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THE EFFECT OF BANK LENDING AND PRIVATE EQUITY INVESTMENT CRITERIA ON SMEs ACCESS TO FINANCE: A DEMAND AND SUPPLY SIDE SYNTHESES

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A thesis submitted to Addis Ababa University College of Business and Economics, in partial fulfillment of the requirements for the degree of Masters of Science in International Business specialization in Strategic Investment Management.

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Declaration

I, the undersigned, hereby declare that the work contained in this paper is my own original work and that I have not previously in its entirety or in part submitted at any university for a degree. Furthermore, all sources of materials used for the thesis had been duly acknowledged.

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This is to certify that the thesis entitled *''The effect of bank lending and private equity investment criteria on SMEs access to finance: a demand and supply side syntheses''* is submitted to Addis Ababa University School of Business and Economics in Partial Fulfillment of the Award for the Degree of Master in International Business (M.Sc.) specialization in strategic investment management. The Thesis has been carried out by Meraf Girma ID. No GSR/8628/12 under my supervision. Therefore, I recommend that the student has fulfilled the requirements and hence hereby can submit the thesis to the department for defense.

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We the examiners´ board approve that this has passed through the defense and review process.

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Acronyms and Abbreviations

AA	Addis Ababa
EAVCA	East African Private Equity and Venture Capital Association
FSMMIPA	Federal Small and Medium Manufacturing Enterprises Promotion Authority
GPs	General Partners
MFIs	Microfinance institution
OECD	The Organization for Economic Cooperation and Development
PE	Private Equity
RII	Relative Importance Index
SMEs	Small and Medium Enterprises
UNDP	United Nations Development Program

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Abstract

This study analyzed the effect of bank lending and private equity (PE) firm investment criteria on SMEs' access to finance. The study followed a deductive approach, both explanatory and descriptive designs, survey method, and questionnaire as data collection instrument. A total of 270 bank managers and credit officers and 8 PE investment and business analysts as well as 200 SMEs owners and managers established the study setting. Hayes logistics regression was used to analyze the direct and indirect effects of lending criteria on manufacturing SMEs access to Bank finance and descriptive statistics to rank PEs' SME investment criteria. The study found a full mediation role of adverse selection in the relationship between SMEs access to finance and 4 aspects of bank lending criteria. However, moral hazard partially mediated the relationship between SMEs access to finance and the other 2 aspects of bank lending criteria. Regardless of having significant mediation effects, the logistics regression indicated SMEs access to finance didn't increase compared to the previous year. On the other hand, the descriptive analysis of PE's response indicated SMEs' managerial, product, market, and financial considerations influence their investment decisions on SMEs. The relative importance index showed that both PEs and Banks give priority to entrepreneurial character in screening SMEs for financing. Besides, the demand-side analysis showed that collateral and capital requirements, and financial consideration are the most important criteria influencing access to Bank and PE finance, respectively. The study concludes SMEs access to finance doesn't show improvement as a result of not-fulfilling mainly Banks' non-performance-related criteria and the lifestyle entrepreneurship nature of manufacturing SMEs in Ethiopia to attract PE investment. The study also concludes that while the existing collateral and capital related criteria directly influence Bank SME financing decisions, character, activity, condition, and capacity do not. This implicates the need for revising the existing Bank SME lending criteria.

***Keywords*:** PEs, Banks, SMEs, Access to Finance, Ethiopia

Chapter One
Introduction

1.1 Background of the study

Although the term Small and Medium-sized enterprise (SMEs') is internationally used, the conceptualization of SMEs' rather varies in accordance to each nation's economic, political, technological, and societal level of development and even among the different sectors within a given country. However, it has been observed that there are certain common denominations used while defining SMEs'; such as the number of employees, turnover made, and the industrial branches of the company (Robu, 2013). The definition applied within the United States shows that firms whether they are non-exporting manufacturers, exporting companies, or farms are considered SMEs' if the number of employees working within the company is less than 500, however, the revenue range put forward differs among these sectors and could go as far $25 million for high value exporting firms (United States International Trade Commission,2010). As in the European Union, the most commonly used upper limit designated for the number of employees is 200 and a turnover not exceeding EUR 50 Million (Organization for Economic Co-operation and Development, 2005).

The idea of SMEs' can be dated as far back as thousands of years ago when mankind was able to add value to the already existing resources through which this turned into expertise and profession. To mention a few, Frapin cognac in France, Angel and Royal Inn in England, and Staffelter Hof in Germany that has lasted for more than a century and are still operating in the present days could be set as an example for such long history of SMEs' (Morgan, 2015). Since then the role and contribution of SMEs' have been multifaceted. SMEs' play a crucial role in global economic development. According to Nyak (2016), SMEs' contribute about 51 percent of GDP in high-income countries. The organization for Economic Cooperation and Development (2000) also states that SMEs' account for about 95% of enterprises and 60 to 70 percent of jobs in most OECD countries. Aside from their contribution to job creation SMEs' in developed nations are viewed as a major driver of innovation thereby adopting new technology and know-how (Brixiova, 2009).

Likewise, SMEs' in developing countries also contribute to 78% of employment and export revenues (Keskġn, Ġentürk, Sungur, & Kġrġġ, 2010; Robu, 2013). Specifically, in Africa, the SMEs' sector is expected to contribute to the establishment of a new middle class thereby fueling demand for

new goods and services (Santos,2015). SMEs' have also been playing a crucial role in alleviating the problem arising in Sub-Saharan Africa, which is due to increased urban population dynamics, by participating in providing urban employment. Similarly, in Ethiopia, the SMEs' sector is considered as a means for economic development and the source of employment and income generation for a wider group of the society and urban youth in particular (Nega and Hussein, 2016). It is said that SMEs' have contributed a value-added of Birr 8.3 million in 1996 (Gebrehiwot, 2006).

Several factors affect the aforementioned performance of SMEs', such as diversification of business, good living standards, technological innovation, creation of employment, and the likes. Capital, infrastructure, information network, entrepreneurial capability, macro-economic conditions are the commonly raised factors that affect the performance of SMEs' (Chome, 2016; Moorthy, Tan, Choo, Wei, Ping, & Leong, 2012; Fouad, 2013; Kinyua, 2014).

Among the listed factors, however, the critical factor that inhibits the progress of SMEs' and contributes to the failure of entrepreneurs is mostly reported to be limited access to external finance (Chome,2016). According to OECD (2017), Credit constraints are especially severe in mid-and low-income countries, where funding gaps are often the main barrier to formalization and SME development. This shows that finance is a critical issue for all business types as it has a direct implication on the existence or survival of the firm itself.

Though the choice of finance source could vary depending upon the stage at which the SMEs' are found in their life cycle (Berger and Udell, 1998), the source of finance from which SMEs' could choose can be categorized into two, namely debt and equity financing. While Banks and Microfinance institutions (MFIs), government grants, etc are some of the sources of debt financing, there are also different types of institutions and individuals which provide equity financing, these include business angels, venture capital firms, and other private equity firms. Though banks are the most commonly used source of financing in Ethiopia (Nega and Hussein, 2016), private equity financing could be an ideal form of capital injection into the economy, given the fact that Ethiopia is undergoing rapid economic growth and banks were not able to meet the capital requirement of local businesses on their own (United Nations Development Program in Ethiopia, 2013).

However, both banks and private equity firms highly emphasize choosing the right client for the services they give thereby reducing the downside risk that comes along in choosing the wrong candidate (Erdogan, 2014; Rajchlová 2010). Banks commonly use two lending models in their attempt to screen their clients: the 5c's and the LAPP lending models (Tilahun, 2018; Khan, 2020). The 5c's lending model uses character, capital, capacity, condition, and collateral as a screening criterion while the LAPP lending model uses liquidity, activity profitability, and potential of the firm to assess the creditworthiness of their applicants thereby reducing the ex-ante and ex-post information asymmetry, that exists between their clients and themselves (Rasmusen,2001). On the other hand, private equity firms also have different sets of investment criteria, which they use to assess and evaluate their potential portfolio companies (Ljungberg and Svedman, 2017). This in turn is expected to affect the availability of finance to SMEs', as both institutions seem to be picky as with whom they will be engaged with. This study thus tried to identify the lending and investment criteria used by banks and private equity firms in Ethiopia, respectively. The study also attempted to assess if the identified criteria affect the availability of funds to SMEs'.

1.2 Statement of the problem

Considering the importance, different studies concerning the SMEs' sector have been conducted. There is abundant literature that examined factors affecting the aforementioned performances and contribution of SMEs' including employment opportunities and adoption of new technology (Chome, 2016; Moorthy, Tan, Choo, Wei, Ping, & Leong, 2012; Fouad, 2013; Kinyua, 2014).

Studies like (Beck & Cull, 2014; Fanta, 2012; Tadesse 2014; Adore, 2016; Chowdhury and Alam,2017; Yeboah and Adigbo, 2014; Nega and Hussein, 2016) put finance as the most crucial factor that has a direct implication on the sustainability and existence of SMEs' and thus studied the factors contributing to SMEs' failure to access fund. Some of the most commonly listed factors affecting SMEs'' access to finance according to these studies are lack of competition within the banking industry, interest rate, loan size and collateral.

Being the most common source of external financing, the need to study the approach used by banks in screening SMEs' for a loan arises here. However, the studies listed above take a general approach to study challenges faced by SMEs' in accessing finance while bank lending criteria is just one part in the studies. Thus, it could be said that the studies lack the necessary dearth in this regard. The study of Kouser, Durani, Hussain and Hassen (2012), Agyapong, Agyapong, & Darfor

(2011), Peprah & Oteng,(2017) addresses this gap and their study focused on the influential criteria used by banks to screen SMEs' for loan and their implication on SMEs' Access to finance**.** However, there exists inconsistency as to the weight attached to these criteria. According to Peprah & Oteng (2017) ranking of 5c's in Ghana, capacity is ranked first followed by character, collateral, condition and capital with only collateral and condition switching places for foreign banks in Ghana. On the other hand, a study conducted by Agyapong, Agyapong, & Darfor (2011) however ranked condition as the first and most crucial criteria that banks consider when screening SMEs' to loan while Kouser, Durani, Hussain and Hassen's (2012) study consider collateral as the most important criteria. This inconsistency could be acceptable as the studies were conducted in different contexts thereby yielding different results.

To bring this to the Ethiopian context an investigation was made by different studies including Nega and Hussein (2016), Tadesse (2014), Adore (2016). Although these studies were conducted to assess SMEs' access to finance in Ethiopia, bank lending criteria hold a small part in the studies and the necessary dearth couldn't be found. Besides no weight has been attached to the identified criteria as well. However, studying bank lending criteria stands important as stakeholders ought to know where to invest their money and time in light of improving their creditworthiness and not waste their resources on a criterion that doesn't stand important or could be compromised in the screening process. Thus, this study was conducted in light of adding more to the dearth of existing literature, which are based on a general approach to SMEs' access to finance but doesn't solely focus on the effect of bank lending criteria on SMEs' access to finance. The study was conducted by merging factors from two of the most commonly used lending models by banks; LAPP and 5Cs, which were previously studied to have been used by Ethiopian commercial banks (Tilahun, 2018).

What is more to this study is that it also tries to study access to finance from the equity side. The studies listed above focus only on the debt side of financing but equity financing such as private equity financing can also be a useful source of capital injection into the economy (UNDP in Ethiopia, 2013). The African private equity and venture capital association (AVCA, 2020) reported that Kenya was the most popular Private equity destination in East Africa between 2014 and 2019, comprising 56% of deals by volume and 54% by value while Ethiopia stood as the 4th PE destination in East Africa following Tanzania and Uganda. Showing that Private equity

financing in Ethiopia is in its infancy stage and a lot more digging is needed in this aspect. A study conducted by (Ahmed,2019) also showed that lack of understanding of private equity investment also stands as a major challenge for private equity practices in Ethiopia. Thus, this study will be the first in Ethiopia trying to investigate the relationship between private equity investment criteria and SMEs' access to finance, thereby serving as a stepping stone for future finding. The study also compared the lending criteria to that of PE firms investment criteria to give insight for who ever would like to thoroughly understand the issue, specially SMEs that are considered important for an economy to grow

1.3 Research Questions

- Does moral hazard mediate the relationship between Bank lending criteria and manufacturing SMEs access to loan?
- Does adverse selection mediate the relationship between Bank lending and manufacturing SMEs access to loan?
- Which Lending criteria weight more?
- Does Management, market, product and financial considerations affect manufacturing SMEs access to investment fund?
- Which investment criteria weight more?

