FINANCE STRUCTURE AND THE GROWTH OF SMALL AND MEDIUM SIZE MANUFACTURING ENTERPRISES IN RWANDA

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Finance Structure and the Growth of Small and Medium Size Manufacturing Enterprises in Rwanda

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other university.

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This thesis has been submitted for examination with our approval as University Supervisors.

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DEDICATION

This thesis is dedicated to my family for their steadfast support and encouragement throughout my academic journey. You have been patient with me when I was away, when I took longer to get home or when I needed time to myself in the study-room. Thank you for understanding and bearing with me when could not give you the attention, love and care you so much deserved. Thank you.

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ABBREVIATIONS AND ACRONYMS

ADB	Africa Development Bank
ANOVA	Analysis of Variance
GDP	Gross Domestic Product
ICPAR	Institute of Certified Public Accountants of Rwanda
KMO	Kaiser-Meyer-Olkin
MINECOFIN	Ministry of Finance and Economic Planning
MINICOM	Ministry of Trade and Industry
NDRC	National Development and Reform Commission
OECD	Organization for Economic Cooperation and Development
PSF	Private Sector Federation
RCA	Rwanda Cooperatives Agency
RDB	Rwanda Development Board
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment
SMEs	Small and Medium Enterprises
SPSS	Statistical Package for Social Scientists
UK	United Kingdom
USA	United States of America
USAID	U.S. Agency for International Development
VIF	Variance Inflation Factor

DEFINITION OF TERMS

Debt Finance	This is a situation in which companies obtain finance products in form of loans from lending institutions and make a promise to repay at a stated time period with accruing interest (Abel and Eberly, 2011).
Equity Finance	Refer to as a method for raising funds for any investments which involves issuing equities in form of common stocks so as to give a claim to share in the net incomes after expenses and taxes (Gomes et al. 2006).
Finance structure	Finance structure is a way a firm finances its assets. In essence, it is the entire left-hand side of the balance sheet (Liabilities plus equity), which describes a firm's long term and short-term sources of finance (Ravindra etal, 2014).
Retained Earnings	Refers to as a part of net income that is kept by an organization rather than distributed to the shareholders as dividends (Chasan, 2012).
Small and Medium Enterprises	Firm generating an annual sales revenue of not more than Frw fifty million (50M) with the number of employees averaging between 31 and 100 employees and a net capital investment of less than Frw 15 M but not more than Frw75M (Rwanda SME policy, 2010).
SMEs Growth	Development process in which enterprises keep realizing the large enhancement of total performance in terms of output, sales volume, profit and asset gross (Sun,2004).
Trade Credit	An arrangement between a buyer and seller in which the seller commits to delayed payment for products offered rather than receive cash payment (Teng, Min and Pan, 2012).

ABSTRACT

Finance structure is an increasingly important area of corporate finance for it shows the pattern of a firm's total firm financing. Both theoretical and empirical research largely focuses on capital structure, which deals with long-term financing and ignored finance structure that encompasses both long-term and short-term sources of finance. The general objective of the study was to analyze the influence of Finance structure on the growth of small and medium manufacturing Enterprises in Rwanda. The study was guided by five specific objectives and these are; to evaluate the influence of debt finance structure, equity finance structure, firm size, retained earnings finance structure and trade credit finance structure on the growth of manufacturing SMEs in Rwanda. To achieve the objectives, the study used mixed research design for collecting, analyzing and integrating quantitative data. The target population of this study consisted of all the 868 small and medium manufacturing enterprises registered with Rwanda Development Board as of November 2017. To determine a study sample size of 273 firms, stratified random sampling techniques were used. Close-ended questionnaires were employed in data collection. The data collected was analyzed using Statistical Package for Social Science to generate descriptive statistics including percentages, frequency tables and mean scores. Multiple regression analysis was used to explore the relationship between retained earnings finance structure, Trade credit finance structure, equity finance structure, debt finance structure, firm size and the small and medium size manufacturing enterprises in Rwanda. Analysis of variance (ANOVA) was used to test the significance of the model. $R^2$was used to measure the extent of the goodness fit of the regression model. The study findings showed that 42.8% of the variation in growth of small and medium manufacturing enterprises in Rwanda is explained by their financial structures which include equity finance, retained earning finance, debt finance, trade credit finance. The findings showed that retained earnings finance (β = 0.246, p=0.000), trade credit finance (β=0.082, p=0.047), debt finance (β= 0.237, p=0.000), and equity finance (β=0.110, p=0.014) had significant influence on growth of small and medium manufacturing enterprise in Rwanda. This study established that financial structure plays a critical role in expansion and growth of small and medium manufacturing enterprise in Rwanda. Among the recommendations, the management of the SMEs should be trained on the need to reinvest some of the profits into business to support growth. Governments, NGOs and Lending institutions must come together to create forum where small business is trained in cash and capital management. This will ensure that small and medium manufacturing enterprises retained some of their earning to finance growth. The management of the SMEs should further learn how to use account receivables and account payables to fully take advantage of trade credit finance structure. This will ensure the SMEs continue producing or manufacturing during time of low liquidity.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The main challenge facing Small and Medium Enterprises (SMEs) in Rwanda is limited access to finance which stalls their growth and expansion (Klyton and Ngoga, 2018). This is stressed by Kim, W. S. (2016) who finds that access to finance is the most significant obstacle hindering SME growth in developing countries. Yet, SMEs contribute significantly to micro and macro levels of economic development of any country (Beck and Cull, 2014). SMEs sector is internationally known as the driving force for economic growth, employment creation, innovation, promotion of product and service quality, competition, and economic flexibility (Harash, 2014).

In many countries, SMEs comprise more than 90% of all businesses (World Bank, 2018). Therefore, having a strong, vibrant, competitive and resilient base of SMEs is key to enhancing wealth creation and social well-being. However, to fully achieve a strong and vibrant SMEs sector, there is need for need to ease access to finance (World Bank, 2018). Increased access to finance for SMEs can improve economic conditions in developing countries by fostering innovation, macro-economic resilience, and GDP growth (Beck and Demirgiic-Kunt, 2008).

Eniola, A. A. (2018) argue that access to finance is critical in the promotion of entrepreneurship development particularly for SMEs. With sufficient funds, SMEs can prosper, expand and have a greater impact on the economy through higher tax contributions, job creation and employment. Besides, SMEs are less capital intensive in production and run on a flexible management structure which ease internal communication and quickens decision making. Yet, in most developing countries, the majority of SMEs are unable to acquire the financing they need to reach their potential. Access to finance is necessary to create an economic environment that enables firms to grow and prosper. However, SMEs are particularly constrained by gaps in the financial system such as high administrative costs, high collateral

requirements and lack of experience within financial intermediaries (World Bank, 2018).

According to Beck and Cull, (2014) one of the factors limiting the survival and growth of small and medium enterprises (SMEs) is non-availability of debt financing. This is because SMEs cannot provide the necessary collateral security demanded by these formal institutions and also, the banks find it difficult to recover the high cost involved in dealing with small firm. In addition to this, the associated risks involved in lending to SMEs make it unattractive to the banks to deal with micro and small enterprises (World Bank, 2018). About half of formal SMEs don't have access to formal credit (World Bank, 2018). The financing gap is even larger when micro and informal enterprises are taken into account. Overall, approximately 70% of all micro, small and medium-sized enterprises (MSMEs) in emerging markets lack access to credit.

One of the most important decisions in business is the financing decision as it deals with the means of acquiring resources needed to realize the business strategy (Beck and Cull, 2014). It is hence a factor influencing strategic choices in small firms as they determine choices of financing (Ravndra, et. al, 2014). The main sources of financing for SMEs are equity (by the owner or other investors), debt (from financial institutions and secured against fixed assets) and/or retained profit (generated from cash flow). Some of this funding is used to finance seed or start-up companies while others are used for expansion. Start-ups are usually limited to the type of financing they can get such as personal savings used as equity. On the other hand, companies with a proven track record have a much larger choice of financing alternatives such as banks, venture capital firms or public offerings. However, research has consistently shown that long-term SMEs growth and competitiveness are compromised by the constraints on their choice of source of alternative forms of finance. As a result, SMEs share of financing resources is disproportionately less than their relative importance in domestic employment creation. Furthermore, the majority of SMEs have been found to be heavily dependent on bank finance (Dube, H.2013). Harash (2014). identifies four key funding requirements for SMEs: initial

infrastructure investments; lumpy operations costs; “next-step” expansions; and unexpected opportunities requiring quick choice of funds.

Conversely Finance structure enables firms to acquire additional sources of finance for growth and expansion. Del Baldo, M. (2018) define finance structure as a way a firm finance its assets. It shows the pattern of a firm’s total financing and measures the extent to which total funds are available to finance total assets. Both theoretical and empirical research mostly focus on capital structure, which deals with long-term financing and pay little attention to finance structure that encompasses both long-term and short-term sources of finance yet several studies have long demonstrated the importance of financial structure to the firms’ growth and survival. For instance, Paroma and Mann (2010) affirm that finance structure is a crucial finance management decision since it influences return on capital employed together with risk. Similarly, Levine (2005) finds that optimum finance structure influences the ability of the firm to finance the needs of shareholders.

Pandey (2010) draws a distinction between financial structure and capital structure. According to him finance structure comprises of different methods that a firm applies to raise funds for its activities while capital structure is the ratio of long-term debt to equity. Paroma et.al, (2010) examined how characteristics of start-up assets, information and entrepreneur attributes relate with finance structure using a panel of 5,000 businesses in the USA. They found that new business ventures are more likely to use external debt financing if they have more collateral with high liquidation value. Finance structure and SME growth has been researched globally and the following section demonstrate findings from studies undertaken in several countries

1.1.1 Global Perspective of the Study

Globally, the SMEs sector plays a pivotal role in industrialization and economic growth in both developing and developed markets. Gupta, Guha and Krishnaswami (2013) observe that the SME sector in European economy for instance contributes over 66 percent of the exports, employs over 70% of the current labor and makes up

to 56.2 percent of the European private sector turnover (Rotar, 2019). It is little wondered therefore that 99.8 percent of the 23 million enterprises in the European Union are SMEs (European Union, EU SME centre, 2019) and they altogether account for over 70 percent on jobs (OECD, 2017). Kuruppuand Azeez (2016) maintains that SMEs in Japan account for more than 99 percent of all firms while Kumar (2017) highlights that SMEs in India make up to over 80 percent of the Indian GDP generating jobs for over 80 million Indians. In China, The EU, SME centre, (2019) reveals that recent policy environment changes in the country have led to an overwhelming growth of SMEs so that they represent 96 percent of the country's companies while offering 80 percent of jobs.

In a survey of major banks around the world with particular interest on how they lend to SMEs, Beck, Demirguc-Kunt and Peria, (2010) found a lack of consistency in SMEs lending due to relationship lending where soft information and decentralized organizational structures are used in selecting creditors. They further discover that only larger firms can access external financing options such as corporate bond and organized securities markets. In a related study, Ayyagari, Demurgiic-Kunt and Makismovic (2017) argue that globally, SMEs constrained and often rely on self-financing when starting out and then progress to debt finance and/or venture capital as they expand business operations.

Paroma and Mann (2010) examined how characteristics of start-up assets, information and entrepreneur attributes relate with finance structure using a panel of 5,000 businesses in the USA. They found that new business ventures are more inclined to using external debt financing when they possess more collateral with high liquidation value.

1.1.2 Regional Perspective of the Study

According to the World Bank (2018), the underlying reason for favoring SMEs growth in Africa is rooted in the fact that they greatly contribute to the creation of wealth, employment, and income generation. However, according to Ayyagari, Demirguc-Kunt and Maksimovic, (2017) over 70 percent of SMEs in developing economies have limited access to credit financing. Thus, SMEs in Africa are highly

limited by these credit constraints compared to larger firms which hinder their growth and expansion potential.

Abor, (2010) argues that in South Africa, it is estimated that 91% of the business entities are SMEs accounting for 57% of GDP while in Ghana, SMEs make up to 81% of the private business entities. Yet, the impressive contribution made by SMEs in Africa notwithstanding, still most of them performs below capacity as a result of inaccessibility to credit financing (Brown, Chavis and Klapper, 2008). In East Africa, SMEs have increasingly acted as a key instrument for job creation and income generation through self-employment and hence according to Arinaitwe and Mwesigwa (2015), SMEs contributed to reduction of poverty. The same authors argue further that SMEs supply the economy with ideas and innovation required to foster competitiveness and proper resource allocation.

Magembe (2017) undertook a cursory review on the level of credit access by Small and Medium Enterprises in Dares Salaam City in Tanzania. The author highlights that SMEs are charged high interest and excessive collateral requirement in exchange for credit access. According to Lubawa, Shirima, Nandonde, and Adamu (2018) family obligations are major determining factors for external financing of SMEs although business owners prefer internal financing at a rate of 61.7% from their own savings in Tanzania. MLakew (2018) in his study reveals that a sizeable portion of SMEs are unable to access finance from banks and MFIs in West Oromia due to lack of collaterals, complex loan procedures and high interest charges in Ethiopia. In a related study, Deresse and Ayenew (2017) investigate determinants of access to formal sources of finance for 200 micro and small enterprises (MSE) in Ethiopia and find that having collateral security, the age of an MSEs, MSE's sector, ownership, owner's/ manager's age, owner's/manager's religion and SME's size largely influence accessibility of the firm to bank credit.

Kebede and Abera (2014) studied 134 randomly selected SMEs in Ethiopia to assess the main determinants of access to finance using binary logistic regression. The results show that operator age, level of education and having fixed assets as well as the period for repayment of the loan are key factors determining access of SMEs to

credit. The implication of such findings is that majority SMEs have a low survival rate. Koech and Namusonge (2015) similarly investigate factors that influence the performance of micro and small enterprises owned by women in Nairobi County. The study sampled 30 women owned SMEs drawn from study population. Findings of the study indicate that enterprise owner characteristics such as the drive to start and run an enterprise, the owner's network affiliations as well as owner's management styles influence business performance of SMEs.

In the Thika district of Kenya, Njeru, Namusonge, Kihoro (2012) examined the role firm size plays in determining the choice of source for entrepreneurial finance for SMEs using a sample population of 259 and stratified random sampling technique. Study findings reveal no relationship between the size of the firm and source of entrepreneurial finance. In a similar study, Oluoch (2016) examines how cash management practices affect performance of SMEs in Eldoret Central Business District. With a sample of 171 respondents, the study finds that SME performance is positively and significantly correlated with cash management. Ogoi (2017) in a study on strategies that SMEs use to access credit in Kakamega town observes that lack of collateral security is leading challenge SMEs face in accessing credit for sustenance of their businesses. Among recommendations the study makes, SME owners are advised to improve their profitability and business growth through use of their education and professional background, information access and group lending strategies to acquire credit.

Rotich, Wanjau, Namusonge (2015) further examined the moderating role of entrepreneurial orientation on the link between financial performance and lending in Kenyan SMEs. Using a cross sectional survey research design and a study population of 620 manufacturing SMEs dealing with Kenyan Commercial banks, the study finds that financial performance of SMEs is correlated with bank lending behavior. In a related study in Mozambique, Osano and Languitone, (2016) examined influencing factors to financial access by SMEs in Maputo central business district. Results highlight a correlation between access to finance by SMEs in Mozambique and satisfying collateral requirements demanded by financial institutions.

In Kenya, Ochanda (2014) carried out a study to determine how SME growth in Kenya is affected by financial innovation, financial sector regulation, inflation and general interest rates. The researchers utilized an exploratory design and stratified sampling. The study findings show that growth of approximately 92% of SMEs is positively determined by access to credit. Equally, Nangaki, Namusonge and Wandera (2014) investigate how registered SMEs in Chwele town of Bungoma County are affected by access to debt finance. Study findings reveal that firms which maintain financial information successfully acquire debt finance from banks while those that never keep financial information have their credit applications rejected.

1.1.3 National Perspective of the Study

The main challenge facing SMEs in Rwanda is limited access to finance which stalls their growth and expansion. This is emphasized by several authors (Akimana, 2017; Ndikubwimana, 2016; Gamba, 2019) and Harelimana, 2017) who stress that inaccessibility to credit is a strategic bottleneck for SMEs in Rwanda. Despite the challenge, the importance of the SMEs sector in Rwanda cannot be over stressed as it contributes to national economic development. However, it is important to examine the hurdles of economic development the country faces in order to fully appreciate SMEs' contribution.

According to National institute of statistics Rwanda (NISR, 2016) 56 percent of Rwanda's population are below the age of 14 which implies that Rwanda's economy is composed largely by pressure of population dynamics that are mostly young. By implication, it means that leverage of the SME sector would serve as a great springboard for youth employment and productivity. Yet, according to Byiringiro (2011), SMEs in Rwanda are increasingly credit constrained.

Ministry of trade and industry (Ministry of trade and commerce, MINECOM, 2010) posited that insufficient operating and investment capital renders SME growth and expansion difficult. Such findings corroborate with findings by Berg and Fuchs (2013) who find in their study on five East African countries that SMEs' share of total bank lending in Kenya was 17.4 as opposed to Rwanda at 17%. Similarly, research findings by Kira, (2013) highlight that SMEs in Rwanda face difficulties in

obtaining finance, especially when they lack collateral, have insufficient documents to support loan applications and lack proper financial track records. Ndikubwimana (2016) also investigates the financing practices and challenges among SMEs in Rwanda and finds that 74 % of respondents' experience difficulties in obtaining external finance.

Despite the fact that Rwanda is among the ten fastest growing economies in Africa, its manufacturing sector has not kept pace with the overall national growth (Behuria, 2019). Its current contribution to GDP is estimated at only 6% per year compared to the services industry which stands at 48% to GDP (NISR, 2016). The manufacturing sector in Rwanda depends on the well-functioning of the supply chain mechanism of its economy such as infrastructure network, utilities costs, financial markets strength that support capital investments, which are equally in infancy (Behuria, 2019). Furthermore, the manufacturing sector is not well diversified as 92 percent of the country's total manufacturing is generated from only seven subsectors: food, beverages and tobacco, textiles and clothing, wood, paper and printing, chemicals, rubber and plastics, on-metallic minerals as well as furniture (United Nations Industry Development Organization, UNIDO 2013).

