited Company
   - Public Limited Company
   - Non-Governmental Organization
   - Privately Owned Establishment

5. What stage development is your business in?
   - Start-up (the business is starting commercialization)
   - Fast growth (the business growing at a rate much faster than the economy)
   - Slow growth (Sales are slowly increasing)
   - Maturity (Sales have stopped growing)
   - Decline (Sales have started to decrease)

6. Does your firm prepare financial statements periodically?
   - Yes
   - No (Go to question 8)

7. Are these financial statements audited?
   - Yes
   - No
SECTION B - FIRM'S OWNERSHIP AND MANAGEMENT

8. Who are the owners of your firm? (Select all that apply)
- One owner only
- Entrepreneurs
- Family
- Other enterprise or business associates
- Venture capitalists
- Business Angels
- Public shareholders
- Private shareholders
- Other (Please Specify)

9. Who owns the largest stake in your business? (Select only one except there is equal holding then Select all that apply)
- One owner only
- Entrepreneurs
- Family
- Other enterprise or business associates
- Venture capitalists
- Business Angels
- Public shareholders
- Private shareholders
- Other (Please Specify)

10. What is the percentage of the largest stake of ownership in your firm?

11. How did the owner(s) with the largest stake (aside venture capitalist and shareholders) take possession of the business?
- Started from scratch
- Inherited the business
- Acquired from origin owners
- Other (Please Specify)

12. How many managers does your business have?

14. The management team is made up of
Males
Females

13. Do any of the managers have an ownership stake in the business?
- Yes
- No (Go to question 17)

14. If yes, what are their managerial positions (Select all that apply)
- CEO
- Senior Manager
- General Manager
- Executive Director
- Managing Director
- Other (Please Specify)

15. How long has the top manager been in his/her managerial position?
16. Did the top manager have any managerial experience prior to him/her joining the firm?
   - YES
   - No (Go to question 20)

17. If yes, for how many years did he/she manage the other business(es)

18. What is the highest educational level attained by the top manager?
   - No education
   - JHS
   - SHS or Vocational
   - Undergraduate level
   - Post graduate level

**SECTION C: FIRMS EXTERNAL FINANCING**

19. Which source(s) of external financing has your firm used before? (Select all that apply)
   - Accrued expenses
   - Financing schemes
   - Trade Credit
   - Debt securities issued
   - Bank overdraft
   - Venture Capitalists
   - Bank loans
   - Business Angels
   - Microcredit
   - Leasing or hire purchase
   - Equity securities issued
   - No external finance
   - Family and friends
   - Other (Please Specify)
   - Grants

20. What is your firm’s preferred choice of external financing? **(Select only one)**
   - Accrued Expenses
   - Financing schemes
   - Trade Credit
   - Debt securities issued
   - Bank overdraft
   - Venture Capitalists
   - Bank loans
   - Business Angels
   - Microcredit
   - Leasing or hire purchase
   - Equity securities issued
   - No external finance
   - Family and friends
   - Other (Please Specify)
   - Grants
21. Your firm has this preference because... (Select all that apply)
- [ ] it is the only source you know of
- [ ] it is easy to access
- [ ] the owners do not want to relinquish ownership or control
- [ ] it is the cheapest source of finance
- [ ] Other (Please Specify) 

22. How often does your firm get access to its preferred choice of external finance?
- [ ] Always (Go to question 27)
- [ ] Sometimes
- [ ] Never

23. Your firm had to change its preferred choice because... (Select all that apply)
- [ ] that particular choice wasn't available
- [ ] your firm didn't meet the criteria
- [ ] the process was too cumbersome
- [ ] the term of the contract didn't favour your firm
- [ ] your firm lacked securable assets
- [ ] your firm lacked financial performance track record
- [ ] the cost was high
- [ ] the owners did not want to relinquish control or ownership
- [ ] Other (Please Specify)

24. Which of the following is/are limiting factors to your firm's access to external financing? (Select all that apply)
- [ ] There are no obstacles
- [ ] Insufficient collateral or guarantee
- [ ] Interest rates or prices are too high
- [ ] Reduced control or ownership over the firm
- [ ] Financing is not available at all
- [ ] Harsh and unfavourable contract terms
- [ ] Little knowledge on external financing alternatives
- [ ] Unwillingness to give out vital information about the firm
25. What were the external funds obtained by your firm invested in? **(Select all that apply)**
- [ ] New project
- [ ] Working capital
- [ ] Plant, property and equipment
- [ ] Research and development or intellectual property
- [ ] Promotion of products and services
- [ ] Staff training
- [ ] Buying another business
- [ ] Other (Please Specify)

26. Has your firm ever invested any external funds obtained in a project different from its intended use?
- [ ] Yes
- [ ] No (Go to question 31)

27. Did your firm communicate the change in the use of the external funds to the providers of the funds?
- [ ] Yes
- [ ] No

28. Which of the following type of finance is the most important to your firm? **(Select only one)**
- [ ] Accrued Expenses
- [ ] Financing schemes
- [ ] Trade Credit
- [ ] Debt securities issued
- [ ] Bank overdraft
- [ ] Venture Capitalists
- [ ] Bank loans
- [ ] Business Angels
- [ ] Micro credit
- [ ] Leasing or hire purchase
- [ ] Equity securities issued
- [ ] No external finance
- [ ] Family and friends
- [ ] Other (Please Specify)
- [ ] Grants

29. How many years has your firm been in a relationship with the providers of your most important source of external finance? |
SECTION D: FIRM'S GROWTH AND GROWTH PROSPECTS

30. During the past 12 months has your firm...
   ... introduced a new good or service or significantly improved its product or service  
     Yes  No
   ... introduced a new production process or significantly increased its production level  
     Yes  No
   ... opened a new location or significantly improved its current location  
     Yes  No

31. During the next 3 years does your firm intend to...
   ... introduce a new good or service or significantly improve its product or service  
     Yes  No
   ... introduce a new production process or significantly increase its production level  
     Yes  No
   ... open a new location or significantly improve its current location  
     Yes  No

32. On average, how has the following indicators of income generation changed in your firm?

<table>
<thead>
<tr>
<th></th>
<th>Increased</th>
<th>Remained Unchanged</th>
<th>Decreased</th>
</tr>
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<tbody>
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<td>Sales/Revenue</td>
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<tr>
<td>Net Income</td>
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<tr>
<td>Non-Current Asset</td>
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<td>0</td>
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</tbody>
</table>

33. How will you categorize your firm’s growth prospects over the next three years?
   - Stay the same
   - Grow slowly (below 20% per year in revenue)
   - Grow moderately (between 20% and 50% per year in revenue)
   - Grow substantially (over 50% per year in revenue)

Thank you for participating in this survey.