1.4 Objective of the study

1.4.1 General objective

- To study the effect that bank lending and private equity firms' investment criteria have on the availability of finance to Ethiopian SMEs'

1.4.2 Specific objective

- To identify if moral hazard mediates the relationship between bank lending criteria and manufacturing SMEs access to loan
- To identify if adverse selection mediates the relationship between bank lending and manufacturing SMEs access to loan
- To identify the weight of each Lending criteria
- To identify if Management, market, product and financial considerations influence manufacturing SMEs access to investment fund?
- To identify the weight of each investment criteria

1.5 Significance of the study

As discussed earlier most literature conducted in Ethiopia focuses on the general factors which pose as a hindrance to SMEs'' accession to debt finance and there is less literature that tries to study the effect of bank lending criteria on the availability of finance to SMEs' in detail. Owing to this, this study is expected to add a helpful insight to the existing literature.

Aside from this, there is a limited number of studies conducted regarding private equity in Ethiopia and thus this study could also serve as a stepping stone for further studies on this industry.

The study is expected to be helpful to SMEs', which are the most important part of an economy, by broadening their understanding regarding the underlying lending and investment criteria used by banks and private equity firms respectively, thereby enabling them make a rational decision regarding their capital structure as well as increase their chance of getting the required fund.

1.6 Delimitation of the Study

The subjects of this study were banks, private equity firms and SMEs', each of which encompasses broad concepts in their stances. However, this study focused on studying of the effect of lending and investment criteria considered in both debt and equity market, has on SMEs'' access to finance.

Given to the fact that banks are the most commonly used external sources of debt financing (Hofstrand, 2013; Horitone and Mirie, 2016; Nega and Hussein, 2016), this study, therefore, considered banks in Ethiopia from the debt side of source of finance to SMEs'. More specifically the conventional units of banks which is engaged in a debt contract is considered rather than interest-free banking unit which can possibly engage in an alternative type of contract as it encompasses investment activities within it.

On the other hand, private equities are considered from the equity side of source of finance to SMEs'. Private equity is in infancy stage in Ethiopia calling for more research to be done in light of giving a broader understanding, as to what is contained within the PE industry. However, not all types of private equity firms were targeted within this study, rather private equity firms, which provide growth capital were considered.

At last, the study targeted, Small and medium sized enterprises. It is to be known that the manufacturing sector contributed for about 6.8% of the GDP in 2019, however, according to the

10 years development plan of the government, a drastic change is expected within this sector for the government has chosen it as its focus area working to raise its share in GDP to 17% by 2030. Owing to this, the study has made its focus towards manufacturing SMEs', so has to add value to the country's road map. Aside from this, Addis Ababa was chosen as the research area given to the fact that there is a broader population size of SMEs' in Addis Ababa than any other city of the country, which in turn is expected to increase the number of SMEs' that will be considered in the study, thereby increasing the reliability of the study.

Generally, this study was conducted to synthesize both supply and demand side access to finance of SMEs'.

1.7 Limitation of The Study

The limitation of the study is that a descriptive analysis was used to analyze the data from the private equity firms. This happened due to the inability to perform a regression analysis as the number of such firms in Ethiopia is very small and therefore couldn't satisfy the rules for a regression analysis. Nonetheless, the study has included the demand side analysis to get the full picture of this.

1.8 Organization of the Study

This study was organized into 5 chapters. The first chapter was a part where the problem and its approaches are discussed briefly. The second chapter presented the theoretical and empirical background of the study. The third chapter focused on the methodology of the study including the research design and analysis techniques to be used. The fourth chapter is part which shows the analysis of the data collected and results obtained while the last chapter; chapter 5 is part where the conclusion of the study and recommendations were presented.

Chapter Two
Literature Review

2.1 Theoretical Review

2.1.1 Definition of SMEs'

Although the term Small and Medium-sized enterprise (SMEs') is internationally used, there is no universally accepted definition to describe them. Rather the definition applied varies in respect to each nation's context (Robu, 2013). However, it has been observed that certain common criteria are being used to define SMEs'. Definitions which are based on the number of employees, turnover made and the industrial branches of the company have been observed (Robu, 2013). According to the European Commission recommendation (2003), SMEs' are defined as those individual firms which have no more than 250 employees and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million.

Though there are different definitions given for the SMEs sector from different institutions this study considers manufacturing SMEs and thus uses the definition given by the Federal small and medium manufacturing enterprises (FSMMEs, 2021) definition. This institution defines Small enterprises as those business entities that have 6-30 employees and a capital of (100,000-1,500,000ETB] while those referred to as medium are those with 31-100 employees and a capital of (1,500,000 – 20 Million ETB].

2.1.2 SMEs' Source of Financing

Though the definition given to SMEs' varies from country to country, it is commonly argued that SMEs' are crucial in boosting economic growth. They are considered as a source of dynamism and flexibility in advanced countries (Robu, 2013), just like how developing economies also agree to the fact that SMEs' have a multifaceted contribution such as adopting new technology and know-how, job creation and broadening the tax base (Brixiova, 2009). However, for such contribution, finance remains to be the backbone of SMEs' endowing their sustainable growth. Access to finance is a very important aspect for both SMEs' and other business segments, as is it is among the crucial factors that could allow them to modernize their processes and equipment as well as expand their operations and/or undertake new ones.

Generally, there are two types of financing options to whichever business seeking to raise fund in light of supporting their business operations. These namely are Debt and equity financing.

Debt financing refers to the borrowing of a loan to support business operation and where the loan principal is repaid at a later point in time, with some periodic payment of interest before the debt's maturity (Cheong, 2015). Although, debt financing always comes from external sources such as friends, relatives, government programs, bonds, and notes, (Olokoyo, 2011; Hofstrand, 2013; Horitone and Mirie, 2016) stated that banks are the most important and popular sources of debt financing to many business units including the SMEs' sector. According to Gobat (2012) "Banks are those institutions whose primary role is to take in funds—called deposits—from those with money, pool them, and lend them to those who need funds"

Equity financing is a financing option that is based on the potential for the creation of value. Equity is a representation of ownership in an enterprise allocated to individuals or other entities in the form of ownership shares (Marcon, 2012). Equity financing can be generally be categorized into, internal and external equity financing. The internal financing is from the owner of the business itself while external equity sources include business angels, venture capital, private equity firms, and the likes.

Business Angels: these are generally high net worth individuals, who invest their own money in an unquoted business, in which they have no family connection and who after making an investment take an active involvement in the business (Manson and Harrison, 2008).

Venture capital: According to Wright (1998) "Venture capital involves the financing of new or radically changing firms which contrast in many important informational ways to established companies quoted on a stock market, notably the problem of asymmetric information."

Private equity: Though private equity could mean all forms of investment in private companies, in which early-stage venture capital is one form (Snow,2007), other forms of private equity investment could be conducted by Private equity firms, which focus on later-stage investment giving out growth equity, turnaround investments of financially troubled companies or conducting leveraged buyouts (Snow, 2007; Wright, 1998; Cote, 2021).

2.1.3 Theory of Information Asymmetry

Though there is no specific theory that illustrates how lending and investment criteria affect access to finance, this study uses the theory of information asymmetry as its theoretical base to establish a link between the variables under consideration. Information asymmetry theory postulates that

when two parties are making decisions or transactions, there exists a situation where when one party has more or better information than the other. Thus, information asymmetry may cause an imbalance of power between the parties. To better understand information asymmetry, ex-ante and ex-post models could be applied. In the former model, information asymmetry occurs before the parties enter into a contractual agreement while in the latter occurs after a contract is signed among the parties (Rasmusen,2001).

Information asymmetry in an ex-ante model, where an information imbalance occurs before any commitment is signed, gives birth to a phenomenon called adverse selection (Sood, 2003). In this model certain characteristics of the agent are unknown to the principal (Neff,1998). Specific to this paper banks and private equities are considered the principals with less information about their potential clients. Sood (2003) also refers to this phenomenon as "hidden Information".

In light of this client, who needs to stand out, could give out information to the principal to reduce the imbalance caused by the information asymmetry, this phenomenon is called signaling (Neff, 1998; Sood, 2003; Rasmusen, 2001). On the other hand, creditors or investors screen their applicants, thereby extracting more information about their potential clients (Neff, 1998; Sood, 2003; Rasmusen, 2001). Principals will try to learn more about the characteristics and other aspects of the agent before they engage themselves in any commitment, which in turn is expected to reduce the chance of adverse selection and thus a risk of default or investment failure. Studies also showed that Adverse selection are the main sources of increased number of non-performing loans (Islam and Nishiyama, 2017) and this is why the lending model of banks and investment criteria of private equity firms are built and applied for. Applicants will have to pass through a rigorous screening step before they can access the required financial support, which in most cases leave businesses in the SMEs' sector financially constrained as these firms are considered informationally opaque and couldn't provide some of the requirements that banks put forward to overcome this information asymmetry (Adore, 2016; Zeru, 2010; Fanta,2012; Tadesse 2014).

In the ex-post model, information asymmetry is known as moral hazard, which happens after both parties have signed a contract (Sood, 2003). According to Smith, Chang and Boyd (1998), moral hazard can occur in two forms which are explained as follows. The first source of moral hazard arises when the return on investment project can only be seen by only the entrepreneurs while other agents must employ costly state verification to observe returns from the project. The second

form of moral hazard occurs when project owners claim that they are undertaking a large investment while they are actually engaged in smaller ones and benefit from the difference or when an entrepreneur before an investment diverts fund. Such action also cannot be detected by other agents unless they engage in costly interim monitoring. Such types of acts of moral hazard are faced by banks and other institutions that have engaged themselves in a debt contract (Smith, Chang and Boyd, 1998). However, private equity firms can overcome moral hazard, as ownership and control are united in the firms, which are acquired by private equity firms (Fontenay, 2013).

2.2. Empirical review

2.2.1 Lending Criteria

Making sound decisions to extend the right amount of money, at the right time to the right borrower has become extremely important for banks in recent years (Erdogan, 2014). However, (Obamuyi, 2010; Horitone and Mirie, 2016) in their respective studies found that banks were reluctant to grant loans to SMEs' due to their poor creditworthiness. This is due to the inability of SMEs' to meet some banking requirements, which commercial banks use as a check on their lending activities (Horitone and Mirie, 2016).

Banks conduct due diligence through their lending process, which ensures safe and sound lending, thereby reducing the risk of default and losing the public's money by reducing the information asymmetry that exists between them and their applicants. This is facilitated by the specific criteria underlying the lending models that each bank use. 5c's and LAPP lending models stand among the commonly used bank lending model (Tilahun, 2018; Khan, 2020; Karsh and Abumwais, 2017). Under the 5c's lending model applicants are screened in accordance to the criteria regarding the character, capacity, capital, collateral, and condition (Dankwa and Badu 2013) while the LAPP assess borrower on the basis of Liquidity, Activity, Profitability, and Potential (Khan,2020).

Collateral

Different demand and supply-side analyses of bank lending criteria have identified that collateral is among the most sought out criteria used by banks while considering SMEs' for a loan (Kouser, Durani, Hussain and Hassen, 2012; Yeboah and Adigbo, 2014; Menberu 2018; Rahman, Belas, Kliestik, and Tyll, 2017). Collateral is an asset pledged to secure a loan that give the lender a secondary source of repayment if the primary sources of repayment is not available (Baiden, 2011). It can serve as a source of additional, indirect information thereby serving as a signal to the lender

and reducing the information asymmetry between lender and borrower and (Chan and Kantas, 1985). Collateral is sought to reduce moral hazard issues as it has the tendency to increase the potential cost to borrowers in case of improper utilization of funds (Osano and Languitone, 2016). However, due to the incapability of SMEs' to provide collateral, this criterion stands as one of the major impediments to SMEs' access to finance (Chowdhury and Alam, 2017; Adore, 2016)

Ha11: Moral hazard mediates the relationship between Collateral and manufacturing SMEs access to loan

Capital

Refers to the amount that the borrowers have contributed in the project or the ability to provide other means to repay debt than the monthly income they earn (Tilahun,2018). Capital is indicative of borrowers' commitment and dedication, thereby mitigating moral hazard issues (Bhatt,2012; Baiden, 2011). This is usually assessed by looking into the debt to equity ratio (Bhatt,2012). However, Capital in its modern essence has developed to encompass a much broader aspect such as the human capital (Majaski, 2016). Now a day's firms are continually being challenged by a tough competition, and owing to this continual innovation and new technology adoption is required to cope up in with this and prevent obsolescence. However, the right mix of human resource that could mange the finance and possess important technical and soft skills such as creative and creative thinking is important for the firm to upheld its going concern principle and survive in the long term (Marimuthu, Arokiasamy & Ismail, 2009). And according to (Karsh and Abumwais; 2017) such financial and human resources and strength the firm is what is explained as potential in the LAPP model and thus this study will thus categorize the potential of the LAPP model under Capital of the 5c's credit.