In fact, Rwanda's SME sector is confronted by perennial challenges of limited access to finance as highlighted by diverse authors. Akimana (2017) for instance, finds that export manufacturing SMEs in Rwandan face insufficient funds to invest in export activities. Also, Egwakhe and Kabasha, (2016) in their study on commercial loan accessibility in Rwanda find that inaccessibility to finance is the second most important impediment to SMEs expansion after shortage of raw materials. Thus, according to MINECOM (2014) Rwanda's manufacturing sector has failed to attract the required investment for growth and expansion hence, remaining a small player in the Rwanda economy.

1.2 Statement of Statement

The main challenge facing SMMEs in Rwanda is limited access to finance which stalls their growth. This is emphasized by several authors (Akimana, 2017; Ndikubwimana, 2016; Gamba, 2019 and Harelimana, 2017) who stress that limited

access to credit is a strategic bottleneck for SMMEs in Rwanda. Del Baldo, M (2018) for example stresses that SMME growth hurdles include; strict collateral conditions and high bank charges while Barungi and Gasheja (2017) point to the tough terms and conditions under which SMEs access finance at high interest rates. Sindini, Namusonge, and Sakwa (2016) observe that limited growth of majority SMEs is attributable to inadequate financing.

According to Sharmilee and Hoque (2016) SMEs need to efficiently and effectively acquire finance in order to grow. Yet, Harelimana (2017) find that a significant number of firms in Rwanda (35.5%) use internal finance sources with a further 61.3% of firms having their loan applications rejected due to lack of collateral and credible information on their operations.

Kabasha (2016) reveals that SMMEs growth in Rwanda is majorly hindered by poor access to finance. Moreover, Gamba (2019) highlights that available research on Rwandan SMMEs in relation to financing is mostly study reports carried out by government departments and development agencies. This implies that there is a gap in extant literature on financial structure of SMEs in Rwanda which makes this study timely and critical.

1.3 Research Objectives

The research objectives of the study are categorized into general and specific objectives as follows.

1.3.1 General Objective

The general objective of this research was to determine the influence of finance structure on the growth of manufacturing SMEs in Rwanda.

1.3.2 Specific objectives

The study was guided by the following specific objectives:

i. To determine the influence of retained earnings finance on the growth of small and medium manufacturing enterprises in Rwanda.
ii. To investigate the influence of trade credit finance on the growth of small and medium manufacturing enterprises in Rwanda.
iii. To evaluate the influence of debt finance on the growth of small and medium manufacturing enterprises in Rwanda.
iv. To assess the influence of equity finance on the growth of small and medium manufacturing enterprises in Rwanda.
v. To evaluate the moderating influence of firm size on the growth of small and medium manufacturing enterprises in Rwanda.

1.4. Research Questions

i. What is the influence of retained earnings finance on the growth of small and medium manufacturing enterprises in Rwanda?
ii. What is the influence of trade credit finance on the growth of small and medium manufacturing enterprises in Rwanda?
iii. What is the influence of debt finance on the growth of small and medium manufacturing enterprises in Rwanda?
iv. What is the influence of equity finance on the growth of small and medium manufacturing enterprises in Rwanda?
v. What is the moderating influence of Firm size on the growth of small and medium manufacturing enterprises in Rwanda?

1.5 Research Hypotheses

The following null hypotheses guided this study:

H_{01}: There is no significant influence of retained earnings finance on the growth of small and medium manufacturing enterprises in Rwanda.

H_{02}: There is no significant influence of trade credit finance on the growth of small and medium manufacturing enterprises in Rwanda.

H_{03}: There is no significant influence of debt finance on the growth of small and medium manufacturing enterprises in Rwanda.

H_{04}: There is no significant influence of equity finance on the growth of small and medium manufacturing enterprises in Rwanda.

H_{05}: There is no significant moderating influence of firm size on the relationship between Firm size and growth of small and medium manufacturing enterprises in Rwanda.

1.6 Significance of the Study

This section highlights the contribution of the study to SMEs owners and managers, policymakers and academic researchers as follows;

1.6.1 SMEs Owners and Managers

This study is of great significance to SMEs owners and managers since its finding foster understanding of current challenges in the SME sector while revealing the essential factors that promote small business growth. This in turn enables them to focus on the relevant factors highlighted in an attempt to enhance SMEs growth and expansion. The study findings further enlighten the SMEs owners on available financing options and how each of the options impacts the growth of their businesses.

1.6.2 Policymakers

The study is a handy resource for policymakers who are interested in undertaking reforms in SMEs financing and growth in Rwanda. SMEs growth especially manufacturing SMEs are therefore vital to the growth of the economy. The study equally informs policy development and amendment of the existing policies to ensure that financing is available for SMEs growth and expansion.

1.6.3 Future academic researchers

It may form the basis for further research for other scholars and researchers who are interested in the manufacturing SMEs and their financing modalities. Besides, the influence of finance structure on SMEs growth according to Gamba, (2019) has not been empirically and widely tested in the literature, especially in Rwanda let alone the limited documentation on the nature, mode of operation and processes involved in determining the firm's finance structure on the growth of SMEs. The study finding therefore, fills the gap on the influence of finance structure on the growth of small and medium manufacturing enterprises in Rwanda.

1.7 Scope of the Study

This study focused on the influence of finance structure has on the growth of small and medium manufacturing enterprises in Rwanda. The study further placed emphasis on retained earnings, trade credit, and debt and equity finance structures. Specifically, the study investigated how they influence growth of manufacturing SMEs in Rwanda. The moderating effect of firm size on the growth of SMEs was also tested. The study is anchored on five theories, Greiner's enterprise growth stages theory, credit rationing theory, Modigliani and Miller capital structure irrelevance theory, pecking order theory and trade –off theory to show the relationship between independent variables and dependent variable. The scope of the study covered registered SMEs in the manufacturing sector in Rwanda from 2013 to 2017. The target population of 868 SMEs was determined from Rwanda development Board (RDB) database as of November 2017). The data collection involved both fresh data from field and documented data information. The former was sourced through a well-structured study questionnaire.

1.8 Limitations of the Study

There were several challenges faced during the research process. The first limitation was some of the respondents were unwilling to answer questionnaires citing various reasons such being reluctant to disclose details about their businesses. The study however mitigated this limitation assured the respondent that the information they

provided was only to be used for research purposes and further pledging compliance with confidentiality of provided information. The researcher further provided Government of Rwanda research permit issued by National council of science and technology to enhance trust among the respondents. The second limitation the study faced was that SMEs were located in various remote areas and it was difficult for the research to reach all of them. The study mitigated this limitation by hiring research assistants, using email and firms' postal addresses where possible to reach the targeted respondents.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The second chapter of the study presents and discusses works other authors have done on the topic of study. It also presents theoretical concepts and investigates empirical literature on the role finance structure plays in determining the growth of SMEs in Rwanda. Theoretical and conceptual framework of the study is equally elucidated at depth. The study examines some of the existing theories that inform the relationship between variables. Theories aimed to facilitate hypothesizing the influence of financial structure on growth of small and medium enterprises and selecting a fitting research design to test the hypotheses. Empirical review conversely helped the researcher to crosscheck existing findings of related studies as well as the methods used with the intention of identifying the gaps that exist and need to be bridged. Empirical review equally enabled the comparison of the study findings with those of previous studies. In the conceptual framework, the study provides the link between predictor variables and dependent variable as well as the indicators the study used to measure the variables.

2.2 Theoretical Framework

According to Adom, Hussein and Agyem (2018) a theoretical framework is important in making research findings more relevant, responsive to established theoretical paradigms in a given area of research to foster generalizability of findings. It has further been stressed that a theoretical framework offers guidance in terms of determining what variables to measure and what statistical relationships to look for while conceptualizing a study. Adom et al, (2018) further argues that a theoretical framework also guides the data collection process by contextualizing the problem analysis under a given study.

According to Imenda (2014) research without a theoretical framework misses a spot-on direction to the search of extant literature and scholarly discussions of research

findings. While, according to Grant and Osanloo (2014) the theoretical framework provides a common worldview or perspective from which to support one's conception of the problem and data analysis. This study was anchored on five theories, Greiner's enterprise growth stages theory, credit rationing theory, Modigliani and Miller capital structure irrelevance theory, trade-off theory and pecking order theory.

2.2.1 Greiner's Enterprise Growth Stages Theory

This study is anchored on Greiner's enterprise growth stages theory. This theory was proposed by Greiner (1972) and its main argument is that growth of enterprise happens in phases. Empirical evidence of several authors approves of the existence of life cycle stages that represent the growth of enterprises. Stochastic and managerial theories derive firm growth from the notion of entrepreneurship on behalf of the owner's management of independent companies. Enterprises tend to grow in organic way while large corporations through acquisition (Adomako & Mole, 2018). The theory applied in this study is stochastic in nature which means that firm growth is affected by many factors and there is no dominant theory to describe growth. Growth has been conceptualized and measured in a number of different ways (Davies, Haugh & Chambers, 2019).

Greiner's enterprise growth stages theory defines 5 stages of enterprises growth, determining symptoms and reasons of crises which appear with twilight of each of them (Nduhura & John, 2020). Greiner argues that crises are inevitable, but the way to overcome them may be an evolutionary or revolutionary. The evolutionary approach is less risky, but it requires more "precision" of management. Processes in an enterprise should be still analyzed and improved, in terms of economic and psychological aspects. The ability to diagnose a crisis allows on a better preparation for a change.

This theory is applicable in the current study since financial structure is critical to the growth of any enterprises. Availability of cheap and reliable finances are significant in aiding small and medium size enterprises to go through a period of growth as highlighted in the Greiners Theory. Small and medium size enterprises that adopt

effective financing model are more likely to grow and become more profitability than those that rely on unreliable and ineffective financial structure.

Small and medium size enterprises have the growth potential which requires to be financed. Capital availability is critical in the growth of the SMEs. Small and medium enterprises accessibility to low-cost capital is important since it enables the business to finance all the activities and withstand the challenges encountered during the various phase of growth as suggested by the theory. Many at times SMEs may stagnant due to lack of capital to expand their businesses, and therefore finace structure determine the amount of finace available to spur thegrowth of the enterprise.

2.2.2 Credit Rationing Theory

Yuhuan and Zhang (2019) posit that a salient attribute of credit markets is that borrowers are rationed on the amount that they can borrow, which often implies that small and micro enterprises (SMEs) are more likely to be eliminated than large and medium-sized enterprises. Stiglitz and Weiss as cited in Malhotra (2015) formulated the credit rationing theory which enunciates a framework for making analysis of financial market inefficiencies that affect credit financing. According to Malhotra, the main cause of financial market anomalies in developing countries is information asymmetry which hampers credit allocation and leads to credit rationing. Helsen, (2014) in addition, argues that credit supplying institutions often have particular interest in interest income and their associated risks. Hence, bank interest income generated from loans either lead to adverse selection or moral hazard effects.

Malhotra further stresses that credit financing has positive effects on profitability. The same author however highlights that limited amount of credit available to ration to borrowers creates difficulty for financial institutions in determining the amount of credit to advance to borrowers. Consequently, lending institutions select borrowers by way of interest rates to get those likely to pay back (Helsen, 2015) since according to efficient market hypothesis, borrowers who willing take up high interest rated loans often fail to pay back. Hence, according to Malhotra, (2015) in the information age, there is unlimited access to data on borrowers which enables banks

to foretell their behavior even if banks have limited control over borrower actions. Terms of lending are thus made by lending institutions in a way that lures borrowers to take actions in bank's interest.

In all, the most important highlight from Stiglitz and Weiss argument is that information asymmetry results to adverse selection and moral hazard (Malhotra, 2015) which leads to market inefficiency in emerging economies with consequences such as exclusion of high-risk borrowers like SMEs. The theory relates to the study in respect to factors that hamper SMEs from accessing finance from banks in Rwanda. According to this theory SMEs use retained earnings to support growth during credit rationing by credit supplying units. The theory therefore informs the relationship between uses of retained earnings in relation to SMEs funding.

2.2.3 Modigliani and Miller Theory

According to Knoll, (2018) Modigliani and Miller refashioned the field of finance with their argument that under certain idealized assumptions the total value of a firm was independent of its capital or finance structure. Katarzyna, Prędkiewicz, Paweł and Prędkiewicz, (2015) muse the MM theory as it is sometimes called, is pivotal as it formed the foundations for capital structure theory in modern finance. Its authors theorized that the market value of a firm is not affected by the way a firm finances its investments rather, by its earnings power and underlying risk of its assets. This position is further stressed by Bolton and Huang, (2016), who argue that a firm's finance structure is not only determined by its value.

Critics to the theory maintain that although it is important and relevant to the field of finance, the MM theory is founded on some unrealistic assumptions particularly where it posits that firms operate in a market environment with no taxes, no transactions costs, no bankruptcy costs as well as symmetry of market information. Following the above criticism, the authors produced a subsequent publication which introduced the concept of tax into firm capital structure model. It came to be known as MM II proposition by Modigliani-Miller in 1963. It revised MM I proposition with the inclusion of tax benefits. They argued that tax benefits influence a firm's

capital structure. It therefore implies that a firm is able to maximize its value through more debt as debt is a tax-allowable expense.

Ahmeti and Prenaj (2015) argue that witnessing the results of M&M theorem, one cannot conclude that they finally prove that the financial decisions are entirely irrelevant to the firm's value. All these assumptions show that the MM theorem hypothesized a non-existent controlled environment that is seemingly antithetical to the real world. There is little wonder therefore that these assumptions are still discussed from many economists and finance experts. The theorem however offers an opportunity for refinement thereby leading to new theoretical paradigms in the field of finance with high level of intellectual discipline and analytical clarity. Hence, many theorists who argue in favor of the MM theorem muse that when studying a firm's finance structure basing on the persuasion that everything is irrelevant, it is possible to identify the factors that in the real world are important and relevant. Hence, showing what doesn't matter can also show, by implication, what does.

Despite the above arguments by different theorists, the theory of Modigliani and Miller remains relevant to the study since it provides useful insights on the use of debt to finance the growth of enterprises including SMEs since key among its arguments is the idea that enterprises resort to debt financing because it is cheap and reduces the cost of financing.

2.2.4 Pecking Order Theory

According to Abeywardhana (2017) the Pecking order theory suggests that firm prioritize internal financing over borrowing (debt capital) and equity capital. Paulo (2017) postulates further that fund generated internally are less costly, as opposed to risky debt, particularly equity, the most expensive source of financing. Jibran, Wajid, Waheed, and Muhammad (2012) posit firms prefer internal equity to external debt when searching for financial resources. Jibran, *et, al.* (2012) maintain that the Pecking order theory explains how a firm's finance structure is determined by a firm's need to fund new investment opportunities, first internally, then with low-risk debt, and finally if all fails, with equity.

According to Tri Gunarsih (2017), limited information on small firms makes them opaque creating adverse selection problems as earlier explained by credit rationing theory. SMEs therefore, bear high information costs. Equally, Maimako and Olayinka, (2011) point out that there are higher levels of asymmetric information in financial statements of SMEs. Yet, investors have high preference for audited financial statements which small firms often want to avoid due to associated costs. In relation to the study, pecking order theory shows the dilemma SMEs face as a consequence of lacking accurate financial statements which makes them prefer internal funding rather than external funding such as obtaining bank credit. This theory becomes relevant to the current study since it informs the relationship between use of equity financing and growth of the enterprises. The theory argues that managers go for the most available and cheap option of financing first which is equity financing before resorting to other financing options. According to the theory, retained earnings are preferred most followed by equity financing then other forms of financing.

2.2.5 Trade-off Theory

According to Chikaodili, Tokunbo and Amanghionyeodiwe (2018) the center piece of the trade off theory is that in a situation of market frictions, leverage brings tax benefits due to interest deductible interest on earnings before tax, but this could happen at a risk of financial distress and potential bankruptcy since debt creates a financial obligation with legal backing, a breach of which prompts legal action. According Paul and Wilson (2007) determinants of trade credit demand, is modelled as a function of several theories: financing, transaction cost, asymmetric information, firms' business environment, and specific investment.

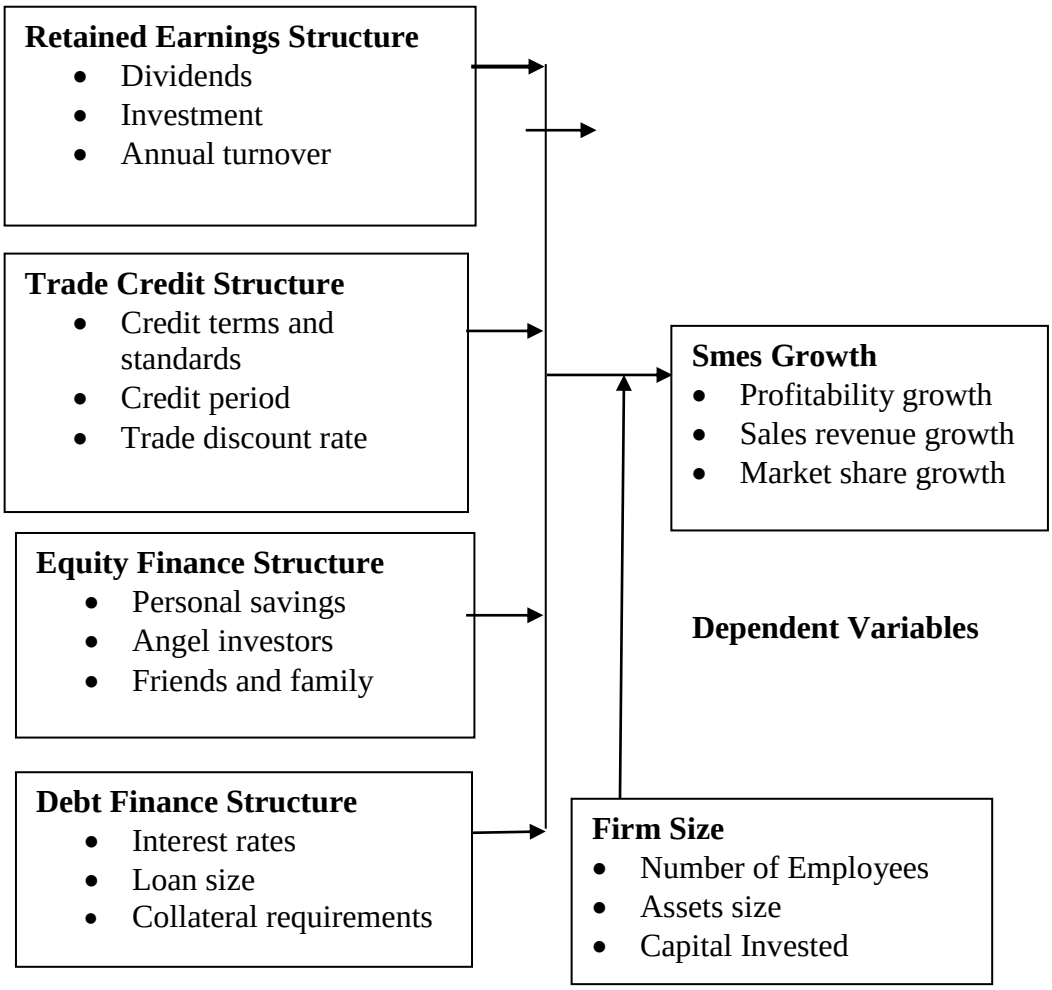
Wen-Chein (2017) contends further that the trade-off theory is an attempt by Kraus and Litzenberger to explain optimal capital structure in the real world based on a model of optimal financing. According to Abel (2018), optimal capital structure derives from the balancing act of firms between the benefits of tax that accrues from using debt, and the costs linked with debt, such as bankruptcy, financial distress, and agency costs. Ayen and Oruas (2008) argue that in order to achieve a suitable finance

structure, firms must create a balance between tax savings that arise from debt with agency costs, bankruptcy threat and financial distress. Ummu and Hamka (2018) in research on Chinese firms similarly add that equity tracks financing deficit better than debt in firms studied and that Chinese firms have an optimal market-based leverage ratio, which is not consistent with the pecking order theory.