Ha12: moral hazard mediates the relationship between Capital and manufacturing SMEs access to loan

Character

These are the specific trait of the owner/manager which could affect the performance of the firm itself thus the character in 5C's involves the assessment of the trustworthiness and capability of the borrower (Boushnak, Regab, Sakr, 2018; Fatoki and Asah, 2011). The specific criteria or factors considered when assessing the character of the borrower for his/her trustworthiness

according to (Kabir, Jahan, Chisty and Dr. Akhtar Hasin 2010) are the stability of borrowers' career, their willingness to provide complete and borrower's keenness to maintain one's reputation integrity and word honor. Fatoki and Asah, (2011) in their study used the Pearson correlation and logistic regression also found that owner/manager characteristics, measured in terms of education, related and work experience have a positive relationship with access to debt financing. Such information is usually discovered through interviews and investigation into the borrowers' payment histories, and how they respond to adversity (Baiden, 2011). Character next to capacity is the most sought out criterion considered by banks (Peprah & Oteng, 2017).

Ha21: Adverse selection mediates the relationship between Character and manufacturing SMEs access to loan

Capacity

Refers to the ability of the firm to service the debt or cover any current obligations, replace assets as they wear out as well as ability to maintain adequate margin for family living (Tilahun,2018). In other words, capacity in 5c's of credit measures the liquidity and Profitability of borrower's and these are two of among the four factors that the LAPP model tries to look into. According to Jahan, Chisty, Hasin (2010) the capacity of a borrower could be measured by using liquidity and profitability ratios such as quick ratio and net profit margin and the likes by analyzing financial statements presented by borrowers.

Ha22: Adverse selection mediates the relationship between Capacity and manufacturing SMEs access to loan

Condition

Here bankers assess both factors which are both within their control or not. Opportunities and threats that can hugely impact the operation of a firm arise from the external environment and thus banks will try to look into external factors including regulations and economic change, technology, stable political environment and trend within the industry such as competitive conditions and demand for the product, (Bhatt,2012). Other factors assessed in condition of 5c's include the purpose and the size of the loan which banks somehow have control over (Kabir, Jahan, Chisty & Akhtar Hasin, 2010).

Ha23: Adverse selection mediates the relationship between Condition and manufacturing SMEs access to loan

Activity

This is what is left from the LAPP model, which is not best explained by the 5C model. It measures the size of the firm and its operations; and thus, percentages such as asset turnover, inventory turnover, average collection period, and average payment period are used (Karsh and Abumwais, 2017).

Ha24: Adverse selection mediates the relationship between Activity and manufacturing SMEs access to loan

2.2.2 Investment Criteria

PE firms also devote a significant amount of time and resources to screen and evaluate potential investments. Rajchlová (2010) contends that investment criteria are necessary to make investment decisions sensible. According to Gompers, Kaplan, and Mukharlyamov (2016) though private equity firms value their ability to nurture their portfolio companies after the deal is closed, but they also emphasize on their ability to source deals that are proprietary in some way. This could be attributable to their capability to identify prospective businesses early on. The general partners (GPs), who are in charge of administering the private equity fund, tend to thoroughly evaluate each possible portfolio firm before agreeing to and closing a deal.

However, most studies (Franke, Gruber & Henkel, 2008; Bernstein, Korteweg & Laws, 2017) focused on venture capital firms' investment criteria and there aren't many studies that show how GPs of PE firms providing growth capitals, choose their portfolio companies or the criteria which they apply when considering an investment that could be made on a firm.

Snow (2007) stated that private equity firms must form a view on the future of a given industry or market in which the firm under consideration operates, the potential of the company within this market, the strength and weakness of a potential portfolio company, and other circumstances by developing models underlying certain criteria of interest, which in turn will give them a picture of how their investment in a company will do. The most commonly raised criteria in the PE industry are presented below

Management Considerations

The track record or the senior management is one of the most important criteria the private equity firms look into (Block, Fisch, Vismara & Andres, 2019; Zinecker and Rajchlová, 2014). The management consideration according to Zinecker and Rajchlová, (2014) also include the ability of senior managers to identify problems, set objectives, and allocate tasks. It also assesses the ability of senior managers to identify and evaluate risks as well as its ability to give the right response to risks. Portmann and Mlambo (2013) have also found management teams honesty, integrity and good knowledge of sector to be criterions found in the top 10 criteria ranked by private equity firms in South Africa.

Ha31: Management criterion influence manufacturing SMEs access to Investment fund

Market criteria

Private equity firms assessing their potential portfolio companies also look into the growth of the market, competition within the market, market share, and the access to international or new market of the specific business under consideration (Zinecker and Rajchlová, 2014; Portmann and Mlambo, 2013).

Ha32: Market criterion influence manufacturing SMEs access to Investment fund

Product Considerations

This criterion assesses different aspects regarding the product including the value addition it provides (Block, Fisch, Vismara & Andres, 2019). It assesses whether the utility that the product provides is recognizable, manufacturing procedures are proprietary and if the product is evidently better compared to up to now offerings (Zinecker and Rajchlová, 2014). Good market acceptance of the product and having a good competitive advantage is also important product consideration for PE firms (Portmann and Mlambo, 2013)

Ha33: Product criterion criterion influence manufacturing SMEs access to Investment fund

Financial criteria

The financial criteria which private equity firms in their investment decision according to Zinecker and Rajchlova (2014), focus on whether it is possible to sell the share of the business quick and trouble-free and that there is a potential to withdraw dividends continuously.

Ha34: Financial considerations influence manufacturing SMEs access to investment fund

2.3 Conceptual Framework

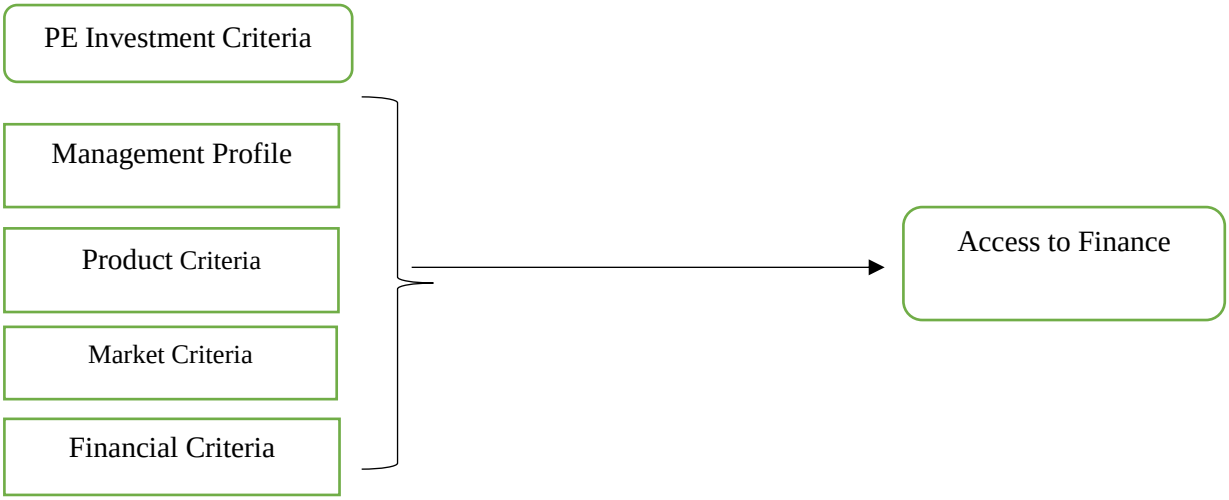
The following conceptual frameworks is developed based on the theoretical and empirical frameworks presented above. The theoretical ground helped in identifying the concept of mediating roles of moral hazard and adverse selection between lending and investment criteria and access to finance. This general was presented by (Neff, 1998; Sood, 2003; Rasmusen, 2001). The Investment Criterions identifies for Private equity firms was based on (Zinecker and Rajchlová, 2014 and Portmann and Mlambo, 2013). The lending criterions identified were based on Kabir, Jahan, Chisty and Dr. Akhtar Hasin ,2010; Fatoki and Asah, 2011; Jahan, Chisty, Hasin, 2010; Tilahun,2018; Bhatt,2012 and Kouser, Durani, Hussain and Hassen, 2012).

On the other the measures to access to finance for the demand side was taken from Kuntchev, Ramalho, Rodríguez-Meza & Yang's, (2013) while the supply side measure for access to finance was based on Consultative Group to Assist the Poor (CGAP) (2013).

2.3.1 Conceptual framework for private equity firms

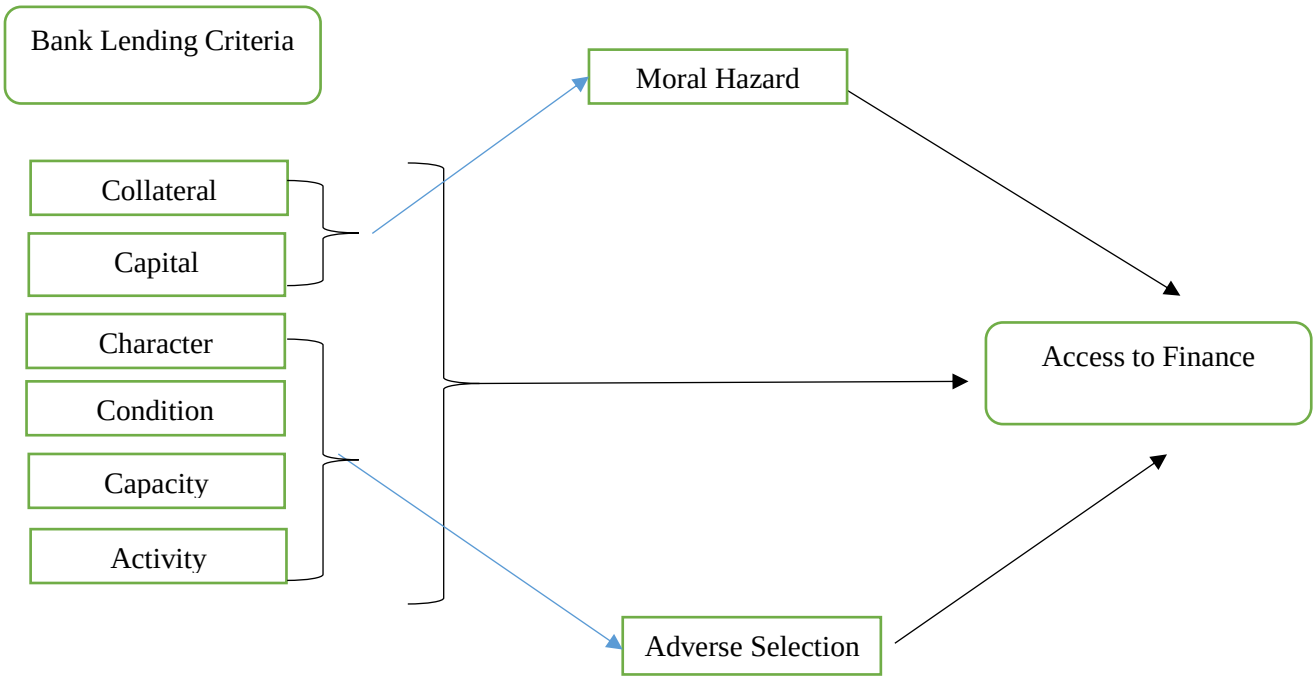
As per the literature review made the notion of the information asymmetry also holds a firm ground in the private equity industry. the conceptual framework of this study however didn't capture this due to the small number of private equity firms in Ethiopia. Usually the regression analysis requires 10 observation per variable, which this segment couldn't satisfy.

Figure 2.1: Conceptual framework for private equity firm's investment criteria and Access to finance



2.3.2 Conceptual framework for banks

Figure 2.2: Conceptual framework for bank lending criteria and Access to finance



Chapter Three

Methodology

3.1 Research Approach

The study followed a mixed research approach. This is attributed to the quantitative nature of the data collected from banks and the qualitative nature of the data collected from both private equity and Manufacturing SMEs.

3.2 Research Design

Given that prior studies conducted in Ethiopia (Fanta, 2012; Tadesse 2014); focus on the constraints faced by Ethiopian SMEs' and that there are less details on the effect that criteria used by banks and PE firms has on the availability of finance to SMEs', this study followed an explanatory research Design, thereby adding up to the dearth of extant literatures conducted in Ethiopian context. This study was conducted to give a detailed explanation on how the lending and investment criteria used by banks and private equity firms respectively affect SMEs access to finance as well as which criteria weighted more in each extreme of sources of finance.

3.3 Research Method

3.3.1 Variables

3.3.1.1 Independent Variables

Two sets of independent variables were considered under this study. These were variables identified from bank lending criteria and PE firm investment criteria. It is because of this that this study has proposed the two structural models above.

The lending criteria of banks; character, capital, capacity, collateral, conditions and Activities were based on the findings of (Kabir, Jahan, Chisty and Dr. Akhtar Hasin ,2010; Fatoki and Asah, 2011; Jahan, Chisty, Hasin, 2010; Tilahun,2018; Bhatt,2012 and Kouser, Durani, Hussain and Hassen, 2012).

The second model, which was regarding the private equity firms' investment criteria, however was based on the findings of (Zinecker and Rajchlová, 2014). Which consisted the management, market, product and financial criteria.

3.3.1.2 Dependent Variable

The dependent variable under this study was SME's access to finance. Kuntchev, Ramalho, Rodríguez-Meza & Yang's, (2013) used 3 levels to measure access to finance from the demand side of finance. These namely are fully constrained, Partially constrained and non-constrained.

Those who were considered as fully constrained were SMEs' who have applied to external sources of finance in the previous year but were rejected as well as those who haven't applied to any external source in the previous year and the reason for not applying is other reason than enough capital.

SMEs' which were considered partially constrained are those that have applied to banks and/or private equity firms in the previous year and were rejected but still managed to get external finance from other sources.

Those who are considered as non-constrained were SMEs' who didn't apply for External source of finance in the previous year because they have enough capital for the firms need.

However, this study focuses on the supply side of finance in relation to the purpose of the title. According to Consultative Group to Assist the Poor (CGAP) (2013), which was established in 1995 as a consortium of public and private donors with its secretariat located in the World Bank (Independent Evaluation Group, 2008), the best way to measure access to credit from the supply side is to obtain a data regarding the number of loans provided to SMEs as a total number of funding.

As per the researchers knowledge no other research, which associate private equity investment criteria to SMEs access to finance was found, this measure was also extended to study access to finance from the supply side of equity financing.

Having this measure as a base however, this study gathered the data concerning manufacturing SMEs access to finance as a binary random variable. The respondents were made to choose from two alternatives; yes or no with regards to the question that asks whether there is an increase in the number of loans provided to or investment made on manufacturing SMEs' as a total number of funding in the previous year.

3.3.1.3 Mediating Variables

The mediating variable that was considered in this study was the information asymmetry between SMEs' and the external sources of finance, which are private equity firms and banks. The mediating effect of information asymmetry was classified into adverse selection, which was studied based on (Maobe, 2013; Islam and Nishiyama, 2017; Sood,2003) and Moral hazard. (Smith, Chang and Boyd, 1998). Based on these studies adverse selection was measured as reduced uncertainty, provision of lowered interest rate, decreased number of non-performing loans, as well as default on loans. Moral Hazard on the other hand was measured as reduced cost of monitoring, reduced cost of auditing, reduced chance of fund diversion and reduced chance of falsified project size presentation.

3.3.2 Data Type and Source

The data that this study used was mainly primary data that was collected from banks, Private equity firms and SMEs'. The data regarding the lending criteria used while considering to grant loan to SMEs' was collected from Banks while on the contrary the data regarding the investment criteria used to screen businesses before an investment could be made on them was collected from private equity firms which are based in Ethiopia. Also, data from SMEs' was collected in light of determining the perception and experience on how the identified criteria could affect their access to finance. Secondary data was also used to determine some specific characteristics of variables under consideration.

3.3.3 Data Collection Tools

The study comprised of 3 sets of questionnaires. The first set of questionnaires were designed and distributed to be filled by banks while the second set were distributed to the PE firms. The last set of questionnaires was distributed to the sampled manufacturing SMEs in Addis Ababa

3.3.4 Population

There are 3 sets of population under this study of which 3 sets of samples will be drawn. These are banks, PE firms, and individual investors that participate in private equity financing and SMEs' in Ethiopia.

There are 18 banks in Ethiopia. These namely are Commercial Bank of Ethiopia, Dashen Bank, Cooperative Bank of Oromia, Bank of Abyssinia, United Bank, Awash Bank, Zemen Bank,

Wegagen Bank,), NIB International Bank, Enat Bank, Berhan International Bank S.C., Addis International Bank, Abay Bank S.C., Bunna International Bank, Debub Global Bank, Lion International Bank, Oromia International Bank and development bank of Ethiopia. Commercial bank of Ethiopia and development bank are governmental banks while the rest are private banks.

On the other hand, the assessment on the Private Equity and Venture Capital regulatory ecosystem in Ethiopia reported by IFC, World Bank and East African private Equity and Venture Capital Association (EAVCA) (2020), there are about 15 active Private Equity invstments in Ethiopia that have invested in Ethiopia. These are namely Cephus Growth Capital Partners, SGI frontier capital, Zoscales Partners, Acent Capital, Catalyst Principal Partners, Kibo Capital Partners, Silk Invest, Zebu Investment Partners, Berkeley Energy, Duet Group, KKR, and Sun Capital Partners.

According to the data from the Federal Small and Medium Manufacturing Enterprises Promotion Authority (FSMMIPA) (2021) there are 4,163 small and medium-sized manufacturing enterprises in Addis Ababa. The small manufacturing enterprises accounts for 80.13% of the total number provided, which is equal to 3336 firms in number. The remaining 827 firms are categorized as medium sized manufacturing enterprises

3.3.5 Sampling procedure

This study included top 7 private banks (Awash International Bank, Dashen Bank, Bank of Abyssinia, United Bank, Nib International Bank, Wegagen Bank and Cooperative Bank of Oromia) which were reported to have a crucial role in channeling funds from savers to borrowers for investment in the year 2019/2020 (National Bank of Ethiopia, 2021). Though the Two state owned banks (Commercial Bank of Ethiopia and the development bank) have a major stake in the disbursement of fund in the form of loan, only the Commercial Bank of Ethiopia was included in the study. The development bank was excluded because its engagement with SMEs is mainly in the form of Lease financing (Development Bank of Ethiopia, 2016), which makes comparability with other banks difficult.

To capture the bank lending criteria that these banks use and study its effect on access to finance, a sampling procedure was applied based on the number of branches these banks have in Addis Ababa, which is presented below.

Table-3.1: Number of branches in Addis Ababa

No	Bank Name	Branches in A. A
1	Commercial Bank of Ethiopia	8
2	Awash International Bank	196
3	Dashen Bank	159
4	Bank of Abyssinia	221
5	United Bank	145
6	Nib International Bank	165
7	Wegagen Bank	174
8	Cooperative Bank of Oromia	82
Total		**1142**

Source: National Bank of Ethiopia 2021

However, it was found that commercial bank of Ethiopia process loans on district levels and not on the branch level. Owing to this the number of district offices that process loan were included in the study. The sample size was determined using Yemane's formula for 95% confidence level, with 5% level of precision. Generally a convenience sampling was used to conduct the study.

$$n= \frac{N}{1+N(e)^2} = \frac{1150}{1+1150(0.05)^2} = 296$$

From the private equity side, those private equity firms that are based in Ethiopia were included in the study. The firms namely are Cephus Growth Capital Partners, SGI frontier capital, Zoscales Partners and Acent Capital. A total of 8 questionnaire was distributed for this segment.

As to the third segment, convenience sampling procedure was used to choose sample SMEs' that will be included in the study. According to the federal small and medium manufacturing enterprise, (2021) there were a total of 4163 manufacturing SMEs in Addis Ababa. The sample size was determined using the Yamane's formula for 95% confidence level, with 5% level of precision. However, the number of small and medium enterprises in the sample was also made to reflect the proportion in the population.

$$n= \frac{N}{1+N(e)^2} = \frac{4163}{1+4163(0.05)^2} = 364.9 \approx 365$$

Table-3.2: Number of Small and Medium sized enterprises in the sample

Strata	**Small-Sized firms**	**Medium-Sized Firms**	**Total**
Number of Firms in the stratum	3336	827	4163
Strata Sample Size	$\frac{365}{4163}$ * 3336= 292.4 ≈ 292	$\frac{365}{4163}$ * 827=72.5 ≈ 73	365

3.4 Method of Data Analysis and Presentation

As discussed earlier the study used both descriptive statistics and quantitative data analysis techniques to meet its objective. More specifically the descriptive statistics was used to analyze the data from the private equity and SMEs side while Hayes logistic regression was used to measure the effect of bank lending criteria on SMEs access to finance. The SPSS (Statistical package for Social Science) software was used as the data analytics tool to perform the rigorous regression analysis. Also, the relative importance index was used to a weight the criteria identified from the supply side. According to Johnson & LeBreton (2004) Relative Importance Index (RII) or weight is a type of analysis which is used for ranking indicators (degree of importance). Relative Importance Index helps in finding the contribution of a particular carriable makes to the prediction of a criterion variable both by itself and in combination with other predictor variables The following formula was used to compute the weights in accordance to this index

$$\text{RII}= \frac{\sum W}{A*N}, \text{ where}$$

W-weighting was given to each statement by the respondents and ranges from 1 to 5;

A-Higher response integer (5); and

N—total number of respondents.

3.5 Reliability Test

Prior to a full-scale distribution of the questionnaire intended to the banks a pilot study was conducted to test the reliability of the questionnaire. As per the test the following Cronbach's alpha was obtaine. However the other 2 sets of questionnaires were used on the basis of other tested questionnaires. Questionnaire that was distributed to private equity firms was from Portmann and

Mlambo, (2013) while questionnaire distributed to SMEs was based on (Kuntchev, Ramalho, Rodríguez-Meza & Yang's, 2013).

Table-3.3 Reliability test for questionnaire-1 (Distributed to banks)

Variables	**No of items**	**Chronbach's Alpha**
Character	4	0.784
Capacity	4	0.810
Collateral	4	0.853
Condition	3	0.763
Capital	4	0.70
Activity	4	0.718
Adverse Selection	4	0.872
Moral Hazard	4	0.843

Given the result of the Cronbach's alpha the questionnaire was found to be reliable and thus the distribution proceeded and the data necessary to conduct the analysis was collected.

3.6 Validity Test

This test is concerned with the alignment of the questions within the questionnaire and the issue that needs to be addressed. According to the pilot test conducted it has been found that the questionnaires were clear and easily understandable.

Chapter Four
Data Analysis and Presentation

4.1. Bank Lending Criteria and Manufacturing SME's Access to Finance

4.1.1 Demography

Out of the 296 questionnaires distributed 270 questionnaires were collected making the response rate 91.21%. The demographic data that was obtained from the data; shows that out of 270 respondents 32.2% were female while 67.8% were male.

With regards to the years of experience the data obtained showed that more than half of the respondent lie within the category of 5 to 8 years of experience while about 37.8% reported that they have 9-12 years of experience within the industry.

4.1.2. Logistic Regression

As discussed earlier the Hayes logistic regression was used to assess the effect of lending criteria on access to finance. The following results were obtained

Collateral

Table 4.1: Direct relationship of Collateral on Moral Hazard

Model Summary (Moral Hazard-MH)						
R	R-Sq	MSE	F	df1	df2	p
0.7539	0.5683	0.2635	352.8329	1.0000	268.0000	0.0000
Model						
	Coeff	Se	t	p	LLCI	ULCI
Constant	5.1323	0.1348	38.0643	0.0000	4.8668	5.3977
Coll	-0.6879	0.0366	-18.7838	0.0000	-0.7600	-0.6158

From the result above it can be seen that collateral has a significant effect with a b of -0.6879 and se of 0.0366 on decrease in moral hazard, which in this study was measured by (reduced cost of monitoring, reduced cost of auditing, reduced chance of fund diversion and reduced chance of falsified project size).

This finding was inline with what was proposed by (Osano and Languitone, 2016), where collateral increases the cost of the borrower and thereby reducing unwanted behavior from the borrower's side, which in turn saves the banks from costly state verification and monitoring.

Table 4.2: Direct and Indirect of X (collateral) on Y(access to finance of Manufacturing SMEs)

Direct Effect of X on Y					
Effect	se	z	p	LLCI	ULCI
-3.7500	0.8096	-4.6317	0.0000	-5.3369	-2.1632
Indirect effect of X on Y					
	Effect	BootSE	BootLLCI	BootULCI	
MH	-4.8102	24.4319	-66.1534	-2.5096	

Table 5 shows the direct and indirect effect of collateral on Manufacturing SMEs access to finance. The direct effect of collateral is significant at (b= -3.7500, se= 0.8096) while the indirect effect is also significant at b=-4.8102 and a confidence 95%. However, the signs as can be seen are negative in both cases and this is attributed to how access to finance was measured.

The result shows that most of the respondents have agreed to the importance of collateral in the approval of the loan as well as its role in reducing potential moral hazard actions for SMEs to access finance. However, most of them has also reported that the number of SMEs provided with a loan in the previous year has not increased.

The possible explanation thus is that banks in there attempt to reduce potential moral hazard action as well as reduce risk of losing public money in case of default require collateral however the inability of SMEs to provide the collateral as presented in most studies (Nega and Hussein, 2016; Alam,2017; Yeboah and Adigbo, 2014) could be the reason for the unincreased number of SMEs accessing the loan in the previous year. Thus, collateral is negatively affecting SMEs ability to get loan.