The mediating effect of firm growth on the relationship between financial structure structures and value of non financial firms listed at the Nairobi securities exchange. Wen-Chien (2017) analyzed the proposition that firms should balance the benefit of tax shields and costs to an optimal debt ratio. He used non-parametric fixed effect model of US listed firms to examine the association between debt ratio and firm value. His findings significantly support the trade off theory as it highlights a nonlinear asymmetric relationship between firm value and market debt ratio.

2.3 Conceptual Framework

According to Kivunja (2018) a conceptual framework is the total, logical orientation portraying relationships between aspects that underlies the thinking, structures, plans and practices as well as the implementation of the entire research project. Kothari (2014) stresses further that a conceptual framework is a hypothesized model showing the relationship between the dependent and independent variables. It aims to explain relevant concepts of the study and indicate how they relate to each other. The conceptual framework of this study outlines how certain variables of the finance structure influence the growth of manufacturing SMEs in Rwanda. The independent variables of this study include; retained earnings finance, trade credit finance, debt finance, and equity finance and firm size. The dependent variable on the other hand is SME growth to be assessed in terms of profitability, sales revenue and market share. Figure 2.1 maps out the relationship between the study variables as indicated below,



Source: Author (2022).

Figure 2.1: Conceptual Framework

2.4 Empirical Review

This section reviews works done by other scholars with regard to the relationship between predictor and dependent variables under study. Empirical reviews on retained earnings finance structure and SME growth is first presented as here under.

2.4.1 Retained Earnings Finance Structure and SMEs Growth

Njeru, Namusonge and Kihoro (2012) observe that retained earnings are a major source of financing for most established small and medium enterprises. In some industries, in fact, it is the major source of financing. According to Dinayak (2014) retained earnings as that portion of the profits which is not handed out to shareholders in form of dividends but is instead kept for future firm expansion. According to Campbell (2012) the main purpose for the firm to withhold profits is to generate higher returns and growth rate since retained earnings are kept under shareholder's equity on the balance sheet. Thirumalaisamy (2013) adds that retained earnings are a cheaper source of finance compared to external equity and do not lead to ownership dilution.

Klyton and Ngoga, (2017) argue that the main challenge facing Small and Medium Enterprises (SMEs) in Rwanda is inadequate access to finance which stalls their growth and expansion. eThis is stressed by Del Baldo, M (2018) who maintains that access to finance is the single most significant obstacle limiting SMEs growth in the developing world. Yet, as Beck and Cull, (2014) observe, SMEs contribute significantly to micro and macro levels of economic development of any country. Similarly, Harash, (2014) highlights that the SMEs sector is recognized globally as the engine for economic growth and job creation.

In many countries, SMEs comprise more than 90% of all businesses (World Bank, 2018). Therefore, having a strong, vibrant, competitive and resilient base of SMEs is key to enhancing wealth creation and social well-being. However, to fully achieve a resounding SMEs sector, it requires easy access to finance (Ayyagari, Demirguc-Kunt and Maksimovic, 2015). This is further stressed by Beck and Demirgiic-Kunt, (2008) who highlight that more access to finance for SMEs can foster innovation, enhance macro-economic resilience, and improve GDP growth for developing countries.

According to Njoroge and Kagiri (2017) access to finance is fundamental in the fostering entrepreneurship development especially for SMEs since with sufficient funds; SMEs can prosper, expand and make significant positive returns to the

economy by way of higher tax contributions, and employment. Besides, SMEs are less capital intensive in production and run on a flexible management structure which ease internal communication and quickens decision making. Yet, according to the World Bank (2018) most SMEs in developing countries cannot obtain required financing to exploit their full potential due to gaps in the financial system involving such obstacles as high administrative costs, complicated collateral conditions as well as inadequate experience of financial intermediaries (World Bank, 2018).

Consequently, Beck and Cull (2014) reveal that the non availability of debt financing is one of the factors limiting the survival and growth of SMEs associating it to the fact that SMEs often fail to give required collateral security needed by financial institutions. This creates a dilemma for recovery of high cost involved in dealing with small firm. In addition, World Bank (2018) maintains that the associated risks involved in lending to SMEs make it nonviable for banks to deal with SMEs. Hence, nearly half of registered SMEs in the developing countries lack access to formal credit with an even widening financing gap when micro and informal enterprises are taken into consideration (World Bank, 2018). It is estimated by the World Bank that generally about 70% of all micro, small and medium-sized enterprises (MSMEs) in developing economies are credit constrained.

Finance structure as highlighted by Mwende, Muturi and Njeru (2019) as one of the most crucial concerns of a business as it entails acquisition of resources for realizing the business objectives. It is therefore, according to Ravindra, et al. (2014), one of the leading factors influencing strategic choices in firms as they assess financing options. Some of the financing options for SMEs include equity, debt and retained profit. This funding can be used to finance start-up companies and firm expansion. Start-ups are usually limited to the type of financing they can get such as personal savings used as equity.

On the other hand, firms with a sound credit management history possess proven wider choices of financing alternatives such as banks, venture capital firms or business angels. Despite this, a growing body of studies shows consistently that long-term SMEs growth and competitiveness are constrained by limited choice of

financing options. Thuranura (2014) shows how retained and distributed earnings influence the profitability of firms in the future among Kenyan firms. Similarly, a weak positive relationship between a firm's dividend policy and firm performance was revealed by the study. On the other hand, Al-Sa'eed, (2018) studied how dividend payout policy relates to performance of firms in the Nairobi Stock Exchange. The findings reveal that firm performance is strongly and positively associated with dividend payout. They hence conclude that given the salience of the dividend payout policy, managers should assign sufficient attention towards an appropriate dividend policy for firm performance and shareholder value.

2.4.2 Trade Credit Finance Structure and SMEs Growth

Fu, Matous and Todo (2018) define trade credit as inter-company credit from a seller to a customer with no bank intermediation. Hence, when a firm sells goods or services that will be paid for later, trade credit is recorded as accounts receivable in the balance sheet of the firm. They highlight that trade credit is the most important source of short-term financing for SMEs.

Al-Qaisi (2018) argue that trade credit is a key source of funds for firms especially where external funding via credit institutions is not a viable option. The author further contends that trade credit is an important alternative to bank loans for the SME sector in developed and developing economies alike. Carvalho and Schiozer (2015) in their study in Spain argue that operations involving trade credit account for 69% and 52% of the current assets and liabilities, respectively in SMEs in the country. The study further reports that in the United Kingdom, 41% of SME's total debt and 35% in the United States involve use of trade credit. In Brazil, Carvalho et al, highlight that 75% of national micro and small enterprises (MSEs) contribute above 50% of their purchases as forward purchases.

Mateut and Chevapatrakul (2018) have equally demonstrated how trade credit provides a safety valve for firms facing distinctive liquidity shocks as they transfer a quarter of shocks to suppliers through acquisition of more trade credit. According to Rodriguez (2016) trade credit helps suppliers reduce transaction costs related to insolvency of each individual commercial exchange. Mateut and Chevapatrakul

(2018) further opine that trade credit helps SMEs to build a stable commercial relationship in the long run despite the fact that it may increase customers' reliance on suppliers, leading to a higher implicit interest rate.

Furthermore, Hermes, Lensink and Meesters (2018) in support of the resource dependency theory, argue that firms may have troubles to access all important resources, hence the need to rely on suppliers to partially offer key resources. However, the same authors argue that trade credit often creates switching barriers since buyers may lose access to short-term finance if they want to change suppliers as suppliers only offer trade credit to customers with whom that they have establish long term relationship.

Akinyi (2012) maintains that the use of trade credit means additional detrimental effects for suppliers as they pay more administrative costs, such as default on debts as well as screening and monitoring costs. This means that each time suppliers should be observant of the financial conditions of the buyers which necessitate both direct money costs and human resource costs. Where such costs exceed benefit from revenue growth, suppliers pull out from offering trade credit to their customers. Moreover, according to the same author, trade credit can be considered as short-term debts in terms of accounts payable.

McNamara, Murro and O'Donohoe (2017) stress that the limited informational transparency associated with SMEs makes banks reluctant to offer debts to SMEs as they require high interest rates to compensate the associated high risk. As a result, trade credit becomes more viable, especially over the period of a tight monetary policy since customers are more likely to switch to it when effective loan interests exceed the effective costs of trade credits. This is due to the fact that the trade credit terms are relatively stable, which means implicit interest rate is consistent. Meanwhile, interest rates of bank loans rise during constricted monetary times culminating into more expensive costs of debt than trade credit. Therefore, with low cost of raising capital would earn more profitability.

Agostino and Trivieri (2014) in a study of 4,543 firms in Italy confirm in their findings that there is indeed a positive correlation between trade credit and bank loan

accessibility for SMEs. Furthermore, Palacín-Sánchez, Canto-Cuevas and di-Pietro, (2019) equally posit that when suppliers willingly offer trade credit and bear default risks, it implies that they possess information pertaining to buyer's ability to repay. This will subsequently boost banks' trust towards buyers and so provide them with debt. In other words, trade credit enables the private information of the seller to be used in the lending relationship, and this additional information can alleviate credit rationing due to adverse selection. Thus, using trade credit by SMEs brightens chances for more acquiring finance from the market to expand investment and boost firm growth.

Daskalakis, Balios and Dalla, (2017) explored the contributing factors to the use of trade credit by small English firms. Key among their findings is that large firms with better access to both internal and external finance at favorable cost require less trade credit from suppliers and that firms with larger growth opportunities make more use of trade credit so as to fund their additional sales volumes.

Casey and O'toole (2014) undertook a study on the role played by demand characteristics and firm creditworthiness in determining the terms associated to trade credit as well as the final use for such facilities. Among their research findings, they contend that big buyers receive contracts with extended maturities due to their creditworthiness. Similarly, using US data, Aktas as cited in Casey and O'toole finds evidence that using trade credit is influenced by the quality of investment, abnormal returns as well as returns on assets. The same author also tests what determines the terms attached to trade credit. The findings from this inquiry reveal that, availability of information and the credit worthiness of the buyer credit largely determine the terms attached to trade credit.

Casey and O'toole further find that constraints on available credit from banks and other financial institutions force firms to resort to use of trade credit. Related observations were made by Daskalakis, Balios and Dalla, who highlights that small firms substitute trade credit for bank credit in the face of bank lending shocks. Bougheas, Lim, Mateut, Mizenand Yalcin (2018) equally studied the links between trade credit and monetary policy activity. Their empirical analysis of UK firms

confirms their initial assumption that monetary tightening is followed by decrease in levels of bank lending in contrast to volumes of trade credit.

Krolikowski and Yuan (2017) also finds that trade credit can act as a substitute for bank credit during periods of monetary tightening. The author however highlights that during times monetary easing, the two financing types appear complementary. Huang, Shi and Zhang (2015) use data from Chinese firms to highlight evidence of substitution of trade credit for bank credit which show counter-cyclical pattern. Carbó et al. (2013) use Spanish firms to investigate effects of over reliance on trade credit by firms that are highly credit constrained. Krolikowski and Yuan, similarly studied the effects of increasing accounts payable for credit constrained firms during the financial crisis in the US. According to Ferrando, Popov and Udell, (2017) firms that are financially limited will most likely use trade credit while pursuing their growth and expansion.

In East Asia, Tan and Ma (2016) investigate how firms make use of trade credit to stimulate their growth during financial crises. Their findings indicate that firms make use of trade credit immediately after crisis, gradually tailing off with passage of time from the crisis period. According to Kapkiyai and Mugo (2015) several studies concur that SMEs with low credit worthiness are likely to be more financed by suppliers, where liquidation is more likely to occur. Thus, the high interest rates associated with trade credit are reflective of the fact that SMEs opt for trade credit from their suppliers. Similarly, Fishman and Love (2003) in their study investigate the relationship between overall development of the financial sector and trade credit substitutability for institutional financing. Their findings reveal that in countries that have under developed financial markets, firms employ more trade credit in order fasten their growth.

Kapkiyai and Mugo also highlight a positive linear relationship between trade credit finance structure and the performance of firms arising from the fact that the advantages associated with trade credit transcend the costs of vendor financing. Furthermore, the benefits of a firm using trade credit might differ based on certain firm attribute. For instance, larger and more creditworthy firms tend to advance trade

credit to their smaller customers' thereby growing the firm's sales and creating an implicit rate of return. Hence, larger and more liquid firms gain superior returns on receivables as opposed to smaller and less liquid firms.

Ferrando, Popov and Udell (2017) argue in addition that firms are likely to supply more trade credit to buyers who are temporarily in short supply of cash flow. This subsequently fosters their sales, as the otherwise distressed clients would be unable to acquire the goods. Firms will however only offer additional trade credit when they believe there is a prospective likelihood for a long-term relationship with that customer.

According to Nanyondo (2017) in Egypt, most SMEs are inclined to use alternative finance in the form of trade credit. Using secondary data from the Central Bank of Egypt (CBE), analysis indicated that 19% of SMEs use formal bank finance, compared to 81% usage by large enterprises. In addition, the descriptive statistics indicated that fewer than 50% of SMEs in Egypt sought formal bank finance in the period 2012 to 2013. The respondents indicated that SMEs dislike the bureaucracy that surrounds access to formal finance. Likewise, loan officers indicated that nearly 80% of SMEs lack accepted collateral to secure the loans and insufficient guarantors to secure the finance.

Nanyondo further offers details on firm balance sheets in eight European countries. The author notes that Spain has the second highest ratio of trade debtors to total assets at (35%), while Italy is the first with (42%), and holds more than a third of its invested assets in trade credit. The study highlights the UK at (20%) and the Netherlands (13%) as the two countries with the least levels of clients relying on trade credit.

Paul, Guermat and Devi (2018) noted that in the UK, at least 80% of corporate sector transactions take place on credit. The authors report that the value of trade credit in the UK exceeded 59 billion pounds in 2006. In the US, they maintain that the size of trade credit supply exceeds the credit supplied by the country's entire banking system and remains the most important supplier of short-term business credit. In France and Italy accounts receivable amounts to 29% of firm's total asset. Trade

credit is equally less important in Eastern Europe where there is restricted availability of bank finance. For instance, the ratio of accounts payable to total liabilities in Eastern Europe vary between 21% in Hungary and 49% in Bulgaria while evidence from Asia shows that the private sector firms in China also largely based on trade credit (Paul, Guermat and Devi, 2018).

Aslam and Hussain (2017) undertook a study to underscore the significance of managing current assets and current liabilities in relation to the trade credit stressing that trade credit has been a growing source of finance of industrial sector in Pakistan. In this study, the main aim is to analyze the role of trade credit in upgradation of cement sector. To achieve this object, data was taken from the annual financial reports of 17 firms listed cement sector in Pakistan Stock. Exchange (PSX). The analyses were carried out by using 8 years data, starting from year 2007 to 2014. Apparently not much work has been done to find out the success or failure of the business units selling cement on credit terms under market conditions prevailing in Pakistan. Panel data (fixed effect) model was used for the estimation of results decided on the basis of Hausman test. The study findings indicate that trade credit has very significant positive affect on sales growth of the firms.

Muchuri and Shukura (2017) highlight trade credit aspects that influence a firm's financial performance of SMEs registered with the private sector federation in Rwanda. The factrs higlighte include: the term to maturity of the loan with (mean 3.56) implying to a great extent and uncertainty about loan amount to a moderate extent (mean 3.24). High interest rates were found to affect the firm's financial performance to a great extent (mean 3.86) while mismatch of funds was revealed to influence a firm's financial performance to a moderate extent (mean 3.21). Finally, undue pressures for repayment were found to affect a firm's financial performance to a great extent (mean 3.83).

2.4.3 Debt Finance Structure and SMEs Growth

According to the Organization for Economic Cooperation and Development (OECD, 2018), there are three primary sources of SMEs finance and these are equity, debt and retained earnings. Cao, Lorenzoni and Walentin (2019) maintain that debt means a case in which a firm gets finance products in form of a loan from a financial institution and commits itself to reimbursing with interest within a set time period.

There are other studies on Rwanda relating to the growth and expansion of SMEs for instance, Klyton, and Ngoga, (2018) investigated strategies used by entrepreneurs, banks, government, and other lending institutions in response to SME financing gaps in Rwanda. Their findings highlight three triggers rooted in the informal and unincorporated nature of the SMEs governance structure; the limited of capacity for SMEs owners to run their own projects, and the implicit nature of language used with collateral requirements which masks realities for SMEs leading to stagnation for SME finance.In a study by Akimana (2017) on exporting SMEs in Rwanda particularly external and internal factors that limit exporting SMEs, it was discovered that Rwandan exporting SMEs did not possess sufficient funds to plough back in export activities.