Thus, in other way around this can be interpreted as the incident of collateral decreases moral hazard thereby paving the way for SMEs who provide collateral get access to loan. Therefore, the researcher fails to reject the **Ha11** hypothesis **"Moral hazard mediates the relationship between collateral and Manufacturing SMEs access to finance."**, which this study has found to be a

partial mediation effect, were the direct effect of collateral is important even after the mediating effect of moral hazard is introduced. This is because moral hazard is not the only reason for default, rather failure due to unforeseen events could occur and still collateral is a way that the banks reduce in losing the public money.

Capital

Table 4.3: Direct effect of Capital on Moral Hazard

Model Summary (Moral Hazard-MH)						
R	R-Sq	MSE	F	df1	df2	p
0.7487	0.75606	0.2682	341.9466	1.0000	268.0000	0.0000
Model						
	Coeff	se	t	p	LLCI	ULCI
Constant	0.4.4032	0.0990	44.4945	0.0000	4.2083	4.5980
Ctl	-0.5024	0.0272	-18.4918	0.0000	-0.5559	-0.4489

From the result it can be seen that the capital has a statistically significant effect with a b of -0.5024 and se of 0.0272 to the decrease in moral hazard (reduced cost of monitoring, reduced cost of auditing, reduced chance of fund diversion and reduced chance of falsified project size).

This result was found to be in line with what was proposed by (Bhatt,2012; Baiden, 2011), which stated that capital is one way to see borrower's commitment and dedication, which is important in mitigating moral hazard issues.

Table 4.4: Direct and Indirect of X (capital) on Y (access to finance of Manufacturing SMEs)

Direct Effect of X on Y					
Effect	se	z	p	LLCI	ULCI
-4.7652	1.1384	-4.1861	0.0000	-6.9964	-2.5341
Indirect effect of X on Y					
	Effect	BootSE	BootLLCI	BootULCI	
MH	-1.7089	16.0284	-50.4175	-0.3171	

The result in table-7 shows that both the direct (b=-4.7652, se= 1.1384) and indirect effect (b= -1.7089) of capital on access to finance is statistically significant therefore, we fail to reject the **Ha12 hypothesis "moral hazard mediates the relationship between Capital and manufacturing SMEs access to finance".** The mediation effect in this study was found to be a partial one as capital still poses significant even after the mediation effect was introduced. This shows that capital not only shows the owners dedication and commitment but also it aids in showing a borrower's risk of an unexpected loss in the industry thereby affecting access to finance directly as well. This is explained by (Strischek, 2000) which he stated that company with a large amount of equity is capable of covering all costs in order to achieve break-even and profitability.

The negative relationship however, as explained in the collateral section is also due to how access to finance was measured. The result shows that most of the respondents have agreed to the importance of capital in the approval of the loan as well as its role in reducing potential moral hazard actions. However most of them has also reported that the number of SMEs provided with loan in the previous year has not increased. The possible explanation is that the SMEs contribution to the fund is not up to what is expected by the bank which might have resulted in the rejection of their loan. Posing as a constraint for manufacturing SMEs accession of loan.

This result generally shows that those applicants who have both an excellent combination of human resource capital that have the ability to manage finance and accumulate asset as well as has contributed their own money to the project shows that the borrower is committed and dedicated towards the project and therefore there is less chance for the borrower to be engaged in moral hazard action. It also shows the firms ability to withstand pressures due to unexpected loss in the industry. Thus, it can be concluded that the incident of capital in likely to increase the chance of SMEs accessing loan.

Character

Table 4.5: Direct Effect of Character on Adverse Selection

Model Summary (Adverse Selection-AS)						
R	R-Sq	MSE	F	df1	df2	p
0.7578	0.5743	0.4784	361.5800	1.0000	268.0000	0.0000
Model						
	Coeff	se	t	p	LLCI	ULCI
Constant	7.1228	0.2189	32.5455	0.0000	6.6919	7.5537
Char	-1.0291	0.0541	-19.0153	0.0000	-1.1356	-0.9225

From the result above it can be seen that there is a significant relationship between character and adverse selection. The result showed that respondents have agreed importance of character for SMEs to access loan, which in turn is assumed to decrease the adverse selection measured in lowered uncertainty, decreased number of non-performing loans, decreased number of defaults and possibility of lower interest rate. In other words, these results show that those that score a higher mark on character are most likely to decrease the chance of adverse selection. This is in line to what Neff, (1998); Sood, (2003) and Rasmusen, (2001) has proposed in their studies.

Table 4.6: Direct and Indirect of X (character) on Y (access to finance of Manufacturing SMEs)

Direct Effect of X on Y					
Effect	Se	z	p	LLCI	ULCI
-1.0209	1.0264	-0.9947	0.3199	-3.0326	0.9907
Indirect effect of X on Y					
	Effect	BootSE	BootLLCI	BootULCI	
As	-6.2525	13.6878	-13.6401	-4.9180	

As can be seen the above table the direct effect of character on access to finance of SMEs is statistically insignificant while on the contrary the indirect effect of character on access to finance mediated by adverse selection is negative with a b= -6.2525 and statistically significant. This shows that there is a full mediation effect between character and Manufacturing SMEs access to

finance. Therefore, we fail to reject the **Ha21 hypothesis "Adverse selection mediates the relationship between character and manufacturing access to finance".**

This result shows that the future endeavor of the SME can be foreseen through the past record of the entrepreneur owning it or the quality of the management team itself. In other words, those entrepreneurs with a very good entrepreneurial character including an excellent track record and a high level of honesty and integrity are more likely to handle risks very well and do things in a straight forward manner thereby decreasing the chance of business failure than those with a poor score on this specific consideration. Thus, those who are found at the top list of the character consideration are most likely to decrease the bank's chance of selecting the wrong candidate for the loan and thus have the tendency to access a loan.

However, the relationship shown here is negative because those that agree to the fact that character can decrease the chance of selecting the wrong candidate for the loan, also have reported that the number of manufacturing SMEs in their branch hasn't increased. This could be attributed to two reasons. The first being failure of the bank to be able to thoroughly understand or study the behavioral feature of the applicants or the past record of the applicant isn't good enough to be accepted. This can be explained by what is known as relationship lending Rahman, Belas, Rosza, and Kliestik (2017) where banks prefer to lend to those that have prior relationship with them as such a method yields private information to lenders.

Capacity

Table 4.7: Direct Effect of Capacity on Adverse Selection

Model Summary (Adverse Selection-AS)						
R	R-Sq	MSE	F	df1	df2	p
0.5176	0.2679	0.8228	98.0950	1.0000	268.0000	0.0000
Model						
	Coeff	se	t	p	LLCI	ULCI
Constant	5.6330	0.2677	21.0446	0.0000	5.1060	6.1600
capa	-0.7778	0.0785	-9.9043	0.0000	-0.932	-0.6232

It can be seen that capacity measured in terms of high liquidity ratio, quick ratio, return on asset and profit margin has a significant positive effect on the decrease of adverse selection, which this study has measured as decrease in uncertainty, possibility for lowered interest rate, decreased number of non-performing loans and decreased in the number of overall defaults.

Table 4.8: Direct and Indirect of X (capacity) on Y (access to finance of Manufacturing SMEs)

Direct Effect of X on Y					
Effect	Se	z	p	LLCI	ULCI
0.3292	0.7498	0.4390	0.6606	-1.1403	1.7987
Indirect effect of X on Y					
	Effect	BootSE	BootLLCI	BootULCI	
as	-5.0988	9.4775	-8.8780	-3.9419	

From the above result, it can be seen that the direct effect of capacity on Manufacturing SMEs access to finance is insignificant while the indirect relationship with access to loan is significant with b= -5.0988 at 95% confidence interval. Therefore, we fail to reject the **Ha22 hypothesis** which states **"Adverse selection mediates the relationship between capacity and Manufacturing SMEs access to finance."**

This shows that banks as a major responsible party to reallocate capital in the economy, are also responsible to direct the capital in the most efficient and safe way as it has a public interest. Owing to this bank will assess the amount of loan that an SME can carry before they actually go for the amount that the SME is requesting. Thus, those having the right amount of capacity for the loan they are asking are most likely to get the loan

But when the notion of adverse selection is applied, it is meant that the bank will have to choose from among vast candidates that have applied for that amount. Still this ratio will easily help the bank identify the best one as the highest capacity can be chosen for a given amount and thus adverse selection can be decreased in such a way which in turn will pave the way for those that have the highest capacity possible are likely to gain the access to loan.

The negative relationship again shows that capacity being one of the criteria for which SMEs applications have been rejected in the previous year contributing the unincreased number of SMEs accessing loan in the previous year.

Condition

Table 4.9: Direct Effect of Condition on Adverse Selection

Model Summary (Adverse Selection-AS)						
R	R-Sq	MSE	F	df1	df2	p
0.1933	0.0373	1.0820	10.3977	1.0000	268.0000	0.0014
Model						
	Coeff	se	t	P	LLCI	ULCI
Constant	3.6240	0.1922	18.8569	0.0000	3.2456	4.0024
Con	-0.2286	0.0709	-3.2245	0.0014	-0.3682	-0.0890

As can be seen form the above table condition measured in terms of sufficient reason to request loan, meeting the minimum desired size for the loan and positive macro-economic out look to have significant effect at b= -0.2286 and se of 0.0709 with decrease to adverse selection characterized by a lowered uncertainty, decreased number of non-performing loans, and default on loans as well as pave the way a lower interest rate provision.

Table 4.10: Direct and Indirect of X (condition) on Y (access to finance of Manufacturing SMEs)

Direct Effect of X on Y					
Effect	se	z	P	LLCI	ULCI
0.7955	0.4715	1.6871	0.0916	-0.1287	1.7198
Indirect effect of X on Y					
	Effect	BootSE	BootLLCI	BootULCI	
As	-1.5993	4.6417	-4.6158	-0.6524	

The result presented in the above table shows the direct effect of condition on access to finance is insignificant while its indirect effect on access to finance is significant at b = -1.5993. Therefore, we fail to reject the **Ha23 Hypothesis that states that "Adverse Selection mediates the**

relationship between condition and Manufacturing SMEs access to finance." as full mediation was found.

The possible explanation is that though the SMEs are from the manufacturing sector, there end product might vary and the macroeconomic condition doesn't affect every manufacturing SMEs in the same way. Also, the intended purpose of the loan might vary. In other words, the SMEs looking for the loan could be looking for working capital or a capital to purchase fixed asset. Given that each combination brings a different potential for each firm, thus the more different possibilities available the more possible the selection process arrives at the best applicant. Thus, condition can be thought of as a way to reduce adverse selection where in turn paves the way for the one with the best combination of internal and external condition to access the loan. However, the negative result shows that SMEs access to loan in the previous year has also been affected by both external and internal conditions.

Activity

Table 4.11: Direct effect of Activity on Adverse Selection.

Model Summary (Adverse Selection-AS)						
R	R-Sq	MSE	F	df1	df2	p
0.2441	0.0596	1.0570	16.9855	1.0000	268.0000	0.0001
Model						
	Coeff	se	t	P	LLCI	ULCI
Constant	4.1390	0.2742	15.0971	0.0000	3.5992	4.6787
Act	-0.3426	0.0831	-4.1213	0.0001	-0.5062	-0.1789

The table above presents the direct effect of activity measured in terms of shorter credit collection period, above industry asset turnover, longer credit payment period, and above industry average inventory turnover has a direct and positive effect to decrease in Adverse selection.

Table 4.12: Direct and Indirect of X (activity) on Y (access to finance of Manufacturing SMEs)

Direct Effect of X on Y					
Effect	se	z	P	LLCI	ULCI
-0.5614	0.5407	-1.0382	0.2992	-1.6211	0.4984
Indirect effect of X on Y					
	Effect	BootSE	BootLLCI	BootULCI	
As	-2.2127	6.7729	-4.7218	-1.1589	

The logistic regression result shows that the direct effect of activity on SMEs access to finance is insignificant while the indirect effect through the reduction of adverse selection poses significant with a b of -2.2127 at 95% confidence interval. Therefore, we fail to reject the **Ha24 hypothesis** which states that **"Adverse selection mediates the relationship between Activity and manufacturing SMEs access to loan"**. The result shows that there is a full mediation effect of adverse selection between activity and manufacturing SMEs access to loan.

The negative coefficient here also shows that though a high score on activity could increase the tendency of SMEs accession of loan by enabling them standout from among other applicants thereby decreasing the adverse selection. Either the inability of SMEs to meet the criteria or the failure of the bank to access a legit information with regards to the activities of SMEs has however resulted in the unchanged number of SMEs access to loan in the previous year, which the result has shown in a negative sign.

4.1.3 Bank Lending criteria Weight

From the above section, it can be seen that all the criteria listed above play a significant role in SMEs access to finance. However, this section deals with as to the weight attached to each criterion. The relative importance index (RII) was used to rank the criteria, for which the formula has been provided in Chapter 3.

Table 4.13 Bank lending criteria Relative importance index

	5	4	3	2	1	W	N	A*N	RII	Relative %	Rank
Collateral									**0.717037**	**17.88**	2
Coll-1	245	368	153	110	23	899	270	1350	0.665926		
Coll-2	250	332	165	70	47	864	270	1350	0.64		
Coll-3	225	336	171	80	44	856	270	1350	0.634074		
Coll-4	1050	132	60	8	3	1253	270	1350	0.928148		
Capacity									**0.666481**	**16.62**	4
Capa-1	320	380	237	38	13	988	270	1350	0.731852		
Capa-2	275	368	258	42	16	959	270	1350	0.71037		
Capa-3	135	156	441	62	26	820	270	1350	0.607407		
Capa-4	115	184	462	48	23	832	270	1350	0.616296		
Character									**0.77037**	**19.21**	1
Char-1	420	412	186	32	5	1055	270	1350	0.781481		
Char-2	910	192	66	22	7	1197	270	1350	0.886667		
Char-3	335	428	192	50	7	1012	270	1350	0.74963		
Char-4	375	200	231	81	9	896	270	1350	0.663704		
Condition									**0.511111**	**12.75**	6
Con-1	135	192	84	254	40	705	270	1350	0.522222		
Con-2	85	100	279	100	85	649	270	1350	0.480741		
Con-3	135	108	216	226	31	716	270	1350	0.53037		
Capital									**0.70537**	**17.59**	3

Cap-1	295	364	135	94	28	916	270	1350	0.678519		
Cap-2	380	296	165	144	29	1014	270	1350	0.751111		
Cap-3	475	228	96	136	18	953	270	1350	0.705926		
Cap-4	455	192	153	92	34	926	270	1350	0.685926		
Activity									**0.639815**	**15.95**	5
Act-1	180	240	285	124	17	846	270	1350	0.626667		
Act-2	335	256	141	124	30	886	270	1350	0.656296		
Act-3	150	288	255	92	37	822	270	1350	0.608889		
Act-4	315	344	75	142	25	901	270	1350	0.667407		

The first criteria according to the finding of this study is character with an RII of 0.77037 and 19.21 relative percentage. There are four sub criteria under it. Among these sub-criteria, borrowers honesty and integrity is the criteria that is given the greatest weight with an RII of 0.886667. Possible explanation is that, Honesty and integrity is the most important aspect whether for adverse selection or moral hazard elimination. No matter how best the potential of the firm is and/or excellent track record of the entrepreneur, lack of honesty the banks choice will turn out to be wrong as moral hazard action are most likely to follow. However, the track record of the entrepreneur still stands the second most important consideration under the character criteria. As the future of the firm highly rely on the entrepreneur's skills and know-how form his/her past endeavors, which might help easily tackle problems that might arise within the firm. The result also shows that educational background and gender of the entrepreneur are the sub criteria with lowest weight attached to with an RII of 0.74963 and 0.663704 respectively.

The criteria that comes second is the collateral with an RII of 0.717037 and relative percentage of 17.88, which comprises the adequate immovable, movable asset, personal guarantee and intangible asset as its sub criteria. Adequate movable and immovable asset holds the greatest weight with an RII of 0.665926 and 0.928148 respectively, while the last on the list is to submit intangible or patent right.

The criterion that comes next to character and collateral is the capital with an RII of 0.70537 and relative percentage of 17.59%. Prior contribution of the borrower on the project tor which the loan is applied for is the sub criterion that is given the highest weight, which is an RII of 0.751111. The next highest weight is attached to the sub criterion which is related to having a demonstrated ability to manage finance 0.705926. following this sub-criterion; having alternative way to repay debt and demonstrated ability to accumulate asset comes one after the other having an RII of 0.685926 and 0.678519 respectively.

From the above weights attached it can be seen that collateral and capacity have a close weight which is about 17% and thus can be considered equivalent than give them a rank. The possible explanation for this that though character remains important for good performance and reduction of information asymmetry. the highest weight attached from among the character is honesty and integrity, where subjectivity is the highest due to the difficulty to understand human nature. Owing to this banks tend to emphasis to easily raise the cost of borrowers by requiring owner contribution through collateral and capital (Osano and Languitone, 2016).

The criterion that stood 4th is the "capacity" with an RII of 0.666481 and relative percentage of 16.62%. There are four measures used to study the capacity criterion. These are the quick ratio, liquidity ratio, high return on asset and high profit margin. The weight attached to these sub creations was found to be 0.71037,0.731852, 0.61629 and0.607407 respectively. The criteria that stood 5th and 6th were found to be the activity and condition with an RII of 0.639815 and 0.51111, relative percentage of 15.95 and 17.59 respectively. The possible explanation for the condition to be the least criteria considered is that, unless and otherwise the macro-economic outlook has affected the SMEs capacity itself making it less preferable for loan approval (Bayiley,2021) has found that banks in Ethiopia do well regardless of macro-economic conditions and thus the effect of macroeconomic factors on the SMEs is rather assessed through their capacity and activity.

4.2 Private equity firm's Investment Criteria and Access to finance

This section is intended to analyze the data obtained through a total of 8 questionnaire distributed to the PE firms that provide growth capital. All 8 questionnaires were received back making the response rate 100%. The questionnaire had 2 segments. The first segment was dedicated to obtain demographic data of the respondents. The second segment held Likert scale questions with regards

to the investment criteria used by the PE firms and about Manufacturing SMEs Access to finance from this sector.

4.2.1 Respondents Demography

The data with regards to this shows that 5 of the respondents were male while 3 were female. Put in a percentage 62.5% were male while the female respondents hold 37.5%.

Also out of the total respondents those of them that had senior analyst, Investment analyst and business analyst position were 3,3,2 respectively. Put in a percentage respondent that had senior analyst and investment analyst title were 37.5% each while 25% of them had business analyst tittle

The last analysis of this section is with regards to the years of experience within the industry. 7 out of 8 respondents, that is 87.5 of the respondents reported that there experience level lies between the range of 3 to 6 years. However, 1 respondent's experience lie between the range of 7 to 10 years.

4.2.2 Likert Scale analysis

As discussed earlier a descriptive statistic was used to analyze this section as the number of the total population is to small. In order to analyze the data, the Likert scale of 1-5, which ranges from strongly disagree to strongly, the relative importance index (RII) was used to first weight each criterion and analyze the relationship with Manufacturing SMEs Access to finance. The result is shown below.

Table 4.14: Private Equity Investment Criteria Relative Importance Index

	5	4	3	2	1	W	N	A*N	RII	Relative (%)	Rank
Management consideration									**0.885**	**30.2**	**1**
mgmt-1	30	8	0	0	0	38	8	40	0.95		
mgmt-2	15	12	0	0	0	27	8	40	0.675		
mgmt-3	25	15	0	0	0	40	8	40	1		
mgmt-4	40	0	0	0	0	40	8	40	1		
mgmt-5	28	4	0	0	0	32	8	40	0.8		
Market Consideration									**0.6125**	**20.9**	**3**

mkt-1	8	0	0	0	0	8	8	40	0.2		
mkt-2	25	8	0	2	0	35	8	40	0.875		
mkt-3	15	20	0	0	0	35	8	40	0.875		
mkt-4	0	0	12	8	0	20	8	40	0.5		
Product Consideration									**0.605**	**20.6**	**4**
Pdt-1	10	4	3	8	0	25	8	40	0.625		
pdt-2	20	16	0	0	0	36	8	40	0.9		
pdt-3	20	16	0	0	0	36	8	40	0.9		
pdt-4	5	0	0	8	3	16	8	40	0.4		
pdt-5	3	5	0	0	0	8	8	40	0.2		
Financial Consideration									**0.8312**	**28.3**	**2**
fin-1	15	20	0	0	0	35	8	40	0.875		
fin-2	35	4	0	0	0	39	8	40	0.975		
fin-3	10	12	0	0	0	22	8	40	0.55		
fin-4	25	12	0	0	0	37	8	40	0.925		

As per the result from the RII computation the management criteria is the criteria that stoods first with RII of 0.885 and relative percentage of 30.2%. Under this criterion there were about 5 criterion that were weighted using the RII. The result shows that the two most important managerial criteria that are prioritized when assessing SMEs eligibility for investment, were honesty and integrity among management team and the track record of the entrepreneur.

This result shows that though private equity firms rely on their ability to nurture and add value to the firm they would invest on, these two criteria stand as the bottom line for smooth operation and successful change implementation in the company. Unless honesty and integrity aren't there a problem of trust and communication gap will be created between the PE firm and the entrepreneurs thereby causing dissatisfaction among both parties, which in turn could lead to lowered performance. PE firms equal to this sub-criterion also tend to observe the entrepreneur's track record, more specifically if they are engaged in various entrepreneurial activities, which in other words could add some objectivity to what is subjective to judge. It can be used to easily foresee the how smooth operations can be and how well opportunities can be used in the future.

The entrepreneur's knowledge of the sector is also important as this has a say on entrepreneurs' ability to cope up within the dynamic environment and even could stand as competitive advantage to grow the firm by creating the synergic effect from different sets of skills and know-how.

The criteria that comes next to the management consideration is the financial consideration with an RII of 0.8312. There are also about four sub-criteria that were indexed using the RII method. the sub-criteria that stood first within this section is having above industry average internal rate of return. The internal rate of return is among the investment analysis ratio that investors use to measure the worthiness of an investment potential. Given the modality of the industry itself, private equity firms require a higher rate which could compensate for the risk they have shared and the market premium for the investment. The possibility of trouble-free sale of capital interest follows the IRR criterion showing that Private equity firms emphasizes on the exit potential of the investment. This could be attributed to the fact that the actual value created can certainly be measured upon exit and thus a trouble-free exit that minimize cost is preferred by the PE firms. This criterion was then followed by shorter payback period and possibility to withdraw continuous dividend. The relative lower weight of the criteria "possibility for continuous dividend" can be complemented with the higher weight attached to trouble free exit. In other words, the result shows that though the criteria remain important, PE firms prefer the accumulated perks that they can rip upon the exit.

Following the financial consideration is the market consideration, which contains 4 sub criteria. The RII for this criterion as whole is 0.6125 while the two of the criteria holds an equal weight of 0.875. these criteria specifically the high market share and market growth rate. As per the elaboration in the literature review part, private equity firms mostly are financing options to be considered after the business has reached a certain level of maturity, the result has also confirmed to what has been put there. Besides the lowest criteria that has been attached to in the market consideration is the presence of low competition within the market. The weight attached to this category, generally imply that given the possibility for high market growth rate and share, private equity firms emphasize in building strategy and competitive advantage of their portfolio company through their non-financial support. Thus, it can be said that lower market competition doesn't necessarily inhibit SME from getting the investment fund.

Finally, the lowest weight was attached to the product criteria. The RII showed that this criterion holds a weight of 0.605. The product consideration was weighed based on 4 sub-criteria. Among these sub-criteria two of the products are given the highest weight in the group. These are a good market acceptance and ability of the product to provide evidently good satisfaction. Following these two criteria is the proprietary manufacturing procedures. All these criteria are given a better weight as they create a favorable environment for value creation. However, the product criteria that was given the lowest weight among the group which is about an RII of 0.605 and relative percentage of 28.3%.

Last but not least is the direction that was obtained from the question with regards to access to finance of manufacturing SMEs. The question was put in a way to obtain data with regards to an increase of in the number of manufacturing SMEs that the firm has invested on in the previous year. As to the data obtained all the respondents reported that there is no increase in the number of such firms that their respective firms has invested on. On the other hand, the average response with regards to each criterion was found to be above 3, which shows that most of them either are neutral and/or agree to the fact that these criteria can be used to assess SMEs worthiness for investment.

Thus, this Generally shows that there is a possibility for the criteria listed above, affect the SMES access to finance. and therefore, the researcher fails to reject the **Ha31, Ha32, Ha33 and Ha34 hypothesis that states that management consideration, market consideration, Product consideration and financial consideration affect SMEs access to finance, respectively,** However, to get the full picture of the issue the demand-side analysis, which will be presented in the following section, was conducted.

4.3 Demand Side Analysis

Out of 365 questionnaires distributed 200 questions were received back making the response rate 54.8%. The questionnaire distributed to the demand side had 2 segments. The first part was intended to capture some demographic characteristics of the respondents as well as to be able to categorize the firm as small or medium-sized enterprise

4.3.1 Demography

Out of the 200 hundred respondents that have participated in the study 36 were female while the rest of the 164 respondents were male. Put in a percentage, Female respondents account 18% while male respondents held 82% of the total. Also, it was found that 58% work on the position of bank managers while 42% were credit officers.