Similarly, Kabasha (2016) analyzed a sample of 400 SMEs in Kigali City in relation to commercial loans accessibility. Results highlight inaccessibility to finance as a salient impediment to SMEs growth in addition to raw material shortage. Dzomonda and Fatoki (2019) argue that debt financing is the most widely used tool in the financial market for obtaining investment capital and funding new businesses including SMEs and it includes secured loans which involve secured loans. He contends further that debt involves an agreement between borrowers and lenders with regard to a fixed interest rate to be paid in a given time frame. When the maturity date of a debt is below 1 year, it is considered a short-term debt while if it is above 1 year is considered as the long-term debt.

Gomis, and Khatiwada, (2016) report that there is a positive relationship between debt and future productivity growth of a firm and that the correlation improves as financing becomes more costly. Finance plays a pivotal role in the allocation of

capital resources. The functioning of financial system is vitally linked to economic growth and countries with larger banks and more active stock markets have grown faster even after controlling for other determinants of economic growth. Industries and sectors that rely on external financing grow disproportionately faster in countries with well-developed financial sector. Financial development is particularly beneficial to new firms as well as to SMEs in an economy by lowering the barriers to entry and access to financial tools. Thus, access to credit is the basis for innovation and creation of new enterprises.

Gomis and Khatiwada, further stress that higher financing obstacles faced by small firms translate into slower growth. They show that smallest firms are adversely affected by financial, legal, and corruption constraints; therefore, financial and institutional development helps to close the gap between small and large firms. Moreover, they add that financing plays an important role in the functioning and growth of small and medium sized enterprises SMEs since on average, the share of investment financed with bank loans for small firms is 15 per cent, while it is 22 and 28 per cent respectively for medium and large firms. Also, not surprisingly, larger firms finance a greater share of investments with equity than smaller firms (Gomis and Khatiwada, 2016).

Safiuddin and Mohedul (2015) argue that bank financing largely accounts for growth of small firms stressing that young businesses and any other enterprises mostly depend on bank financing to boost their business and to carry out new investment projects. However, the authors also highlight slack of collateral, high cost of capital, difficulty in making business plans and the limited of lending institutions as salient challenges facing SMEs.

Nanyondo equally reports on a study conducted in China by Ayyagari et al. (2008). The study categorized finance into formal and alternative, with the aim of examining firm financing patterns among SMEs. A sample of 2,400 accountants and personnel managers of Chinese small and medium sized firms were interviewed by using a questionnaire and also by qualitative questions asking for the managers' opinions on the business environment and access to debt finance. The sample only included

registered SMEs with a corporation status. The descriptive statistics results indicated that approximately 20% of SMEs in China use bank finance such as loans, with a much greater reliance on alternative sources, at nearly 80% (Nanyondo 2017).

According to Lekhanya, (2016) non–availability of debt financing is considered to be the most constraining factor for SMEs' survival and growth in South Africa. The author highlights other limiting factors which include failure of SMEs to avail viable business proposals to lure potential finance institutions, market inaccessibility and tough firm sizes and legislation which subsequently present obstacles that limit SMEs' ability to obtain funding. Moreover, El-said, Al-said and Zaki as cited in Lekhanya (2016) highlight that banks consider SMEs as risky portfolios partly due to owner characteristics.

Several other studies mark inaccessibility to finance as a major shortcoming to SMEs. Thus, according to Ibrahim and Ali as cited in Lekhanya (2016) owners find it hard to acquire necessary debt finance for growth and expansion of their businesses and firms. When SMEs have access to finance, it helps them make progress in terms of growth and expansion. Hence, Bwisa and Ngugi, (2013) expound on this position when in their study they find that firms with greater access to financial resources take advantage of market opportunities. However, Kira (2013) in a study of SMEs' financing observes that 77 percent of all small firms that requested for debt financing were unsuccessful.

According to Githaiga (2015) the fact that most nascent firms have limited retained earnings which sometimes are even nonexistent makes debt financing the major sources of financial resources. Besides, there are associated advantages to using debt credit finance as Sun (2019) highlights stressing that SMEs depend on debt financing as it is relatively cheaper compared to equity financing. Furthermore, SMEs are often firms with limited financial track records dwindling their chances of acquiring finance from credit units. This makes shareholders have serious misgivings towards provision of capital for such firms.

Nanyondo (2017) used case study of countries in the East and central Africa to examine the role of bank financing on SMEs growth in Kenya, Tanzania, Uganda

and Zambia. The study used questionnaires to collect data from 16 banks, four banks in each country, followed by interviews. The findings revealed that the Ugandan SME sector has the lowest aggregate access to debt finance among the four countries, with a rate below average at 42%.

Triki and Gajigo also cited in Nanyondo equally conducted a survey to investigate public and private access to debt finance among SMEs using a sample of over 900 commercial banks across 42 African countries. Their findings revealed that access to bank finance among SMEs is on average higher in countries such as Namibia (58.5%), Botswana (57.6%), and South Africa (54.9%), while Malawi and Mozambique have the lowest access, at less than 0.1%.

Another study that investigated different sources of finance to determine SME finance access rates include a survey by the Bank of England (2014). This study was conducted in 18 countries in the Eurozone. The findings revealed that SMEs access more bank loans, at 45%, compared to bank overdrafts (23%), leasing or hire purchase (16%), factoring or invoice discounting (10%), mortgages (4%), trade finance (4%) or grant and equity investment (1%). Ayyagari, Demirguc-Kunt and Maksimovic (2014) also conducted a study aimed at establishing the forms of finance applicable to SMEs. They used firm level data from the period 2006 to 2010, and a sample of 120,000 SMEs across 125 developing countries selected by way of stratified random sampling technique. The descriptive statistics revealed that bank finance in particular is the most common type of external finance for SMEs across these countries, with access ranging from 44% to 58%.

Nanyondo argues further that contrary to the findings that bank finance is the most popular form of finance, some studies suggest that this is not the case. For example, Besley and Levenson as cited in Nanyondo opine that in Taiwan, a study found that sole proprietors use alternative (non-bank) finance from Rotating Savings and Credit Associations (ROSCA) groups, at a rate of 90%. The respondents indicated that the bureaucracy in banks does not favor SME access to debt finance, therefore saving groups offer a remedy in terms of quick finance.

According to the Organization for Economic Cooperation and Development, (OECD, 2014) in Mexico, national bank data shows that in 2009, the highest proportion of funding for SMEs came from trade credit followed by commercial banks and development banks. This would again suggest that bank finance is not the dominant source of finance for SMEs in Mexico. Given this contradictory evidence, it is therefore important for there to be clarity over what forms of finance count most when determining SME access to debt finance, otherwise there is a danger that the debate will never end.

Davydov (2014) in an essay argues that traditionally, the ultimate goal of any business is to increase firm value and that the use of debt financing enables SMEs and other firms generate revenues that would be nearly impossible to attain devoid of additional external financing in the form of debt or equity capital. The author however highlights that while determinants of the choice between debt and equity are well documented and, to a large extent long established, the effects of various debt sources on firm value and performance still remain somewhat unclear.

Dube (2013) highlights a study on the effects of debt on firms in which it was concluded that high debt levels can hamper firm growth and expansion. The author hence argues in favor of an acceptable level of debt sufficient to impact positively the growth of a firm. Hence, when the debt ratio goes beyond a given threshold, the firm stands a risk of experiencing financial crisis. Other theorists equally weigh in on the position that debt should be kept under certain levels to avoid the probability of a firm facing financial distress. Over borrowing could lead to disastrous consequences such as bankruptcy and financial ruin since high levels of debt might constrain the firm from pursuit of profitable projects due to failure to obtain more debt from financial institutions.

A study by Hussain, Salia and Karim (2018) uses Chinese listed companies to show the negative consequences of total debt ratio on fixed investment since a firm having a high debt ratio forces it to channel its income into debt repayments as the opportunity cost of investment. Moreover, as more debt is employed in a firm's finance structure, the business risks also skyrocket. This is exemplified by He and

Matvos (2012) who stress that debt finance heightens the risk of bankruptcy particularly in times temporary industry and economy-wide downturns. Consequently, it becomes hard for a firm to attract more debt for investment purposes since creditors tend to charge high interest rates as a way to cater for the high business risk. Hence, according to Yuan and Kazuyuki, creditors will restrain from lending to a highly indebted firm leading to underinvestment.

In their study on Malaysian firms, Ahmad, Abdullar and Roslan (2012) examined how firm performance can be impacted by the capital structure of a firm. The authors analyzed how return on assets (ROA), return on equity (ROE) and short-term debt and total debt are interlinked. The findings from this study suggest that short-term debt and long-term debt are significantly interrelated with ROA. Another highlight from the study is that ROE is significantly related with short term debt, long-term debt and total debt.

Another study by Allini, Rakha, McMillanand Caldarelli (2018) in Egypt sought to demonstrate how financial performance of companies on the Egyptian stock exchange market was affected by debt levels. The author used return on assets (ROA), return on equity (ROE) and gross profit margin as dependent variables and short-term debt, long-term debt and total debt as independent variables. Accordingly, findings from the study, revealed that short-term debt and total debt are negatively correlated with return on assets (ROA). Furthermore, no significant relationship was found between long-term debt financing and ROA. Hence, the study concluded that there was an insignificant relationship between total debt, short-term debt and long-term debt with financial performance measured by gross profit margin and return on equity.

Asare and Lawer (2015) assessed how debt financing affects the profitability of 50 SMEs in a period ranging from 1999 to 2006. Using a regression model and panel data in SPSS package, the study found that debt financing has a significant positive impact on Conventional SMEs' profitability. The authors concluded that debt is a financing option mostly designed to increase the rate of return on owners' investment by creating greater return on borrowed funds as opposed to the cost of using the

funds. According to Biggs and Shah (2006) there is ample evidence that bank finance accessibility is linked to the size of firms. In a study of four African countries, Kenya, Tanzania, Zambia and Zimbabwe, it was found that the percentage of SMEs receiving bank credit ranged from 8.2 per cent in Zimbabwe to 24.6 per cent in Kenya.

De Maeseneire and Claeys (2012) also observe that SMEs were more limited in using collateral, long-term relationship and reputation, which would otherwise ease information problems. Lack of collateral was the most constraint that SMEs faced in accessing lines of credit from the formal financial system. A study of six African countries; Burundi, Cameroon, Cote d'Ivoire, Ghana, Kenya and Zimbabwe in the 90s showed that among those firms which wanted a loan, small firms had substantially worse chances of getting a loan from the banking system than large firms.

In Kenya, Mwega (2011) found there to be a reluctance to lend to SMEs, although some banks like Equity Bank and Kenya Commercial Bank were designing products that increased access to loans to SMEs. Similarly, the same authors observed that the proportion of firms that obtained overdraft facilities, bank and non-bank loans increased with the size of the firms in Zimbabwe, with small industries being severely constrained in many ways.

Legesse and Guo (2020) opine that when using debt capital, firms gain advantages in various ways through providing tax shield, minimizing agency problems between firm managers and shareholders as well as transmitting positive signals regarding firm productivity since managers possess inside information about the future productivity gains of the firm. However, the use of debt also could potentially make a firm to incur costs linked to bankruptcy. As the ratio of debt in the finance structure rises, the probability that the firm suffers bankruptcy becomes more imminent. Higher default likelihood brings about financial distress. Thus, a firm's long-term borrowing depends on the benefit it gains from the long term debt and bankruptcy costs emanating from such borrowing. Companies borrow less if they are exposed to high probability of bankruptcy. Equally. Lenders assess the credit worthiness of

companies and restrain from granting loans to potentially bankrupt business. The implications of bankruptcy costs go beyond the firms that have gone bankrupt because it has a collective effect on all firms in the economy.

2.4.4 Equity Finance Structure and SMEs Growth

Equity financing is said to have a positive correlation with performance of firms and it is also deemed one of the most significant source of finance for SMEs. Hence, firms able to use equity finance stand higher chances of better performance as opposed to firms which don't use it. Osano and Languitone (2016) define equity financing method as the degree to which a firm offers a part of its shares or stock in return for money. The offer can range from 25% to 75 % of the business. Njagi, Maina and Kariuki (2017) maintain that equity financing can be in form of own savings, retained profits, company board members' contributions as well as contributions from friends, cash flows, partners, deferred income as well as business angels.

According to Njagi et al, (2017) business angels can be defined as wealthy individuals who offer equity to businesses that they predict to have high growth and return prospects with aim to support entrepreneurship. Njagi et al, add that many successful large firms by venture capitalists first relied on business angel financing.

Olomi and Mori, (2015) classify equity finance in the context of SMEs as encompassing principal owners and family equity, angel investors, private equity firms, fund managers, crowd funding and venture capital. Under principle owners and family equity, SMEs rely on personal savings, own time and expertise (sweat capital) as well as soft loans and grants offered by friends for start up. Olomi and Mori further describe private equity firms as firms owned by individual shareholders that deal in placing the capital contributed by the shareholders in other companies. Fund managers on the other hand manage funds of large investors such as mutual funds, pension funds and government funds. They however opine that crowd funding is an novel technique of raising external finance from a large audience, in which each contributor gives a small portion of the funding requested while venture

capital (VC) is a form of financing in which specialized companies offer funds with intent to support a business as it launches new product line as it expand.

Dibrova (2015) observes that in high-income countries, while existing firms struggle due to lack of finance and the need for investments, business angels come in to support since 4.7% of entrepreneurs in these countries mention venture and business angel capital as their most viable source for fulfilling financial needs and optimizing their growth ambition. The same author highlights the ICT (information, communication, technology) sector as the most favored by business angels with as much as 50% investment deals. The biotech and healthcare sectors follow with 11% of the deals that amounted to 14% of investment. The energy and environment sectors with 11% of deals that totaled roughly 13% of total investments come next.

The European Association for business angels (Eban, 2014), reports similar findings on Europe's main investment sectors sought after by angel investors as ICT (32%), followed by biotech and life sciences at (10%), mobile (10%) and manufacturing (10%). The report adds that a majority of the targeted companies (87%) by angel investors are in early stages of growth especially start-ups, seed and preseed stages. The report further sites specific cases in Germany where the IT sector is rated higher with 52% of angel investments, followed by 22% in life sciences and 20% in services. Despite the share of highlighted sectors in different countries varying markedly, Dibrova maintains that the risk of poor accessibility to angel investments remains a daunting puzzle.

Briozzo and Vigier (2014) investigate the use of personal loans as an aspect of equity in funding SMEs in South America particularly in Bahia Blanca, Argentina. Their findings reveal that SME lending soared by 30% in mid 2000s. The authors' highlights that given a small percentage of funds offered to the SME sector by mainstream banking institutions at that time, dependence on bank loans for SME growth had been made practically difficult. Some SMEs therefore resorted to the use of personal loans as a partial solution to the demand for credit, which remained disappointing by the traditional financial sector. However, mature companies, businesses with unpredictable growth patterns, new business owners, as well as

proprietors with emotional costs associated to liquidation, were less inclined to obtain personal loans to fund their business operations. Briozzo and Vigier conclude that the owner's private loans invested in the small businesses created a form of equity while loans held by the enterprise function represented part of the firm's debt. The variation also affected the method that owners deployed to assess firms' financial risks as opposed to the owner's financial risk.

In Nigeria, Gbandi and Amissah (2014) studied how SMEs financed their businesses with a particular consideration on the importance of microfinance banks, cooperatives, and commercial banks in Nigeria's financial sector. Their study found that auxilliary sources of investment finance for SMEs in Nigeria included proprietor's savings, moneylenders, and local authorities. They however also found that formal investment sector included equity financing through venture capital and business angels. It was equally found that the informal finance sector in Nigeria offered more than 70% of the funds SMEs required for investment and growth.

Daskalakis, Jarvis and Schizas, (2013) in their study found that Greek small and medium enterprises largely relied on private funds with often little or no initiative to create additional capital from sources outside the family. Hence, there was reluctance on the side of SMEs to deploy independent external funds such as venture capital and business angels in Greece. In contrast, Cela, Shkurti and Hilaj (2013) in Albania report increasing levels of financing for small businesses although they note that the increase was insufficient to promote a speedy development of the SME sector. The others pointed out several measures introduced by the Albanian government to solve the challenge such as the use of credit guarantee schemes in factoring SMEs to boost the investment environment for small businesses.

Gudov (2014) maintains that the internal sources of SME capital in China comprises of individual and family savings, reserved earnings, working capital, and disposal of fixed assets. On the other hand, Gudov points out external funding sources as consisting of established venture capital speculations, bank loans and initial public offering (IPOs). The predominant arrangement however between sources of financing and small start-up businesses was individual and family savings.

Moreover, there was a low percentage of business angels' investment as opposed to innovation-driven countries of Western Europe and the US.

Kerr, Lerner, and Schoar (2014) studied the effects of by angel financiers' investment in start-up businesses. Their findings reveal that angel investments represented economically driven activities, undertaken by individuals investing to meet the capital demands of small businesses. Furthermore, they observed that angel investors deploy capital in high-net-worth individuals and private start up companies and that angel investors pool resources collectively and create more substantial investments than when they could have had an independent investment.

In Turkey, Yildirim, Akci, and Eksi (2013) examine the role of firm characteristics in determining accessibility to loans using a sample of 970 SMEs that operated across nine provinces of Mediterranean and South-East Anatolia regions. Their study findings reveal that a minuscule proportion of the SMEs in the country could generate substantial earnings sufficient to appeal to venture capitalists, private equity, or new forms of capital. Moreover, Yildirim et al highlight that insufficient equity, low working capital, difficulty accessing credit financing and rising cost of issuing stocks in financial markets, were the salient financial bottlenecks for SMEs in Turkey. They emphasize in addition that absence of secure credit history information as well as an underdeveloped legal, and institutional framework on the part of business managers in emerging economies was a key limiting factor for accessing finance.

In Tunusia, Adel, Tarek, Affes, and Jarboui (2016) investigate the use of venture capital as a source of funds for small and medium businesses in the country. The findings of the study reveal that the use of venture capital for SME financing was on the rise in the country though still oblivious to some SME proprietors. The study highlights that the country had initiated an investment company with venture capital called SICARs with aim to offer venture capital to start ups since new businesses which often struggled to acquire loans from commercial banks.

Shinozaki, (2014) opines that in emerging economies of Asia, equity financing avenues for SMEs have been created under stock exchange operations. The author

cites an example of Bombay in India where the Bombay Stock Exchange launched the SME Exchange in 2012 and had 41 SMEs listed that single year. Another example in China highlights the Shenzhen Stock Exchange where a three-tier market was developed consisting of the Main Board, SM Board, and ChiNext (high-tech venture) Board; in line with China's national economic development strategies. Shinozaki, remarks that capital market financing is one of the salient emerging priorities in long-term funding for SMEs growth in the People's Republic of China.

Watse (2017) similarly observes that China's Growth Enterprise Market (GEM) established an alternative stock market for high-growth enterprises, operated by the Stock Exchange of Hong Kong Ltd. Watse furthermore highlights the KOSDAQ as the largest regulated market for SMEs and venture businesses in the Republic of Korea, and a new market named KONEX launched under the Korea Exchange. Watse however proposes that moving forward, SME policy makers and financial regulators needed to come up with a comprehensive menu of policy alternatives for supporting diversified financing models accessible to SMEs, rather than strictly regulating new funding modality.

In Canada, Riding and Belanger (2006) noted that the total in flow of growth capital from business angels was roughly $3.5 billion, averaging nearly $117 000, invested in about 30,000 SMEs. Investments from friends and family members into small firms collectively made up a substantially larger collection of investment money amounting to $5 billion of investment capital. Furthermore, the authors highlight that both angel-financed SMEs and those financed by friends and family were found to be larger than other SMEs. Averagely, it was realized that firms that deployed angel financing registered returns that were 40 percent greater and total assets 25 percent higher than other firms. Firms financed by friends and family also reported revenues and total assets averaging 23 percent more than other firms. The implication is that informal investment has indeed spurred growth for these SMEs in Canada.

Abbasi, Wang and Abbasi, (2017) maintain that equity financing benefits SMEs by providing long-term capital with low cash outflow risks in terms of interest thereby helping new businesses to expand. Hence, when SME owners face lack of capital,

the foremost option is to invest by themselves from available sources or seek help from family and friends. The authors report that in Nigeria, 73% of SMEs raised their financing through own funds from personal savings whereas only about 2% opted for financial institutions' finance. Thus, financing from friends and family is a more amenable alternative as the investors' major aim is not monetary yet it comes with lower or no interest on investments. They author however highlight that financing from friends and family has a few downsides such as a significant risk on the social circle of owner which could cause a negative effect on the relationship in addition to such kind of financing being limited.

The World Bank, (2018) argues that equity financing is the most appropriate form of funding to support innovative high-growth firms in the Czech Republic with stress on business angel investors as they bring not only financing to high growth firms, but also expert advice, post investment mentorship, and market connections. Furthermore, the World Bank maintains that in the Czech Republic, business angels are showcased as linking the gap between preseed/seed stage and growth stage in the firm's life cycle yet, in reality they play as primary sources of funds for high growth firms. The World Bank reveals further that despite this, innovation, one of the main productivity drivers, has a modest performance in the Czech Republic just as entrepreneurship, another key productivity driver, is laid back in terms of new business creation and firm dynamism.

Matias and Serrasqueiro (2017) argue that many small firms start as family businesses with little growth prospects and often choose to use internal sources of finance to debt finance so as to keep control and independence. They therefore, opt for funding options such as retained earnings and personal savings that limit the possibility of dilution from intrusion into the business. Divakaran, McGinnis and Shariff (2014) note that the market for SME equity in many developing countries is still emerging only representing a meager fraction of the overall quantity of fund investment. The authors observe that in 2010 and 2011, SMEs represented only 5% of overall in South America. Similarly, the Association for Private Capital Investment in Latin America observed that in countries such as Columbia, Mexico

and Peru, investments in SMEs represented only 10 percent of overall investment. In comparison with East Africa,

Deloitte (2012) reports that in 2011 there were only about 16 active funds dedicated in East Africa. The same report further adds that there were only 20 deals representing a total investment of one hundred and eighty-eight million dollars in the East African region. It was observed however, that the average transaction value per deal was more than Ten million dollars which implies that SMEs that sought less than three million dollars to support business set up and expansions were largely overlooked.

Gompers, Kaplan and Mukharlyamov (2015) argue that despite the growth in private equity use by Small to medium enterprises, only a few papers have studied the actions private equity investors actually take. Early papers explored value creation in individual cases. More recently, Acharya as cited in Gompers et al, (2015) studied portfolio company performance and relate that performance to personal equity firm and partner characteristics. There is still much that is unknown on how deploying equity tools could boost SME growth and expansion.

2.4.5 Firm Size and SMEs Growth

Firm size is one of the most influential characteristics in organizational studies. Pham, Dao and Bui (2020) provide a summary and overview of the importance of firm size. Firm size has also been shown to be related to industry- sunk costs, concentration, vertical integration and overall industry profitability. Larger life insurance companies are more likely to have more layers of management, greater number of departments, increased specialization of skills and functions, greater centralization and greater bureaucracy than smaller life insurance companies (Muigai & Muriithi, 2017). Recent research has found an association between firm size and inertia defined as slow adaptation to change or resistance to fundamental changes in conducting business. Inertia can be caused by constraints on action associated with firm age and size.

Ayuba *et al.* (2019) argues that inertia can make change more costly and harder to achieve and maintain. The size of a firm affects performance in many ways. Key features of a large firm are its diverse capabilities, the abilities to exploit economies of scale and scope and the formalization of procedures. These characteristics, by making the implementation of operations more effective, allow larger firms to generate superior performance relative to smaller firms. Larger companies may also find it more difficult to maintain an atmosphere of continuous change than smaller companies

Bigger firms are presumed to be more efficient than smaller ones. The market power and access to capital markets of large firms may give them access to investment opportunities that are not available to smaller ones. Firm size helps in achieving economies of scale. According to the life cycle effect, younger companies are more dynamic and more volatile in their growth experience than older companies. Maturity brings stability in growth as firms learn more precisely their market positioning, cost structures and efficiency levels (Stepanyan, 2012).

Ilaboya and Ohiokha (2016) study indicated a significant positive association between firm age, firm size and profitability. With respect to the effect of age, one side of research proposes that older businesses are veteran, have enjoyed the benefits of learning, are not prone to the liabilities of newness and can, therefore, enjoy superior performance. The other side of research, however, proposes that older firms are prone to inertia, and thus, they are unlikely to have the flexibility to make fast adjustments to changing environments and are likely to miss out in the performance stakes to younger and more responsive businesses. Firm size and age to firms' performance cannot be evaluated outside the recognized context that the organizations function within.

Size has not only been studied as an independent variable for measuring performance of the firms but Rauch, Wiklund, Lumpkin and Frese, (2009) concluded that size of firms is an important moderator. Rauch *et al.* (2009) in that analysis deeply observed number of researches which were conducted taking size of firm as a moderator and inferred a result that severity of impact of all the environmental factors changes with

change in the size of organizations. Size of the organization as well as environmental philanthropy played a role of moderator variable between entrepreneurial orientation and performance. Size is an important predictor of the performance.

According to Theresia (2021) performance of a company can be significantly predicted by firm size. Larger firms show better profitability while smaller firms do not have an ability to compete larger firms in this regard. Abbasi and Malik (2015) clarified the relationship and concluded that organizational size is having significant impact on performance as well as rights of the shareholders. Larger firms have better chances to obtain credits from financial institutions. They may obtain loan at cheaper rates, as they have better credit worth and low chances of bankruptcy. The same aspect has been confirmed by Gedajlovic, Yoshikawa and Hashimoto (2015), they confirmed that relationship between size and profitability of the organization is positive in nature.

2.4.6 Small and Medium Enterprises Growth

El Hakioui and Louitri (2020) argue that growth is deemed the second most important goal of a firm, with the most important being firm survival. Aversion to growth therefore, has been said to be the principal reason why most SMEs stagnate and decline. According to Kirkwood (2016) firm growth is a multidimensional construct and research should not aim to find a one size fits all measure. Hence, a range of the most widely cited indicators that are used to measure firm growth are discussed below; the market share indicator is unique since it highlights how much a firm has grown in comparison to its competitors. However, Kirkwood (2016) was less convinced with the market share hypothesis as a measure of growth, particularly in SMEs research. They argue that the term 'market' in market share calculations could be ambiguous. Furthermore, they maintain that for firms with small market shares, differences in market share could be irrelevant, while comparing market shares for firms operating in different markets.

According to Salder, Gilman, Raby and Gkikas (2020) there is inconclusive evidence to suggest an association between profitability and small firm growth. Such findings are indicative of the notion of causal relationship between SME profitability and

growth. Salder, et al, however stress that in SMEs, it is extremely hard to measure profits since owner/managers are often non-committal to offering such data. Moreover, an inverse relationship has been found between profits and growth as researchers such as Adomako and Mole (2018) have found that achieving profitability did not necessarily translate into growth of SMEs. Profitability of SMEs mostly in early years may not succinctly show its real financial realities thereby limiting profitability as an effective measure for growth.

According to Mawson and Brown (2017) sales is the most favorite measure for firm growth since 83% of the studies in their research adopted sales as their growth indicator. This proposition is based on the idea that sales figures are readily available let alone the fact that all other indicators (employment, plant and equipment) are also driven by sales as Chit (2018) suggest. However, despite the argument above, Moo and Eyiah (2019) challenges the notion that sales increase is a measure of firm growth since growth of firms can come from outsourcing, meaning that a firm can grow without necessarily increasing their resources or employment. Furthermore, Gransey maintains that sales can be influenced by accounting conventions and periods hence, a need arises to control the resulting differences by adjusting sales figures to take account of inflation and exchange rates. This makes it less reliable as an effective firm growth measure.

Etale, Bingilar and Ifurueze (2016) stress that market share is used to express a firm's competitive position as it is generally accepted that a firm's increased market share is equated to success and the reverse is said to be true. Hence, in their study findings, they maintain that market share has a statistically significant and positive relationship with growth particularly growth measured in terms of profitability of banks in the Nigerian banking sector. Yannopoulos, (2010) similarly notes that there is a positive relationship between market share and firm growth in terms of profitability. Hence, the author advocates for the fact firms should strive to achieve a higher market share in order to reap the advantages of higher economies of scale since a company's cost position is dependent on its relative market share.

Coban, (2014) observes that firm profitability supports growth as the assumption of the firm theory in economics is that firms aim to maximize profits. Cowling as cited in Coban underscores the positive and strong relationship between profit and growth for British firms. Hobarth also cited in Coban (2014) in a study of British firms demonstrates that firms with efficient working capital management, low liquidity, more equity and high retained earnings have high profitability.

Kouser, Bano Azeem and Hassan (2012) observe that profitability has a great influence on growth. They define profitability as the consistency of cash inflows of a firm. Jang and Park (2011) revealed a positive relationship between profitability and firm growth. They argued that increasing profit also increases growth although they further maintain that increase in growth may impede profits. Fuertes-Callen and Cueller-Fernandez (2019) opine that business growth and profitability are the essence of business practice and that growth is a precursor of sustainable competitive advantage. Hence, growth that is not accompanied by profitability does not seem sustainable in the long run as firms that grow at the expense of their profits are forced to seek external financing which may result into financial difficulty. The authors add that the effect of profit on growth is likely to be positive in an environment that encourages investment and growth and so if the business environment does not favor investment, the nexus between profitability and growth weakens.

Lee (2014) undertook a study on the relationship between growth and profitability using a panel of data from Korean firms from varied economic sectors. In their findings, it was revealed that past firm profitability has an effect on current firm profitability and past growth has a positive effect on future profitability. Coad, (2011) also conducted an empirical survey on firms in France on the relationship between profitability and firm growth based on a panel of data from French manufacturing firms. Among the findings, the study reveals a significant relationship between current firm profitability on future firm growth.

Goddard et al. as cited in Yoo and Kim (2015) conducted an empirical review on the dynamic relationship between firm's growth and profitability using a data of

banks from five European countries. They analyzed the growth rate of bank sizes and profit rates. The results highlight that current profit rates for firms act as positive indicator for the growth rate of the given corporate size in the subsequent period.

Similarly, Shibia and Barako (2017) argues for use of employment as the growth measure since according to Kirkwood (2017) majority SMEs are unable to report their sales or profits accurately citing lack of appropriate records. However, according to Bridge (2003) the use of employment as a growth indicator becomes less effective given the distorting effects of labor productivity increases, advancement in means of production as well as the level of integration. Moreover, the fact that there is growth in some variables of the firm does not always mean an increase in employment.

Peric and Vitezic (2016) have argued in favor of asset as an indicator of growth in manufacturing firms where high investment in capital is vital. However, Wekesa, Bwisa, and Namusonge (2017) suggest that measuring growth in terms of assets could be problematic in the service sector due to the difficulty of valuing intangible assets which could be very important to growth. Wekesa, Bwisa and Namusonge (2017) argues further that accounting differences as well as lease financing could also pose real challenges when using assets value as an indicator stressing that this issue is common to all or most sectors.

Miguel and Gomez (2018) observe that micro firms with less than 10 employees are less susceptible to credit constraints, perhaps due to the fact that such firms largely depend on internal funds such as cash flows and retained earnings to fund their investment projects which render them less sensitive to inaccessibility to external funds. All in all, Leona et al. (2015) observes that firm growth is a multidimensional phenomenon encompassing varied factors. Hence, there are several commonly used measures of firm growth: employment growth, sales growth, profit, return on equity (ROE), and return on assets (ROA) as well as SMEs owners' perceived growth relative to their competitors in terms of increase in company.

Chirwa (2012) notes that a report by the International Finance Corporation (IFC, 2010) on SMEs articulates that in emerging economies, the formal SME sector

makes up to 33 per cent of gross domestic product (GDP) and contributes about 45 per cent of total employment. In particular, SMEs in the quarrying and mining, manufacturing, energy, gas and water sectors are of salient significance in the SME sector. According to IFC (2010), SMEs account for 45 per cent of manufacturing employment and 29 per cent of manufacturing GDP in low-income countries as compared to 67 per cent and 49 per cent in developed world. Chirwa, (2012) further contends that the manufacturing sector in South-East Asian countries is dominated by SMEs and plays a key role in the industrialization process, making up to 78-99 per cent of the entire manufacturing establishments, 17-71 per cent of industrial output and 39-65 per cent of total exports. Moreover, limited information is documented about the number and contribution of SMEs in Africa and evidence of its relative contribution in employment and national output is not known. Most of the literature focuses on SMEs in general, without paying particular attention to the special characteristics and financing needs of SMEs.

Moreover, Sindini, Namusonge and Sakwa (2016) observed that the limited growth and expansion of majority SMEs is as a result of limited finances and poor management of the available scarce resources adding that millions of SMEs go bankrupt due to poor cash flow with the most common cash-traps in form of uncollected accounts receivables. The authors add that even large profitable firms can collapse if they fail to manage accounts receivables effectively.

Ayuma, Namusonge and Iravo (2014) observe that banks use tighter loan contracts to overcome risk. The authors further highlight that collateral, interest rates and debt spread are the common terms used by financial institutions to determine loan contracts for borrowers such as small and medium enterprises. Moreover, in the case of Small and Medium Scale Enterprises (SMEs), accessing finance has been the most significant challenge for their growth and sustainability. Thus, problem gets exacerbated by the economic crisis and recession leading to increased insolvency rates in most lending institutions thereby making banks' interest towards lending to SMEs reduces arising from the pressure to preserve and strengthen their capital base. Hence, banks maintain only economically viable clients as the cost of capital

increases. Financial institutions, guided by increasing risk awareness, come up with new capital requirements on lending contract terms and SMEs get hard hit.

Alibhai, Bell and Conner (2017) argue that in global investment climate surveys, the hurdles of finding and acquiring financing is often one of the top three constraints that are identified as limiting SMEs growth and expansion. In several regions, access to finance is the single most important constraint. This finding is supported by research that has calculated that the credit gap that formal SMEs confront is about $1 trillion. When informal SMEs are taken into account, that gap widens even further, to around $2.6 trillion. This is because these enterprises are generally perceived as risky by most banks and access to finance is an important constraint on them playing a fuller role in supporting economic growth, jobs and development.

International Finance Corporation (2017) highlights the most significant limiting factor to SME growth as lack of access to finance further stressing that many researchers and academics emphasize SME's dependence on credit and cash flows as greatly limiting their ability to grow and expand. They further stress that SMEs face numerous obstacles in borrowing funds because they are small, less diversified, and have weaker financial structures. This is implied by evidence pertaining to payment delays on receivables, declining liquidity, and an increase in SME's insolvencies and bankruptcies. In addition, SMEs find it difficult to provide high quality collateral at all times. They also experience difficulties in ensuring transparency with respect to their creditworthiness.

2.5 Critique of the Existing Literature

Review of empirical studies on the topic of study in Rwanda revealed various limitations and shortcomings that need to be addressed. First, the contextual difference in the studies reviews imply that there finding cannot be applied in the context of Rwanda. For instance, Thuranira (2014) focused on how returns of firms listed at the Nairobi Securities Exchange are affected by retained earnings whereas Tshabalala (2017) uses a case study of South African SMEs to demonstrate how internal finance impacts firm growth. Since Rwanda has different social-economic

and political factors compared to both Kenya and South Africa these studies findings cannot be wholesomely applied in the Rwandan Context.

Berger and Udell (2014) in their study address the effect of trade credit on growth of SMEs in the Japan. Japan is a developed country while Rwanda is categorized as developing economy. Hence, this difference in economic status of the two countries limits the applicability of their study findings in the Rwandan context. Similarly, the methodological approaches used in similar studies reviewed further limits the generalization of the findings to other contexts.

Studies by Njagi, Maina, and Kariuki (2017) focused on small towns in Kenya hence the findings of these studies can only apply to SMEs within those towns because of difference in legislation governing SMEs and the limitation in the available sources of finance within those particular regions. SMEs in Rwanda are subjected under different legislation and financing options hence there is a need to carry out this study.