The analysis of capital was made based on two categories to facilitate the classification of the respondents as either small or medium enterprises. The two ranges were selected based on the definition given to manufacturing SMEs by FSMME.

Out of the 200 respondents, the capital of 145 firms lies within the range of 100,000 ETB – 1.5Million ETB. The capital of the remaining 55 firms lies within the range of 100,001 ETB- 20 Million ETB. In the same manner, the number of employees within the 145 firms lies between the range of 6-30 while the rest of the firms' number of employees lies between the range of 31-100. Based on this data, therefore, the 145 (72.5%) firms that have participated in the study can be classified as Small while the remaining 55 (27.5%) can be classified as medium enterprises.

As to the educational background of the respondents, 5 categories of responses were observed. These are vocational certificates, high school, university degree, masters, and others, which the respondents specified as some university courses. The percentage of each of the categories was found to be 23%%, 37%, 30%, 4%, and 16% respectively.

4.3.2. Demand Side Criteria and Access to finance Analysis

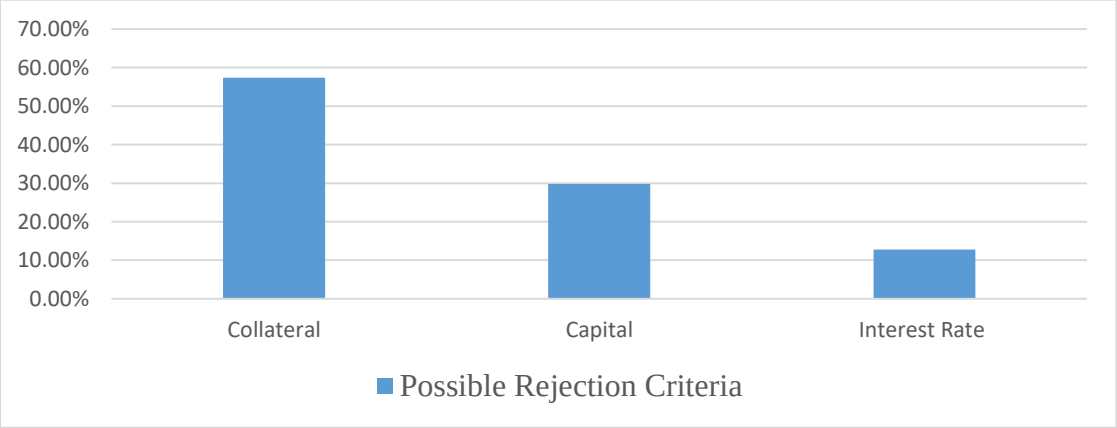
Out of the 200-questionnaire collected it was found that 67 (33.5%) of the respondents hadn't tried to raise any external funds in the previous year. Out of these 67 respondents, 57 reported that their reason for not applying for external finance is because they thought their proposal would be rejected. 10 of the respondents however have ticked the other choice box but haven't specified their reason.

This shows that there are no non-constrained SMS that has participated in the study. Non-constrained SMEs according to Kuntchev, Ramalho, Rodríguez-Meza & Yang, (2013) are those SMEs who haven't applied for external finance due to enough capital and no such enterprise was found in this study.

Moreover out of the 57 respondents who have self-isolated out of getting external finance, 47 (80%) of them reported bank as the potential institution which would reject their proposal while the remaining 20% mentioned microfinance as the institution which would reject their proposal.

These respondents in the next question were asked about the criteria they think are the potential reason for bank rejection. Out of the 47 respondents, 27 of them mentioned collateral as a possible criterion while 14 of the respondents mentioned owners own contribution(capital) as the potential rejection criteria. 6 of the remaining respondents however chose the other option and specified interest rate as a possible rejection criterion.

Figure-4.1 Possible rejection criteria

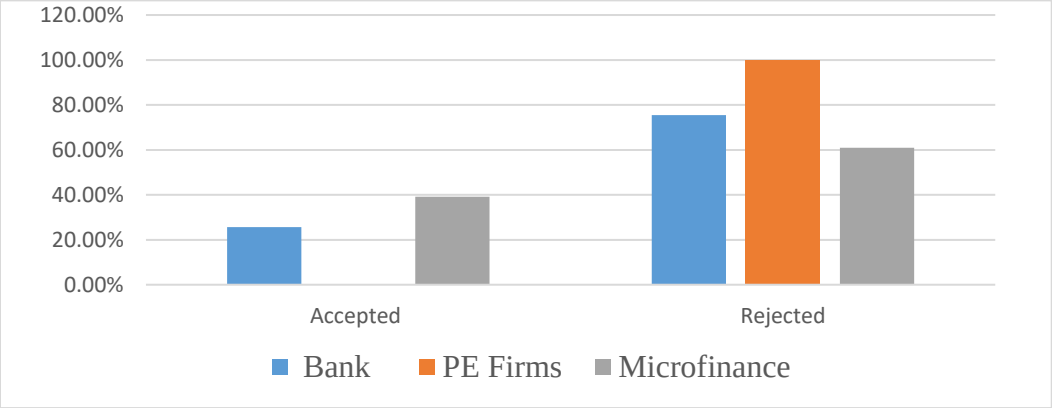


This implies that there is a misperception concerning bank lending criteria. Some of the respondents self-rationed by assuming interest rate as a pre-determined criterion against which each applicant is screened against it. However, the interest rate could be rather a function of different factors, which this study has found one factor to be the information made available to banks.

The next section of the questionnaire was dedicated to those who have applied to external finance in the previous year. Out of 133 respondents who have filled this part, it was found that 61 and 64 of the respondents approached banks and micro-finance institutions while only 8 respondents approached PE firms. From this data, it could be deduced that the number of SMEs that approach private equity firms is very small and can be attributed to the level of awareness that SMEs have as to the existence of such institutions.

The next question was with regards to the acceptance or rejection of the proposals submitted to banks and PE firms. Out of 61 respondents that have approached banks 46 of them responded that their proposal was rejected while 15 of the respondent's proposal was accepted. However, 8 respondents that have approached Private Equity firms reported rejection. On the other hand, 25 respondents who have approached microfinance institutions reported that their proposal was accepted while the remaining 39 responded that their proposal was rejected.

Figure 4.2: SMEs Rejected Vs Accepted proposal



Out of the 46 respondents that were rejected by bank 51% of them reported that rejection was due to the inability to provide collateral, 20% of them reported that rejection was due to capital and the 21% of them has either reported the macroeconomic and other factors to be the rejection reason. On the other hand, all that have pitched to private equity firms reported the inability to meet IRR expectation of the PE firm to be the major constraint.

Figure 4.3: Bank rejection reason

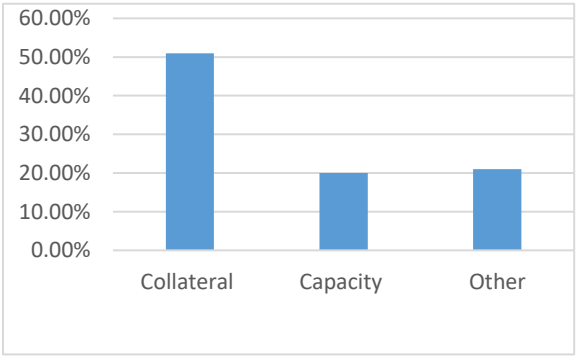
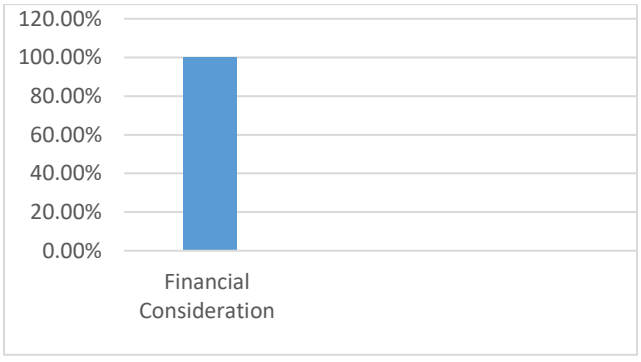


Figure 4.4: Private equity firms rejection reason



However out of the respondents that were rejected by banks and private equity all together 10 were able to access from family and friends while the remaining reported to work with the capacity of

the internal finance. this generally showed that there were 151 fully constrained manufacturing SMEs while the partially constrained were 10 in number.

Chapter five
Conclusion and Recommendations

5.1 Summary

The study aimed in Analyzing the effect of bank lending and investment criteria on manufacturing SMES access to Finance. In light of these both demand and supply side analysis was conducted. 270, 8 and 200 questionnaire were collected out of 296, 8, and 365 questionnaires distributed to Banks, private equity firms and manufacturing SMEs in Addis Ababa. The descriptive analysis was used to analyze the data from private equity firms and SMEs while the hypes logistic regression was used to analyze the data from banks.

According to the result shown above the lending criterions character, capacity, condition and activity are found to have a significant indirect relationship with access to finance mediated by a adverse selection, which was measured as lowered uncertainty, decreased number of non-performing loans, decreased number of defaults and possibility of lower interest rate. Besides a partial mediation of moral hazard was found between two the characters; collateral and Capital, and access to finance. The incidence of these was found to decrease the moral hazard action, which this study measured as reduced cost of monitoring, reduced cost of auditing, reduced chance of fund diversion and reduced chance of falsified project size. This in turn was found to increase the likely hood of SMEs accessing finance. Though the exhibition of all these features by the SMEs increases the chance of the SMEs accessing loan. It was found that these criterion were actually hindering them from getting finance either due to their inability to meet them or the banks inability to get the necessary information with regards to each one of them as explained by (Nega and Hussein, 2016; Alam,2017; Yeboah and Adigbo, 2014).

However, the study also confirmed this through the demand side analysis where 51% of them reported collateral as the rejection reason from bank while 21% of them reported capital as the rejection reason while the remaining was held by other criterions including the macroeconomic factor, activity and capacity.

On the other the descriptive analysis of the investment criterion from the private equity side showed that all the criterion where significant in accessing SMEs for investment as their mean response were found to be 3 and above. Also, the it was found that the number of manufacturing SMEs funded in the previous year haven't increased thereby showing a possibility of the criterion influencing SMEs chance to get access to the investment fund. The demand side analysis also showed that all that approached the Private equity firms were rejected, while the reason they raised was inability to meet the IRR expectation of the Private Equity firms.

Given that the lending and investment criteria used by banks and private equity firms affect SMEs chance of accessing an external finance. The result from the Relative importance index (RII) was used to compare the weights that is attached each criterion in each of the industries.

The first criterion considered by banks and private equity affecting the SMEs access to loan is the character and managerial considerations respectively. This can be generalized as the entrepreneurial consideration or criteria. More specifically both gives the highest score to the honesty and integrity of owner/manager.

As per the result obtained the relationship between character and access to finance is mediated by adverse selection. Owing to this, banks give this criterion priority as it's the base for making the wrong choice and source of moral hazard actions if not engaged with the right type. Banks expect honesty and integrity from the candidate as the gap on information asymmetry can be decreased due to this factor. In other words, all other criterion to be considered by the bank can be highly be manipulated and made-up in a way that could engage the bank in adverse selection and also increase its vulnerability to post transaction cost. On the other hand, private equity firms are known to actively participate in the operation of the firm they would be investing on. they rely on their ability to nurture their portfolio companies (Gompers, Kaplan, and Mukharlyamov, 2016) however the intended value can only be created when there is a smooth communication between the PE firms representative and existing management team. Thus, generally PE firms consider management character to affect the highly emphasized factor by PE firms, which is the value creation process. Private equity also gives track record of the entrepreneur equal weight to honesty and integrity and cross check if the team is composed of individuals who are serial entrepreneurs or not. This is because this can also be a core competitive advantage, where technologies can be easily copied and substituted to be considered to serve the competitive advantage.

The second and third criteria that banks gives priority and has the tendency to affect manufacturing SMEs access to loan is collateral and capital respectively. As per the result obtained above collateral and capital is set as criteria to be fulfilled by SMEs in order to increase the cost of the borrower in case of moral hazard actions post transaction. The possible explanation is that, though character, and more specifically honesty and integrity are given priority, it is a very difficult task to fully understand human nature. This in turn creates a room for error in the subjective analysis of the character of their applicants. Due to such possibility's banks prefer to minimize their cost due to information asymmetry by requiring candidates to fulfil such criterion. However, the inability to meet such requirement is what creates the constraint on the accession of finance by SMEs, which has also been confirmed from both demand and supply side analysis. 51% and 21% of the SMEs that reported that their application rejected by bank report collateral and capital as a reason for rejection respectively. Activity, capacity and condition are the least sought out criteria as per the analysis for the supply side

On the other hand, the second and third criterion that Private equity firms gives emphasis to are the financial and market criteria. This path shows that private equity firm would first assess possibilities for smooth value creation and best uses of potential opportunities through the managerial criteria and look into the actual value that could be created and the possibility of the realization of their value through the assessments they make on the financial aspect of the a given business. PE firms use the market consideration to foresee the actual possible value that can be created if they are to implement a growth strategy in the course of nurturing their portfolio companies. This usually is what is used to confirm the assumptions underlying the financial analysis.