A critical review of research on how finance structure influences manufacturing SMEs growth has had mixed results, some have found positively correlated results others a negative effect while the rest found no significant relationship. Cull, Xu, Yang, Zhou, and Zhu, (2013) in their survey on sources of finance for Chinese firms find that retained earnings, government transfers and bank finance were the most commonly deployed sources of finance for Chinese firms. Allen, Qian, Zhang, and Zhao (2012) similarly examined the degree to which firms obtain finance in China. Their findings reveal that bank loan is the commonest source for SMEs. Hence, both studied by Cull et al, and Allen et al. are concomitant to the fact that debt finance is the most dominant type of finance used by SMEs in China.

In Rwanda, Ndikubwimana (2016) studied how SMEs innovations are supported or promoted by financial institutions. The findings from his study indicate that traditions and informal business management practices hinder SMEs growth and innovation despite the fact that financial institutions play their inter mediation role. Furthermore, some theorists highlight the research gap on the current study topic noting that academic studies on SMEs financing has been given little attention for the

last twenty years as opposed to large firms which have rights of acquiring more capital from stock markets.

SMEs sector in Rwanda is guided by Rwanda SMEs policy. This may not accurately depict the current trends in the SMEs industry in the country given that it is nine years old. Dynamics have changed and regulatory and policy environments have equally changed, this implies that some of this information may be irrelevant in a more improved doing business environment in Rwanda. Going forward this study will address the deficiencies by analyzing the role finance structure plays towards growth of manufacturing SMEs in Rwanda.

2.6 Research Gaps

The reviewed literature reveals gaps in both empirical and theoretical literature in support of finance structure of SMEs. First and foremost, review of existing empirical literature showed conflicting findings. For instance, Thuranira's (2014) results show a weak inverse association between retained earnings and stock returns. Tshabalala (2017) finds a significant relationship between internal finance and firm growth. Mwangi's (2016) study finds when treated in isolation, short term debt, long term debt, retained earnings and external equity have insignificant negative effect on return on assets but insignificant positive effect on return on equity.

Similarly, there are contextual research gaps where most of the existing studies were conducted in various regions but not Rwanda. For instance, Thuranira (2014) focused on the effect of retained earnings on the returns of firms listed at the Nairobi Securities Exchange while Tshabalala (2017) focused on the impact of internal finance on firm growth using a case study on South African SMEs. Rwanda has different social-economic and political factors compared to both Kenya and South Africa hence, these study findings cannot be fully applied in the Rwandan Context.

Tang, Huang, Kabir and van Beuschiem (2014) observed that several theorists explain the determinants of trade credit citing theoretical models to evaluate it. The transaction theory, for instance, points out that trade credit can reduce exchange costs by separating goods exchanges from money exchanges. Nevertheless, those trade

credit theories lack empirical evidence to support them and there is little research which specifically focuses on the understanding of the relationship between trade credit and firm's profitability. This paper attempts to bridge such gap.

Zingales (2000) opines that research on SMEs growth gets little attention from researchers most scholars who mostly put emphasis on large enterprises. Some scholars such as Mckelvie and Wiklund, (2010) add that little research has been conducted to understand how the growth of small and medium manufacturing enterprises is influenced by the finance structure and therefore there has been lack of proper theoretical frameworks on growth of SMEs. Hence, this study seeks fill this knowledge gap.

According to Kim (2016) trade credit research has garnered little attention in corporate finance literature. The author attributes this neglect to the fact that trade credit is buried in the firm's distribution activity. Trade credit, like other working capital components, is related to short-term external finance. Moreover, trade credit makes up a large share of total assets in manufacturing companies. Empirical research on trade credit has been applied mainly to developed countries. As with most emerging countries, such as Rwandan firms, little attempt has been made to verify the effect of trade credit on the firm growth. Yet, it is an important source of financing.

According to Legesse and Guo (2020) even though corporate finance theories and a multitude of studies demonstrate the relationship between firm performance and finance structure, this notion calls for revisiting with different perspectives. First, prior studies indicate non concomitant findings on the relationship between firm growth and its financial structure choices. Extant literature is also awash with both negative and positive relationship between firm finance structure and firm growth. This kind of dichotomy in findings warrants further studies that adopt alternative indicators for firm growth and expansion.

2.7 Summary

Collectively, chapter two focused on both the theoretical and empirical literature related to the study variables. The review offers a strong background for the development of the conceptual framework that would facilitate an investigation of the relationship among the independent, dependent, and moderating variables. The knowledge of finance structure theories is particularly important for it is the basis for understanding the interrelationship between independent, dependent and moderating variables for the topic under study.

In an analysis of finance structure, Modigliani and Miller (1963) found that the market value of the firm is not affected by the way a firm finances its investments rather, the market value is affected by the firm's earnings power and underlying risk of the firm's assets. In another major study, Myers, Majluf 1984; Myers 1984; Katarzyna Prędkiewicz, PawełPrędkiewicz, 2015) found that firms have a preferred hierarchy for financing decisions. The highest preference was to use internal financing (e.g. retained earnings) before resorting to any form of external funds.

Analysis of empirical studies revealed various findings on how SME growth is affected by the firm's finance structure. For instance, Thuranira (2014) results finds a very weak and insignificant relationship between retained earnings and stock returns and that the relationship is inverse as the coefficient corresponding to retained earnings in the model were always found to be negative. Mwangi (2016) in a study finds that return on assets is negatively and insignificantly affected by short term debt, long term debt, retained earnings and external equity although it had insignificant positive effect on return on equity. This analysis shows that there are conflicting results among existing studies on the relationship between finance structure and growth of SMEs

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Chapter three is an account of the methodology that this study used. The chapter outlines the research design, study population, the study sample size, sampling procedure, data collection instruments, validity and reliability as well as the methods of data analysis deployed.

3.2 Research Philosophy

The study adopted a positivism philosophy because ppositivist inquiries into the facts or causes of social phenomena without being subjective to states of individuals. The objective of positivism is to generate explanatory associations or causal relationships that ultimately lead to prediction and control of the phenomena in question. The role of the researcher, under positivism philosophy is limited to objective data collection and interpretation and is commonly applicable to quantitative forms of research.

3.3 Research Design

Coopers and Schindler, (2008) define research design as a framework for guiding a study which connects the questions or objectives of the study to the data gathered. This study adopted mixed methods research design. Elahi and Dehdashti (2011) argue that the mixed methods research design is ideal when the study objectives require determining the degree to which study variables are associated and making predictions regarding the occurrence of phenomena. With regard to this study, mixed research design was used, and this employe both qualitative and quantitative research approaches. Mixed research approach provides the researcher with the opportunity to gain an understanding of intricacies between qualitative and quantitative data, thereby producing accurate results.

Zikmund, Babin, Carr and Griffin (2010) maintain that qualitative research approach entails understanding the social phenomenon from the perspective of participants or

respondents while quantitative research involves investigating an identified problem by testing a theory by way of numbers and statistical techniques of data analysis., According to Silverman, (2005) collective use of the two approaches offers a richer presentation of reality. Hence, this study combined the two approaches to examine how growth of Manufacturing SMEs in Rwanda is affected by firm's finance structure.

3.4 Target population

Zikmund et al., (2010) maintain that a target population denotes all items in any field of inquiry also known as the universe. Polit and Beck (2016) similarly explain that a target population refers to the total of individuals or objects that satisfy a given set of criteria while Castillo, Olivos and Azar, (2018) defines a target population as the whole set of individuals or objects to which researchers are interested in making generalizations. According to Rwanda Development Bank (RDB 2017) there are 868 SMEs in the Rwandan manufacturing sectors. Thus, this study considered all the 868 SMEs as the target population.

Table 3.1: Target Population

Category	**Population**
Small Enterprises	781
Medium Enterprises	87
Total	**868**

Source: Rwanda Development Board, 2017.

3.5 Sampling Frame

Sekaran and Bougie (2010) define a sampling frame as an outline of the entire group of subjects that the researcher targeted during the study. According to Kothari (2014), a sampling frame means a list of all population units from which the sample was extracted. Mugenda and Mugenda (2009) further argue that a sampling frame denotes a list, directory or index of cases from which a sample can be selected. The sampling frame for the study was drawn from the ministry of Trade and Industry database. The Ministry of Trade and Industry is the parent ministry for Rwanda

Development Board (RDB), an agency that is responsible for promoting investments and ensuring a conducive business environment in the country. Thus, the sampling frame comprised of 868 small and medium manufacturing enterprises registered with Rwanda Development Board as of November, 2017. The 868 SMEs in the manufacturing sector consist of 781 small enterprises and 87 medium enterprises.

3.6 Sampling Size and Sampling Techniques

Kothari (2014) refers to sampling as the process of acquiring information on an entire population by testing only a part of it. The study adopted stratified random sampling technique. Orodho (2009) argues that stratified random sampling method ensures that small-categories in the population are adequately represented in the sample. On the other hand, simple random sampling procedure according to Orotho (2009) refers to a sampling procedure in which all subjects in the population of interest possess an equal and independent chance of being considered in the selected sample.

Through stratified random sampling, the target population was divided into two strata; small enterprises and medium enterprises. Hence, stratified random sampling technique was adopted to ensure that sub-groups in the population get an adequately representation in the sample. Afterwards, simple random sampling was deployed in choosing respondents from each stratum. SMEs owners and finance managers were interviewed as well. Thus, the study used simple random sampling to select SMEs from each stratum. The sample size for this research was obtained by way of Yamanne's (1967) formula for finite population as cited by Adekola, Allen, and Tinuola (2017).

$$n = \frac{\mathrm{N}}{1 + \mathrm{N(e)}^2}$$

Where:

n =Size of the sample

N= Total Population which is 868

e= Degree of desired precision

Applying the above formula, we will obtain;

$$n = \frac{868}{1+868\,(0.05)^2} = 273 \text{ respondents}$$

Steps in random sampling,

1. Assign numbers to units on the sampling frame from 1 to N where N is the total population size (868).
2. Set the sampling interval (k) by dividing the total population by the desired sample size, [868/273] =3.
3. Pick interval 3. The numbers of this sample are individuals such as; 5, 8, 11, 14, 17, 20, 23, 26,29,32,35,38,41,44.

The Sample was allocated to manufacturing SMEs using the formula suggested by Kothari (2014).

$$\mathrm{n(Subsector)} = \frac{\mathrm{N(Subsector)} \times \mathrm{n(all\ subsector)}}{\mathrm{N(all\ subsectors)}}$$

Where:

N (sub sector) refers to the population of the sub sector.

n (all sub sectors): is the sample size of the two (small and medium enterprises) sub sectors combined.

N (all Sub sectors) means the population of the two sub sectors.

$$\text{Small enterprises} = \frac{781 \times 273}{868} = 246$$

$$\text{Medium enterprises} = \frac{87 \times 273}{868} = 27$$

Table 3.2: Sample Frame for SMEs in Manufacturing in Rwanda

Sub-sectors	Population	Sample size
Small enterprises	781	246
Medium enterprises	87	27
Total	**868**	**273**

3.7 Data Collection Methods

Both primary and secondary data were collected for this study. Saunders, (2008) defines data collection as a way in which information gets acquired from the selected subjects of an investigation. Furthermore, Mugenda and Mugenda (2009) opine that choosing tools and instruments for data collection largely depends on such attributes as the subject of study, research topic, data type and expected results. According to Sounders (2019), the most prevalent instruments used in data collection are interview schedules, questionnaire, observational forms and standardized tests.

3.7.1 Ethical consideration

In consideration of the critical importance of ethics in conducting scientific academic research. The researcher obtained a research clearance permit N0. NCST/482.71/2018 from Rwanda National council for science and technology (NCST) to conduct research on Finance structure and the growth of small and medium size manufacturing enterprises in Rwanda (Appendix 6). The research permits guided the researcher in carrying out field studies and ensured ethical behaviors were observed at all levels. The researcher, therefore acknowledged the

source of all data obtained during field work and abide by the terms and conditions data was accessed.

In the meantime, participants were informed in writing the purpose, duration and benefits of research to them. Confidentiality and anonymity of participants records was equally emphasized. Anonymity refers to keeping secret the cultural background of respondents, and refraining from referring them to their names or releasing any other sensitive information about them (Mugenda, 2009). Study results was coded, and presented in summary format therefore making difficult for any one to trace the identify of an individual respondent. Eventually, the final thesis was subjected to JKUAT plagiarism test to ensure accurate representation of research results.

3.7.2 Primary Data

Primary data can be defined as information that is collected from the field for the first time. This study used a set of questionnaires to collect primary data from 273 respondents with the help of four research assistants and principal researcher. A five point linkered scale was used to meaure data where five points meant that respondents strongly agaree and one point linkered scale meant that respodents strongly disagreed with the statement. Linkered scale was considered because it is reliable since respondents answer questions set in a questionnaire. Thye also facilitate data coding and analysis of collected data and provides greater anonymity of respondents. For respondents, response was instant while for for some respondents questionaires were dropped and picked after being fiiled. On the other hand, follow was done through phone calls, emails, and personal visits. Mugenda and Mugenda (2009) define a questionnaire as a document with several questions in a given order on a form or set of forms. According to Orodho (2009) a questionnaire is effective in collecting a huge amount of data in a short span of time compared to other methods. In this study, questionnaires were deployed in collection of data from the proprietors or the manager of SMEs selected in the study sample. Both open and close ended questions were integrated in the questionnaire.

3.7.3 Secondary Data

According to Victoria (2018) secondary data analysis is popular among educational and social science researchers. This is probably due to increased accessibility to quantitative and qualitative data that provides researchers with resources to study new hypotheses, find answers to research questions thus deriving new and additional interpretations and conclusions which were previously nonexistent in the primary research findings. Johnston, (2017) reiterates the importance of systematically using secondary data analysis as a viable method in library and information science research.

According to Andrews, Higgins, Andrews, and Lalor (2012) secondary data can be described as data collected by others and is traced by the comparative researcher in ethnographic, censuses and histories. In the current study, secondary data was collected from Rwanda's National Institute of Statistics (NISR), Rwanda Development Board, (RDB) and Ministry of Trade and Industry since they are main Government departments that oversee the creation and promotion of viable and dynamic SMEs in the country. The secondary data collection focused on firm turnover for all the sampled firms in the study as well as sample income statements obtained at firm level to help determine operating costs for the sampled firms in the period stretching from 2014 to 2018.

Data collection sheet was employed to obtain information from 273, registered, SMEs with Rwanda Development Board as at 2017, with an objective to determine the firm profitability, market share as well as sales growth to predict firm growth trend.

3.8 Data instruments and Procedures

Primary data was sourced through a well-structured questionnaire. The researcher utilized it to collect required primary data. Interview sessions were equally scheduled with SMEs owners and finance managers to acquire necessary information. Secondary data on the other hand, was obtained from literature sources through review of published literature such as journal articles, published theses and text

books. The researcher also made use of published reports about SMEs in Rwanda from the Ministry of Trade and Industry (MINICOM), National Institute of Statistics of Rwanda (NISR) and Rwanda Development Board (RDB).

The data of interest were sales revenue, profitability as well as market share growth. The researcher also collected data from annual reports, surveys and journal publications from other state agencies. In order to increase the response rate, an authorization letter for conducting academic research in Rwanda acquired from National Commission of Science and Technology (NCST) was attached to the questionnaire. The purpose for collecting secondary data was to cross validate the primary data collected and interpreted.

3.9 Pilot Study

Mugenda and Mugenda, (2009) contend that it is necessary to undertake piloting so as to ascertain the degree of reliability and validity of a research instrument to be used for gathering data. Kombo and Tromp (2010) posit that a pilot study refers to a small-scale preliminary study trial executed prior to performance of a full-scale research so as to assess the feasibility, time and costs involved in the study process and make appropriate predictions to improve the study design.

A pilot study was conducted on 15 respondents drawn from the sample population of the survey. Those selected in the pilot study represented similar background characteristics as members in the actual survey. Lancaster and Thabane, (2019) recommend that for high precision pilot studies, 1% to 5% of the sample should constitute the pilot test size. Therefore, the researcher selected 15 respondents in line with the study. The pilot survey facilitated discovery of errors in the research instruments such as ambiguous instructions or wrong wording, inadequate time limit with regard to returning questionnaires as well as immeasurability of some defined variables.

3.9.1 Reliability of the Research Instrument

Joppe (2000) defines reliability of a research instrument as the degree to which results derived by using it repeatedly reflect consistency over time. Hence, reliability indicates the level to which the measuring procedure produces similar results on a series of repeated number of times. Cronbach (as cited in Zikmund et al, 2009) suggests that a suitable Cronbach's alpha α, of 0.7 is the minimum acceptable value for reliability of a study instrument. Therefore, in this study a Cronbach alpha value reaching the 0.7 mark was rated as an indicator of higher reliability.

3.9.2 Validity of the Research Instrument

Mohajan (2017) defines validity of a research instrument as the degree to which a measurement instrument such as a questionnaire accurately measures the characteristic it is supposed to measure. Orodho (2009) posits that validity of a research instrument can be assessed from three dimension; content, construct, and criterion validity. In the case of this study, efforts were made to ensure construct validity during the drafting of the study questionnaire by restricting it to the conceptualization and operationalization of variables. Similarly face validity was ensured when subject matter experts were requested to read through and offer guidance where the questionnaire deviated from what it intended to measure. With regard to content validity, the research tools were designed in lieu to reflect all study variables.

3.10 Data Processing and Analysis

The analysis of data was done to derive both descriptive and inferential statistics. The data collected on all attributes of finance structure was scored to determine how each construct affected the growth of SMEs. The study used a 5 Likert scale type that ranged from strongly disagree (1) to strongly agree (5) to measure each attribute on the four dimensions of finance structure; retained earnings, trade credit, debt finance and equity. A composite score for each construct was obtained by averaging the responses across the items. Data analysis entailed use of statistical package for social science (SPSS) version 22. Cronbach coefficient alpha values were utilized in

checking the goodness of the data as well as the consistency and reliability of measures obtained from the Likert scale items. According to Adeniran (2019) Cronbach's Alpha values should not go below the traditional cutoff mark of 0.7 as a rule of thumb.

The study deployed inferential statistical approaches; correlation and regression analysis to test for relationships between variables. Particularly, the study utilized ordinary least square regression analysis to assess the relationship that the independent variables have with the dependent variable. Moreover, to check for linear relationship between the various independent and the dependent variables the study made use of Spearman's rho correlation. Hypothesis testing was undertaken on the regression model output where:

Ho_1: $\beta i \neq 0$ (I = 1, 2, and 3.....4) versus Ha_1: $\beta_i \neq 0$

The output from regression analysis done on variables yielded t values and corresponding p values. Whenever a P value was found to be less than 0.001, (P value < 0.001) then alternative hypothesis (Ho_1) would be rejected which meant that variable 1 (X_1) has a significant relationship with the dependent variable (Y).

Also, the study used content analysis on open-ended questions in the questionnaire to make inferences by systematically and objectively looking out for definite features in respondents' messages. According to Mohajan (2018), qualitative data analysis entails three major approaches; interpretative, social anthropological approaches and collaborative social research. Interpretative approaches offer a way to gauge practical understandings of meanings and actions. This approach was employed in analysis of open-ended questions as well as the findings collected during the interviews conducted. Qualitative analysis aided in the triangulation of results from quantitative analysis.

It has been argued that quantitative analysis assists in assessing the relevance of theories related to the study in the theoretical framework so as to find ground for accepting or rejecting hypothesis. Hence, the use of multiple regression analysis and Pearson's product moment correlations analysis was justified to check if there was a

relationship between retained earnings, trade credit, equity, debt finance and SMEs growth in the manufacturing sector in Rwanda. Consideration was put on correlation coefficient outcomes to establish the strength of the associations between variables. Also, analysis of variance (ANOVA) was utilized in testing the overall significance of the model while R^2 value helped to determine the extent of the goodness fit for the regression model. The regression model used for the study is indicated as follows;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where,

$Y =$ Represents the growth of small and medium manufacturing enterprises Growth

β_0 Is the intercept

$\beta_1, \beta_2, \beta_3, \beta_4$ are the regression coefficient for each independent variable.

X_1, X_2, X_3, X_4 Indicate the independent variables, and these are; retained earnings, debt finance, equity finance, and trade credit.

e- is the random error or stochastic term.

After Moderation: $Y = \beta_0 + \beta_1 X_1 Z1 + \beta_2 X_2 Z2 + \beta_3 X_3 Z3 + \beta_4 X_4 Z4 + e$

The model was based on the following assumptions, Variables are normally distributed as per tests by Shapiro-Wilk test; Scatter plot measured the linear relationship between the independent and dependent variables; Variables are measured without reliability error as per Cronbach's alpha; Variance of errors is the same across all levels of the independent variables measured by Breusch-Pagan test. The study assumed that each of the independent variables under study influences the dependent variable independently measured by Durbin-Watson statistic.

SMEs Growth = $\boldsymbol{\beta_0}$+ $\boldsymbol{(\beta_1)}$ Retained earnings finance structure + $\boldsymbol{(\beta_2)}$ Trade credit finance structure + (β_3) Equity finance structure+ $\boldsymbol{(\beta_4)}$ Debt finance structure

3.11 Operationalization of Study Variables

Saunders et al., (2019) state the need for operationalization of variable is to enable facts to be measured. The scales used in this study were developed specifically for this study or adapted from existing scales to suit the context of the present study. These variables are operationalized in Table 3.3.

Table 3.3: Operationalization of Study Variables

Variable definition	Analysis	Indicators	Measurement Scale.
Retained earnings structure	Descriptive Inferential	• Dividends • Investment • Annual turnover	Overall, on a scale of 5 to 1 where 5 is the scale of the highest effect while 1 is the scale of the lowest effect on the Retained earnings.
Trade credit structure	Descriptive Inferential	• Credit terms and standards • Credit period • Trade discount rate	Overall, on a scale of 5 to 1 where 5 is the scale of the highest effect while 1 is the scale of the lowest effect on the Trade credit.
Debt finance structure	Descriptive Inferential	• Interest rates • Loan size • Collateral requirements	Overall, on a scale of 5 to 1 where 5 is the scale of the highest effect while 1 is the scale of the lowest effect on the Debt finance.
Equity finance structure	Descriptive Inferential	• Personal savings • Angel investors • Friends and family	Overall, on a scale of 5 to 1 where 5 is the scale of the highest effect while 1 is the scale of the lowest effect on the Equity finance.
SMEs Growth	Descriptive Inferential	• Profitability growth • Sales revenue growth • Market share growth	Overall, on a scale of 5 to 1 where 5 is the scale of the highest effect while 1 is the scale of the lowest effect on the SMEs Growth.

3.12 Diagnostic Tests

3.12.1 Sampling Adequacy Test

This study utilized the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy to determine the extent to which the sample size was sufficient for the study. Mugenda and Mugenda (2009) argue that KMO serves as an index in the examination and justification for use of Factor Analysis. Hence, KMO values ranging between 0.5-1.0 indicate that a factor is significant although other theorists such as Moutinho and Hutcheson (2010) posit that values which lie between 0.7 and 0.8 are to be taken into consideration during a factor analysis procedure.

3.12.2 Auto-correlation Test

Berenson (2012) defines auto-correlation as the interrelationship between the residue terms for any two observations adding that it is normal that the residue terms for any two observations are independent. Also, the study employed the Durbin-Watson test in checking for the presence of auto-correlation between variables. According to Gujarati (2003) the Durbin-Watson statistic ranges from 0 to 4. A value close to 0 indicates positive auto-correlation while a value near 4 implies a negative auto-correlation. Lack of auto-correlation is indicated by a value ranging from 1.5 - 2.5.

3.12.3 Multicollinearity Test

Bickel, (2010) defines multicollinearity as a situation occurring in statistics when two or more independent variables in a multiple regression analysis have a tendency to be highly correlated. The Variance Inflation Factor (VIF) is the commonest indicator for multicollinearity problem while conducting a multiple regression analysis. According to Baguley, (2012) the VIF statistic of an independent variable in a regression analysis is the opposite of the tolerance values and it is indicative of how much bigger the variance error is in specific terms for a given independent variable. Daoud, (2017) suggest a VIF value of 5 or more to be the conservative cutoff for concluding VIF as too large and unsuitable. Equally, Pallant (2014) posits

that in a case where two or more variables have a VIF of 5 or more, one of them must be eliminated from the regression analysis as this heightens the odds of multicollinearity.

3.12.4 Normality Test

The study undertook a test of normality to check whether the data is well modeled and normally distributed. Kothari (2014) recommends that variables need to be at least roughly normally distributed particularly when results are for generalized beyond the study sample. The kolmogorov-Sminorv and ShapiroWilk normality tests were executed. According to Pallant (2014), while conducting a kolmogorov-smirnov test, a figure of less than 0.05 on the tests of normality is indicative of abnormal distribution. The scholars however argue that for the Shapiro-wilk test of normality, whenever the figure is below 0.05 then the data is said to be normally distributed.

3.12.5 Tests of the Hypotheses

Pivetti and Melotti (2013) define hypothesis as a statement or assumption concerning a population. It is also a procedure which, on the basis of sample results, enables us to decide whether a proposition is to be verified then accepted or rejected for decision making. Mugenda and Mugenda, (2009) maintain that in hypothesis testing the researcher makes some inference about population parameters like inferential statistics. However, if the population is not normal, then parametric tests cannot be done. Hypotheses were tested using Analysis of variance (ANOVA).

The ANOVA technique was also used to test whether linearity of the regression line fitted the data. The parameters given in the ANOVA table are the sum of squares, mean square, degree of freedom, Multivariate regression analysis, F-statistic and significance level. Multivariate regression analysis and significance level were used to test and decide on the acceptability of the hypothesis.

Two types of statistical hypotheses are often dealt with; the null hypothesis often expressed as H_o and Alternative hypothesis written as H_a or H_1. The stated alternative

hypotheses as highlighted in table 3.2 were tested at 95% confidence level ($\alpha = 0.05$), whereby; when P-value ≥ 0.05 the observed difference is not significant and when P-value ≤ 0.05 the observed difference is significant. Based on the above assertion, the study either rejects the null hypothesis and supports the alternative hypothesis, or fails to reject null hypothesis, and thus the null hypothesis is accepted. A set of five hypotheses were developed to guide the study and those hypotheses were tested at 95 percent confidence level ($\alpha = 0.05$) as shown in table 3.4 bel

Table 3.4: Hypothesis Tests

Objective	Hypothesis	Analysis tests	Interpretation
To determine the influence of retained earnings on the growth of manufacturing SMEs in Rwanda.	H_{O1}: There is no significant influence of retained earnings on the growth of manufacturing SMEs in Rwanda.	Multivariate regression analysis	If p value is less than 0.05 reject null hypothesis. If p value is greater than 0.05 fail to reject the null hypothesis.
To investigate the influence of trade credit on the growth of manufacturing SMEs in Rwanda.	H_{O2}: There is no significant influence of trade credit on the growth of manufacturing SMEs in Rwanda.	Multivariate regression analysis	If p value is less than 0.05 reject null hypothesis. If p value is greater than 0.05 fail to reject the null hypothesis.
To evaluate the influence of debt finance on the growth of manufacturing SMEs in Rwanda.	H_{O3}: There is no significant influence of debt finance on the growth of manufacturing SMEs in Rwanda.	Multivariate regression analysis.	If p value is less than 0.05 reject null hypothesis. If p value is greater than 0.05 fail to reject the null hypothesis.
To determine the influence of equity finance on the growth of manufacturing SMEs in Rwanda.	H_{O4}: There is no significant influence of Equity finance on the growth of manufacturing SMEs in Rwanda.	Multivariate regression analysis.	If p value is less than 0.05 reject null hypothesis. If p value is greater than 0.05 fail to reject the null hypothesis.
To evaluate the moderating effect of firm size on the relationship between finance structure and growth of manufacturing SMEs in Rwanda.	H_{O5}: There is no moderating influence of firm size on the relationship between finance structure and growth of manufacturing SMEs in Rwanda.	Moderated multivariate linear regression analysis	If p value is less than 0.05 reject null hypothesis. If p value is greater than 0.05 fail to reject the null hypothesis.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

The chapter presents and discusses the results of data analysis. The purpose of the study was to examine how the finance structure affects the growth of manufacturing SMEs in Rwanda. The data collected was analyzed by way of SPSS to generate descriptive statistics including percentages, frequency tables and mean scores. Multiple regression analysis was used to explore the relationship between retained earnings finance structure, trade credit finance structure, equity finance structure, debt finance structure, firm size and the SMEs growth in Rwanda. This section contains findings on demographic features of study participants, descriptive and inferential statistics on the effect of independent variables on the dependent variable and test of hypotheses which was determined by way of multivariate regression analysis. Presentation of data was mainly done using tables and charts.

4.2 Response Rate

In this study, 273 questionnaires were administered to selected respondents. The questionnaires that were dully filled and returned equaled 225 while 48 were not properly filled and some not returned. A response rate of 82% was recorded which according to Mugenda and Mugenda (2009) is deemed adequate for one to proceed with data analysis. Such a reasonable response rate was attributed to proper planning, scheduling of meetings with the selected respondents and constant follow ups to make sure questionnaires were dully filled.

Table 4.1: Response Rate

Category	F	P
Returned Questionnaires	225	82%
Non-Responses	48	18%
Total	**273**	**100**

4.3 Pilot Test Results

The study conducted a pilot study on 15 respondents who were excluded in the final survey. The purpose of the pilot test was to check for the reliability and validity of the instruments used to gather relevant information sought by the study. The pilot study study was conducted one month before the actual studies to allow for modification of the questionnaires were deemed necessary. The findings of the pilot study are presented in subsections below.

4.3.1 Summary of the Scale Reliability Results

Table 4.2 shows a summary of findings from the reliability test obtained from pilot study. The finding indicates the following Cronbach Alpha scores on eachof the study variable: retained earnings 0.740, equity finance 0.797, debt finance 0.909, trade finance 0.887, firm size 0.764 while SMEs growth had 0.735. These findings point to a high reliability measure for the scale deployed to assess the study variables and so, all attributes used to measure variables were maintained in the final survey.

Table 4.2: Summary of the Reliability Statistics

Variables	No of Items	Cronbach's Alpha	Remarks
Retained Earnings	9	0.740	Accepted
Equity Finance	9	0.797	Accepted
Debt Finance	11	0.909	Accepted
Trade Finance	9	0.887	Accepted
Firm Size	9	0.764	Accepted
SMEs Growth	9	0.735	Accepted

4.3.2 Summary of Research Instrument Validity

Kothari (2014) argues that validity test is carried out to highlight the extent to which the used research instrument actually measures what it is meant to measure. According to Mugenda and Mugenda (2009) validity as the accuracy and meaningfulness of inferences that research findings produce. Thus, measuring validity of instruments helps in determining the limit to which results obtained from an analysis of data are actually representative of phenomenon under study. Similarly,

this research adopted various techniques to ensure the validity of the research instrument**.** Validity of the questionnaire was initially tested by submitting it for review by subject matter experts such as my supervisors.

Validation of the study entailed discussing it with ten randomly selected SMEs owners among the target manufacturing SMEs and other resourceful people in the field of finance. Their views were evaluated and incorporated by adding missing links, deleting unclear and general statement or replacing them with wordings that were appropriate ad clearly understood to enhance content validity of the questionnaire and data collected. The study further conducted a thorough literature reviews and all constructs used in the research were based on empirical and theoretical ideas of scholars in the field of finance.

4.4 Demographic Information

This section analyzed the demographic information of the respondents which included age bracket, gender, highest level of education, position held in the business, experience among other characteristics. Background information enabled the researcher to understand the respondents and whether their characteristics reflected the entire the population to make generalization about the findings.

4.4.1 Age Bracket of the Respondents

Table 4.3 presents findings on the age bracket of respondents. As indicated, 34.7% of the respondents were aged between 31 and 40 years, 32% were age between 21 and 30 years, 22.7% were aged between 41 and 50 years, 8% were age between 51 and 60 years while 2.7% were above 60 years. Since over 66.7% were below 40 years, the study results reveal that majority of the people who operate small business in manufacturing industry in Rwanda were relatively young people who are also majority of the population in the country. Moreso, the result implies that manaufacturing SMEs were managed by young and dynamic individuals abale to supply reliable information.

Table 4.3: Age Bracket of the Respondents

Age Bracket	Frequency	Percent (%)
21-30 years	72	32
31-40 years	78	34.7
41-50 years	51	22.7
51-60 years	18	8
Over 60 years	6	2.7
Total	**225**	**100**

4.4.2 Gender of the Respondents

Table 4.4 shows findings on the gender of respondents. As revealed in the table, 55% of the study participants were male while 45% of the respondents were female. This study finding implies that information collected by the study was gender representative and further the finding implies that small business in manufacturing enterprises in Rwanda are operated by people from both genders. The finding equally shows that women just like their male counterparts are stepping forward to be involved in meaningful economic activities to generate income contrary to the past where economic activities were a domain reserved for men.

Table 4.4: Gender of the Respondents

Gender	Frequency	Percent
Male	123	54.7
Female	102	45.3
Total	**225**	**100**

4.4.3 Highest Level of Education attained

The results on the highest level of education attained show that 38.3% of the respondents had attained secondary education, 32% had primary education, and 20% were undergraduates while 9.7% had attained graduate level education respectively. The findings further imply that individuals in small enterprises in manufacturing industry in Rwanda have diverse levels of education. The findings further mean that

venturing into small businesses in manufacturing industry in Rwanda requires no specific level of education although higher educational attainment level would arguably be an added advantage in the success of a business. Moreso, majority of the respondents (61.7%) had attained higher education, we concluded that the level education did not affect the quality of research results.

Table 4.5: Highest Level of Education

Highest level of education	Frequency	Percent
Primary School	72	32
Secondary School	86	38.3
Undergraduate	45	20
Graduate	22	9.7
Total	**225**	**100**

4.4.4 Position of the Respondents in the Business

The study further sought to establish the position held by the respondents in the business. Table 4.6 highlights that 49.3% of the respondents were owners of the business, 17.3% were finance manager, 8% were CEO while 25.3% indicates others who include directors, managers and officers. The study findings imply that most of the selected study participants were well placed in the business to provide the requisite information sought by the study.

Table 4.6: Position of the Respondents in the Business

Position	Frequency	Percent
CEO	18	8
Owner	111	49.3
Finance Manager	39	17.3
Others	57	25.3
Total	**225**	**100**

4.4.5 Experience of the Respondents in the Business

Table 4.7 presents the findings on the level of experience of the respondents. The findings show that 34.7% had between 3 and 5 years of experience, 32% held 1 to 2

years of experience, 12% with over 8 years of experience while those under 1 year and those between 5 and 7 years were each at 10.7%. The results show that the respondents had varying level of experience hence the respondents were representative of the study population.

Table 4.7: Experience of the Respondents

Experience at in the business	Frequency	Percent
Less than 1 year	24	10.7
1-2 years	72	32
3-5 years	78	34.7
5-7 years	24	10.7
Above 8 years	27	12
Total	**225**	**100**

4.4.6 Ownership Structure of the Business

The study also sought to establish the owner structure of the small business that participated in the study. The findings in table 4.8, show that 72% of the businesses were locally owned, 18.7% were owned by individuals, 4% were owned by groups, while those foreign owned and co-owned were each 2.7%. These findings also show that small businesses in manufacturing industry in Rwanda were predominantly locally owned with only a few being owned by foreigners. This could be attributed to the fact that local entrepreneurs understand the local cultures and language which makes it easier for them to succeed in business compared to foreigners.

Table 4.8: Owner of the Business

Business Ownership	Frequency	Percent
Foreign	6	2.7
Local	162	72
Individual	42	18.7
Groups	9	4
Co-owned	6	2.7
Total	**225**	**100**

4.4.7 Size of the Business

The study further sought to establish the size of the business in terms of the number of the employees the business had. Table 4.9 shows that the largest business had 25 employees as indicated by the maximum value while the smallest had 1 employee as shown by the minimum value. The average small business in manufacturing sector had 6 employees as indicated by the mean of 6.27.

Table 4.9: Number of Employees in Business

Descriptive Statistics	N	Min	Max	Mean	Std. Deviation
Number of employees in your business from	225	1	25	6.27	3.033
Valid N (listwise)	225				

4.5 Tests of Regression Assumptions

Various tests of regression assumptions were carried out prior to regression model fitting. The relevant diagnostic tests for this study were, test for multicollinearity and sampling adequacy test, test for normality and test for auto-correlation.