The last thing to be considered by private equity firms is the product criterion. This related to the analysis that is conducted while studying the market based on the market considerations. Given that the product has enough demand within the market and is underserved, the consideration under product differentiation doesn't pose important.

Though PE firms give the highest weight to managerial capability the demand side analysis however, showed that, out of all the above listed investment criteria the possible constraint to access the PE fund is the inability to meet the IRR expectation of the PE firms. This gap however

might be due to the SMEs perception on one's own managerial capability and what the PE firm perceives.

Also, another observation that was found by the study was that there is clearly small number of firms that approach the private equity firms to source finance. the possible explanation for this the lack of awareness about the role of private equity firms.

5.2 Conclusion

The study concludes SMEs access to debt doesn't show improvement as a result of not-fulfilling mainly Banks' non-performance-related criteria. Those that are generalized as the non-performing criteria are namely character, collateral, and capital. These criterions are what are weighted as the first, second and third criterion by the banks while collateral and capital are the frequently listed from the demand side. However, the study also concludes that the existing collateral and capital related criteria directly influence Bank SME financing decisions, character, activity, condition, and capacity do not, implicating the need for revising the existing bank SMEs lending criteria.

On the other hand, SMEs access to investment fund doesn't show improvement due to lifestyle entrepreneurship nature of manufacturing SMEs in Ethiopia to attract PE investment. Unlike to firms that are established based on innovative entrepreneurship; those that are established based on lifestyle entrepreneurship are mostly engage in an activity that the owner/manager enjoys or to reach a level of activity that generates sufficient revenue, their product development expertise and activities as well as marketing are also limited (Peters, Frehse, & Buhalis, 2009), which in their very sense lacks what is required by PE firms providing growth capital.

5.3 Recommendations

- As has been discussed earlier, the criterions that are found to be significant including the character, capacity, activity and condition are found to have an indirect effect on access to finance rather than affecting it directly. Thus, this implicates that banks need to revise the SMEs lending criterions that they operate on.
- Also, it has been found that the number of SMEs approaching the PE firms are very small, which could be attributed to the understanding that SMEs have with regards to the industry. This implies that there is a need for PE firms work on in creating the necessary awareness about their services among SMEs. This may generally require working in close collaboration

with incubation firms that basically mentor, train, and guide startup businesses as well as introduce them to potential investors.

- Generally, it can be seen that access to finance of SMEs from banks is constrained by the inability of SMEs to provide collateral and capital, which are used by banks to reduce their vulnerability to pre and post transaction costs. On the other hand, studies like (Fontenay, 2013) shows that PE firms has less vulnerability to moral hazard due to active participation within the firm's operation. Owing to this, the effect of cooperation between banks and private equity firms on accessibility of finance can be possible future research area.
- The character is the mostly sought out criteria from among the bank lending criteria and the inability of the bank to get a full information with regards this might constrain SMEs while banks might divert to a relationship lending where only those that have prior contact with the bank are selected for loan. Thus, this can also be seen as a future research area.

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Questionnaire to Banks on "Lending Criteria to SMEs'"

Name of the Bank (optional): _____
Position:_____
Years of experience in the industry:_____
Gender ☐ Female ☐ Male

- The questionnaire holds some criteria that could be used by banks to screen Manufacturing SMEs' for loan. Please mark the boxes in accordance to the importance of the specific criterion that the bank uses while screening SMEs.
- The Likert scale 1- 5 refers to the following labels
  - **5=Strongly Agree**
  - **4= Agree**
  - **3= Neutral**
  - **2=disagree**
  - **1=Strongly Disagree**

Reference:

- **Businesses considered small in this study are businesses that have 6-30 employees and a capital of [100,001- 1.5 Million birr]**
- **Businesses considered medium in this study are businesses that have 31- 100 employees and a capital of (1.5 million birr- 20 Million birr]**

5C	1	2	3	4	5
Collateral					
Adequate movable asset to back the loan is necessary for the loan application to be accepted					
strong backing with personal guarantee must be provided to get loan					
Ability to submit intangible assets such as patent rights contributes for the loan application to be accepted					
Adequate immovable asset to back the loan necessary for the loan application to be accepted					
Capacity					
Having high liquidity ratio is necessary for loan to be granted					
Having high quick ratio is necessary for loan to be granted					
Having high profit margin for loan to be granted					
Having high return on asset is necessary for loan to be granted					
Character					
Having a good track record is important for the approval of the loan					
Honesty and integrity of borrower contributes in the approval of the loan					
The educational background of the entrepreneur is critical factor for loan rejection or acceptance					
Borrowers gender matter for the loan to get approved					
Condition					
Sufficient reason to request the loan is necessary for the loan to be approved					
Requested loan must meet the minimum desired size for the loan to get approved					
Positive macro-economic outlook is crucial for the loan application to get approved					
Capital					
A demonstrated ability to accumulate asset is necessary for the loan to be approved					

Prior contribution of the borrower on the project for which the loan is applied for is necessary for the loan to be approved					
A demonstrated ability to manage finance is necessary for the loan to be approved					
having alternative ways to repay debt other than monthly income is necessary for the loan to be approved					
Activity					
Having a shorter credit collection period than competitors will result in manufacturing SMES' loan application acceptance					
Having above industry average asset turnover will result in manufacturing SMEs' loan application acceptance					
Having a longer credit payment period than competitors will result in manufacturing SMEs' loan application acceptance					
Having above industry average inventory turnover will result in manufacturing SMEs' loan application acceptance					

Adverse Selection	**1**	**2**	**3**	**4**	**5**
Applicants that exhibit the character, condition, capacity, and activity criteria listed above decreases uncertainty					
Applicants that satisfy the character, condition, capacity, and activity criteria listed above are charged lower interest rate					
Applicants that exhibit the character, condition, capacity, and activity criteria listed above decreases the chance of default					
Applicants that satisfy the character, condition, capacity, and activity criteria listed above decrease the overall number of non-performing loans within the bank					
Moral Hazard					
Applicants that provide collateral and capital reduces the cost of monitoring that could be incurred by the bank					
Applicants that the collateral and capital criteria reduces the cost of auditing that could be incurred by the bank					
Applicants that satisfy the collateral and capital criteria above reduce the chance of fund diversion					
Applicants that satisfy the collateral and capital criteria above reduces the chance falsified project size					

Access To finance	**Yes**	**No**
Number of Small and Medium manufacturing enterprise as a total investment has increased in the previous year (2013 E.c)		

Questionnaire to Private Equity on "Investment Criteria to SMEs'"

1. Respondents Position: _____
2. Years of experience in the industry
   ☐ 3-6 ☐ 7-9 ☐ 10-12 ☐ Other please specify_____
3. Gender ☐ Female ☐ Male

- The questionnaire holds some criteria that could be used by Private Equity firms to screen SMEs' from the manufacturing sector for investment. Please mark the boxes in accordance to the importance of the specific criterion that the firm uses while screening SMEs.
- The Likert scale 1- 5 refers to the following labels
  - **5=Strongly Agree**
  - **4= Agree**
  - **3= Neutral**
  - **2=disagree**
  - **1=Strongly Disagree**

Reference:

- **Businesses considered small in this study are businesses that have 6-30 employees and a capital of [100,001- 1.5 Million birr]**
- **Businesses considered medium in this study are businesses that have 31- 100 employees and a capital of (1.5 million birr- 20 Million birr]**

PE Questionnaire	1	2	3	4	5
Management criteria					
The management team must have the ability to identify and evaluate risk for the Manufacturing SME to be chosen for investment					
The management team must have a demonstrated ability to identify problem, set objective and allocate tasks for the manufacturing SME to be chosen for the investment					
The management team must have honesty and integrity for the manufacturing SME to be chosen for the investment					
The management team must have a good track record for the Manufacturing SME to be chosen for investment					
The management team must have a demonstrated knowledge of the sector for the manufacturing SME to be chosen for the investment					
Market/ firm criteria					
Low competition within the market is necessary for SMEs' to be chosen for investment					
Market has high growth rate is necessary for SMEs' to be chosen for investment					
The business must have high market share for it to be chosen for investment					
The business must have access to an international market or new market share for it to be chosen for investment					

Product criteria					
Manufacturing procedures of the product must be proprietary for the SME to be chosen for investment					
Product must have a good market acceptance for the SME to be chosen for the investment					
The product must provide recognizable satisfaction for the SME producing it to be chosen for investment					
The product is evidently better than similar products or up to now offerings for the SME producing it to be chosen for investment					
Product must be protected by patent in order for the SME to be chosen for investment					
Financial criteria					
High possibility of quick and trouble-free sale of capital interest results in the respective SME to be chosen for the investment					
The firm must have above industry average internal rate of return					
Possibility to withdraw continuous dividend					
Has shorter payback period					

Access To finance	**Yes**	**No**
Number of Small and Medium manufacturing enterprise as a total investment has increased in the previous year (2013 E.c)		

Questionnaire to SMEs'

Part-1

1. Company Profile

1.1 Company name (Optional) _____
1.2 Number of employees

a) <6
b) 6-30
c) 31-100
d) >100
1.3 Capital _____

1.4 Gender of Owner/ manager

☐ Male ☐ Female

1.6 Age of the owner/manager

☐ 18-29
☐ 30- 49
☐ 50- 64
☐ ≥ 65

1.11 Educational background of Owner/Manager

☐ High School Diploma ☐ Master's Degree and Above
☐ University Degree ☐ Vocational Certificate
☐ Other, Please Specify _____

Part-2

2 Have you ever tried to raise fund from external source in the Past Year (2013 E.c)

☐ Yes ☐ No

3. If your answer on question number two is No, what was your reason for not applying for external source of finance

A) Having Enough Capital to work with

B) Because you think your proposal would be rejected

C) you are yet to apply for external source

D) Other, Please specify _____

4. If your answer on question number 3 is C, then from which source are you planning to raise fund

A) Banks **B)** Private Equity Firms **C)** Microfinance **D)** Other source, please specify

_____

5. what was your reason for choosing the above source of finance on question number 4

_____

_____

_____

6. If your answer on question number 3 is B, which one of the following institution do you think will most likely reject your application or proposal **(more than one option could be chosen)**

A) Banks **B)** Private Equity Firms **C)** Microfinance **D)** Other source, please specify

_____

7. If your answer on question number 6 includes A, which reason do think will be the cause for the rejection of your proposal

☐ Managerial capability

☐ Own capital contribution

☐ Unable to provide collateral

☐ Limited ability to payback loan

☐ The macroeconomic condition of the country

☐ Other, please specify _____

8**.** If your answer on question number 6 is B, which reason do think will be the cause for the rejection of your proposal

☐ Managerial capability

☐ Low level of product differentiation

☐ Small Market size

☐ Longer pay back

☐ Inability to meet internal rate of return expectations of the Private equity firms

☐ Other, Please specify _____

9. If your answer on question number 2 is yes, which source did you try to approach or apply to(multiple answer could be selected)

A) Banks	**B)** Private Equity Firms	**C)** Microfinance	**D)** Other source, please specify
Yes ☐	Yes ☐	Yes ☐	
No ☐	No ☐	No ☐	_____

10. If your answer on question number 9 for A ,B ,C or D is Yes, was your application/Proposal from **A) Banks**

Accepted ☐

Rejected ☐

B) Private Equity Firms

Accepted ☐

Rejected ☐

C) Microfinance

Accepted ☐

Rejected ☐

D) Other Sources

Accepted ☐

Rejected ☐

12. If your answer on question number 11 for A is Rejected or failed to access the loan, In your opinion, what do you think are the barriers to the credit approval

☐ Managerial capability

☐ Own capital contribution

☐ Unable to provide collateral

☐ Limited ability to payback loan

☐ The macroeconomic condition of the country

☐ Other (Please specify) _____

13. If your answer on question number 11 for B is Rejected, In your opinion, what do think are the reason for Rejection

☐ Managerial capability

☐ Low level of product differentiation

☐ Small Market size

☐ Longer pay back

☐ Inability to meet internal rate of return expectations of Private equity firms

☐ Other, please specify _____

14 If your answer on question number 11 for A or B, is rejected, but you still manage to ger external finance, which source did you manage to get the fund from

Family and friends ☐

Micro Finance ☐

Other Please specify _____