4.5.1 Sampling Adequacy Test

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was utilized to check for adequacy of the sample size. Pallant (2014) defines KMO is an index used to assess and justify the appropriateness of using Factor Analysis. The scholar adds that values between 0.5-1.0 indicate that a factor is significant. According to Moutinho and Hutcheson (2010) values between 0.7 and 0.8 are good enough for factor analysis and such values were used in the study. The results in Table 4.10 show that the KMO test of the variables of this study generated a sufficient value of 0.725 which is more than 0.7 mark implying that the sample size was adequate for further analysis.

Equally, the Bartlett's test of sphericity conducted augmented the above findings given its results which had a chi-square value of 13881.767 with a p value of 0.000 far less than the conventional 0.05 value. Since the p value is less than 0.05 this shows that there is a strong relationship among the study variables under investigation and hence the Bartlett's test was found to be highly significant.

Table 4.10: Sampling Adequacy Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.725
Bartlett's Test of Sphericity	Approx. Chi-Square	13881.767
	Df	1596
	Sig.	.000

4.5.2 Test of Normality

According to Ghasemin and zahediasi (2012) if the results are to be generalized beyond the sample, the variables are supposed to be roughly normally distributed. Hence, a Kolmogorov- Simonov and Shapiro test of normality was utilized. Under the Shapiro test the null hypothesis H0: data is normally distributed while the reverse is true for the alternative hypothesis data Ha. Since the p-values for all the variables were greater than 0.05, the null hypotheses for all the variables were not rejected hence confirming that data was found to be normally distributed and so, fit for linear regression analysis.

Table 4.11: Test of Normality

Test of Normality	**Kolmogorov-Smirnov**			**Shapiro-Wilk**		
Variables	Statistic	df	Sig.	Statistic	df	Sig.
Retained Earnings Finance	0.187	225	0.108	0.795	225	0.203
Trade Credit Finance	0.079	225	0.091	0.887	225	0.601
Debt Finance	0.16	225	0.142	0.856	225	0.172
Equity Finance	0.126	225	0.060	0.952	225	0.107
Firms Size	0.162	225	0.078	0.902	225	0.302
Growth of SMEs	0.282	225	0.230	0.756	225	0.071

4.5.3 Test of Multicollinearity

Multicollinearity occurs where two independent variables are strongly associated. Garson (2012) asserts that in a situation where the VIF > 4.0 exists, multicollinearity is a likely problem. Other scholars such as Pallant (2014) use more lenient cut off points of VIF> 5.0 to suggest multicollinearity as the problem. O'Brien (2007) on the contrary suggests that the traditional cut off mark should be assessed on contextual basis in view of factors that have a bearing on the variance of regression coefficient. Accordingly, this study adopted a VIF value of 5 as the threshold. These results indicate that the VIF values of the variables were within the threshold of 5. This implies therefore that there was no significant threat of multi-collinearity and so, the study considered all variables in linear regression analysis since all predictor variables did not have strong interrelationship among themselves.

Table 4.12: Test of Multicollinearity

Variable	Tolerance	VIF
Retained Earnings Finance	0.639	1.566
Trade Credit Finance	0.47	2.129
Debt Finance	0.656	1.524
Equity Finance	0.639	1.565
Firm size	0.937	1.067

a Dependent Variable: Growth of SMEs

4.5.4 Test for Auto correlation

The study used the Durbin-Watson test to assess for the presence of auto correlation between variables. According to Pallant (2014) the Durbin-Watson statistic ranges from 0 to 4. A value near 0 indicates positive auto correlation while a value close to 4 shows negative auto correlation. When the obtained value ranges from 1.5 to 2.5 it can be interpreted as no auto correlation. Thus, results from this study revealed a Durbin-Watson value of 1.737 which implies no auto correlation among variables.

Table 4.13: Test of Autocorrelation

Model	Durbin-Watson

1		1.737[a]

Predictors: (Constant), Firm Size, Debt Finance, Equity Finance, Retained Earning Finance, Trade Credit Finance
b. Dependent Variable: Growth of SMEs

4.6 Influence of Retained Earnings Finance Structure on SMEs Growth

The first objective of the study was to determine how retained earnings finance structure influenced the growth of manufacturing SMEs in Rwanda. Hence, the study used factor analysis, descriptive statistics, correlation and univariate regression analysis to test the influence of retained earning finance structure on growth of manufacturing SMEs in Rwanda.

4.6.1 Factors Analysis for Retained Earnings Finance Structure Indicators

The study conducted factor analysis to determine the factor loading of the all the constructs used to measure retained earning finance structure. The key rationale for conducting factor analysis was to condense the information contained in a large number of original variables into a smaller manageable number of factors with the highest significance without losing much information. Besides, Hair et. al., (2010) posits that Factor Analysis is relevant in research to test for construct validity and highlight variability among observed variables in addition to checking for any correlated variable so as to control redundancy in data. The factor analysis procedure found no variable had a coefficient of less than 0.4 and so none was eliminated since they all met inclusion criterion of 0.4 or greater (Rahim and Magna, 2005). This is congruent with scholars such as Mwiti (2013) who maintain that variables with factor loading greater than 0.4 are the ones that have the highest significance and influence.

Table 4.14: Factors Analysis for Retained Earnings Finance

	Statements	Factor Loading
1	The business has been declaring dividends each year	0.788
2	Dividends per share for the business have been increasing each year	0.803
3	Paying dividends helps the business return profit gained to shareholders.	0.735
4	Net income after tax has been increasing each year	0.765

5	Optimal net income after tax is maintained by the business at all times	0.726
6	The business uses net income after tax to finance business operating expenses	0.656
7	Business investments in tangible assets have increasing each year	0.68
8	Maintenance costs for tangible assets have reduced in the last five years	0.601
9	The business invests in plant expansion and acquisition of modern equipment's whenever retained earnings are available	0.616

Extraction Method: Principal Component Analysis.

4.6.2 Descriptive Results on Retained Earnings Finance structure

In this section the study used percentages, average weighted mean scores and standard deviation to analyze responses to attributes used to measure how retained earnings finance structure affects growth of manufacturing SMEs in Rwanda. Hence, the study sought to establish whether business had been declaring dividends each year, the findings shown that majority (64.0%) agree. On whether dividends per share for the business have been increasing each year, 41.3% agree and 2.7% strongly agree while 37.3% disagree.

The study asked the respondent whether they paid dividends because their firm intended to return profit gained through business activities to shareholders. The findings show that 40% agree while other disagree as indicated by 32%. The study findings also show that 72% of the respondents agree that their net income after tax has been increasing each year. Similarly, 64.0% agree that optimal net income after tax is maintained by the business at all times.

Most respondents agree and strongly agree that their business use net income after tax to finance business operating expenses and that business investment in tangible assets has been increasing each year. This is indicated by the mean of 4. The respondents differed as indicated by the mean of 3 on whether maintenance costs for tangible assets have reduced in the previous five years and on whether the business invests in plant expansion and acquisition of modern equipment whenever retained earnings are available.

The general implications of the findings were that small and medium manufacturing enterprises in Rwanda have retained earnings at their disposal which they use to

further expand their business. The study findings concur with those of Thirumalaisamy (2013) who finds that retained earnings are less expensive source of finance as opposed to equity as they do not affect ownership. Campbell (2012) also stresses that the more retention of profits a company does, the higher its growth rate. In another study, Thuranura (2014) shows how retained and distributed earnings influence the profitability of firms in the future among Kenyan firms. The study reveals a weak positive relationship between a firm's dividend policy and firm performance. However, Al-Sa'eed, (2018) shows findings on the contrary by demonstrating how dividend payout policy relates to performance of firms in the Nairobi Stock Exchange. The study findings indicate that firm performance is strongly and positively associated with dividend payout.

Table 4.15: Descriptive Results on Retained Earnings Finance

No.	Statements	SD	D	NS	A	SA	Mean	Std Dev
1	The business has been declaring dividends each year	0.0%	25.3%	5.3%	64.0%	5.3%	3	0.93
2	Dividends per share for the business have been increasing each year	0.0%	37.3%	18.7%	41.3%	2.7%	3	0.94
3	Paying dividends helps the business return profit gained to shareholders.	5.3%	32.0%	20.0%	40.0%	2.7%	3	0.74
4	Net income after tax has been increasing each year	1.3%	12.0%	8.0%	72.0%	6.7%	4	0.81
5	Optimal net income after tax is maintained by the business at all times	1.3%	22.7%	4.0%	64.0%	8.0%	4	0.77
6	The business uses net income after tax to finance business operating expenses	1.3%	20.0%	8.0%	66.7%	4.0%	4	0.60
7	Business investments in tangible assets have increasing each year.	1.3%	20.0%	1.3%	72.0%	5.3%	4	0.61
8	Maintenance costs for tangible assets have reduced in the last five years.	0.0%	33.3%	12.0%	48.0%	6.7%	3	0.67
9	The business invests in plant expansion and acquisition of modern equipment's whenever retained earnings are available.	1.3%	32.0%	8.0%	50.7%	8.0%	3	0.65

4.6.3 Correlation Analysis for Retained Earnings Finance structure and SMEs Growth

The study further used correlation analysis to check for the association between retained earning, finance structure and growth of small and medium manufacturing enterprises in Rwanda. Table 4.16 reveals that retained earnings finance structure has a weak positive association with growth of manufacturing SMEs in Rwanda as shown by the correlation value of $r = 0.258$ and $p = 0.000$, although correlations were found to be significant at 0.05 level of significance. The results mean that when

manufacturing SMEs increase the proportion of retained earnings, chances of increased growth for manufacturing SMEs in Rwanda would equally go high.

According to Thirumalaisamy (2013) there is need for firms to retain more profit since the more profit the company withholds the higher the growth rate. The study findings also concur with Paulo (2017), who bases on the pecking order theory to provide supports for the use of retained earnings as opposed to other sources of financing for startup ventures. He maintains that funds generated internally are less costly, as opposed to those gotten from external sources. In addition, Paulo further underscores the role of retained earnings in reducing dividend payout which decreases taxes paid, albeit lowering debt-to-assets ratio and consequently reducing future fiscal savings through a reduction in interest payments.

Furthermore, Masood (2018) argues that retained earnings are an important source of internal financing for a company. The savings generated internally by a company in the form of retained earnings are cultivated back into the company for diversification of its business. It also helps reduce firm dependence on externally sourced funds to finance their regular business needs. The author argues that retained earnings are favorable for companies as issuing of new capital is inconvenient given the associated floatation costs let alone the increased financial obligations and risks. Moreover, retained earnings not only offer growth in firm value but equally raise the value of its shares.

Table 4.16: Correlation between retained earnings finance and SMEs growth

Variable	Statistics	Retained Earnings Finance	Growth SMEs
Retained Earnings Finance	Pearson Correlation	1	.258**
	Sig. (2-tailed)		0.000
	N	225	225
Growth of SMEs	Pearson Correlation	.258**	1
	Sig. (2-tailed)	0.000	
	N	225	225

**. Correlation is significant at the 0.05 level (2-tailed).

4.6.4 Univariate Regression Analysis Retained Earnings Finance structure and SMEs growth

The study further used univariate regression to test the influence of retained earning finance on the growth of manufacturing SMEs in Rwanda. Regression analysis was deployed due to its ability to produce results on the nature of the relationship between variables, magnitude of the relationship and significance of the relationship between the variables under investigation.

Table 4.17: Model Summary Retained Earnings Finance and SMEs Growth

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate
1	.605a	0.366	0.062	0.4643

a. Predictors: (Constant), Retained Earning Finance

Table 4.17 shows coefficient of determination (R-square) = 0.366 which means that other factors remaining constant, retained earning finance contributes 36.6% of the variation in growth of manufacturing SMEs in Rwanda. The finding further implies that retained earning finance is a good predictor variable of growth of manufacturing SMEs in Rwanda. This finding is congruent with those of other scholars such as Campbell (2012) who argues in favor of firms retaining profits as precursor to more growth. Similarly, Bassey, Onyam, and Aganyi, (2016) equally retained profit and that accumulated profit retained in the business has the potential to improve a firm's future earnings, growth and expansion.

Akinkoye and Akinadewo (2018) also underscore that the amount of retained earnings is a critical issue to investors and other stakeholders as an indicator of management ability to bring improvement in market value of a firm. Hence, in Nigeria, retained earnings is used as an investment criterion to measure how much value in terms of capital gain, business growth and asset net worth a company portends before acquisition. Finally, Beena (2011) reveals that an increasing trend in retained earnings contributed a significant proportion of finance Indian firms used for their growth and expansion during and after the liberalization policy.

Table 4.18: ANOVA for Retained Earnings Finance Structure and SMEs Growth

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.416	1	3.416	15.845	.000[b]
	Residual	48.073	223	.216		
	Total	51.488	224			

a. Dependent Variable: Growth of SMEs
b. Predictors: (Constant), Retained Earning Finance

Table 4.18 presents ANOVA findings on the model used to link retained earnings and growth of small and medium manufacturing enterprises in Rwanda. The results of F=15.845 with a corresponding p=0.000 shows that the model was statistically significance hence, the study failed to reject the null hypothesis of the goodness of fit.

Table 4.19: Regression Coefficients for Retained Earnings Finance structure and SMEs Growth

Variables	Unstandardized coefficients B	Std. Error	Standardized coefficients Beta	t	Sig.
(Constant)	2.66	0.22		12.077	0.000
Retained Earnings Finance	0.255	0.064	0.258	3.981	0.000

a Dependent Variable: Growth of SMEs

Table 4.19 presents the findings of regression coefficients of retained earnings finance and growth of small and medium manufacturing enterprises. The study results show a beta coefficient of β=0.255, p=0.000 <0.05. These findings indicate that retained earnings have a positive and significant effect on growth of manufacturing SMEs in Rwanda other factors put to a hold. Hence, a unit increase in retained earnings would result into an increase of 0.225 units in growth of small and medium manufacturing enterprises. This finding is in agreement with those by Thirumalaisamy (2013) who highlighted retained earnings as a cheaper source of finance compared to equity as it does not cause ownership dilution. Moreover, Thirumalaisamy stresses that there are no transaction and bankruptcy costs

associated with retained profits which renders it a critical source of finance for companies. In another study, Thuranura (2014) shows a weak positive relationship between a firm's dividend policy and firm performance. However, Al-Sa'eed, (2018) show results to the contrary as they investigated how dividend payout policy relates to performance of firms in the Nairobi Stock Exchange and found that firm performance is strongly and positively associated with dividend payout.

4.7 Influence of Trade Credit Finance Structure on SMEs growth

The second objective of the study was to investigate how the use of trade credit finance affects the growth of manufacturing SMEs in Rwanda. Thus, the study used various tests such as factor analysis, descriptive and inferential statistics to analyze responses to constructs used to assess for the study objective.

4.7.1 Factors Analysis for Trade Credit Finance Structure Indicators

Table 4.20 reveals findings of factor analysis which show that all constructs used to test for trade credit finance structure have factor loading values above the threshold of 0.4 as recommended in related studies. Hence, all the attributes used under trade credit finance structure reached significant levels in terms of explaining the variable and so none of them was removed.

Table 4.20: Factors Analysis for Trade Credit Finance Indicators

No	Statements	Factor Loading
1	Customers honor their commitment to pay in agreed credit period	0.759
2	Appropriate credit period creates repeat business for the company	0.753
3	The business considers the length of credit period for the customer before trade credit approval	0.689
4	The business prefers giving favorable credit terms and standards to customers than cash sales in return of long-term relationship building	0.587
5	The business receives payments from suppliers based on contract credit terms and standards	0.728
6	Shorter and strict credit terms and standards reduce sales revenue for my business	0.695
7	The business trade discounts do not conflict with the liquidity demands of my firm	0.637
8	Customers' loyalty and goodwill increase whenever I offer favorable trade discount facilities	0.805
9	The business grants trade discount only to big organizations	0.726

Extraction Method: Principal Component Analysis.

4.7.2 Descriptive Results on Trade Credit Finance structure

This section presents the descriptive results of trade credit finance. The study used percentages, mean and standard deviation to analyze responses on attributes used to measure how the use of trade credit finance structure affects growth of manufacturing SMEs in Rwanda. Hence, the study inquired whether customers always honor their commitment to make payment in agreed credit period. Results show respondent having varying opinions as indicated by 46.7% and 16.0% who agree and strongly agree respectively and 28.0% and 2.7% who disagree and strongly disagree respectively.

The findings imply that in some small and medium manufacturing enterprises customers honor their commitment while in other others customer fail to honor their commitments. On whether appropriate credit period creates repeat business for their companies, some respondents agree (44.0%) while others disagree (37.3%). The findings imply that appropriate credit period creates repeat business in some firms while in other cases it does not. Furthermore, on whether manufacturing SMEs consider the length of credit period for the customers before trade credit approval, the study finds that more than half (53.3%) of the respondents agree.

The study also sought to establish whether manufacturing SMEs in Rwanda prefer giving favorable credit terms and standards to customers than cash sales in return of long-term relationship building. The findings show that some firms do as indicated by 41.3% who agree while others don't offer favorable credit terms as indicate by 34.7% who disagree. The mean of 3 confirms that respondent hold varying opinions on credit terms and standards for customers in return for long-term relationship building.

The study further wanted to establish whether manufacturing SMEs receive payments from suppliers based on contract credit terms and standards. The findings indicate that a majority (64.0%) of the respondents agree. On whether shorter and strict credit terms and standards reduce sales revenue for businesses, 42.7% and 5.3% of the respondents agree and strongly agree respectively while 29.3% and 10.7% disagree and strongly disagree respectively.

The study finding also shows that more than half (53.3%) of the respondents agree that their business trade discounts do not conflict with the liquidity demands of their firms and that their customers' loyalty and goodwill increases whenever they offer favorable trade discount facilities. Some of the respondents agree (33.3%) while others disagree (32.0%) on whether manufacturing SMEs in Rwanda grant trade discount only to big organizations. The findings imply that some manufacturing SMEs offer trade discounts only to big organizations while others grant trade discounts to all customers equally.

In all, the findings in this section confirm that manufacturing SMEs in Rwanda use trade credit finance in their businesses. The main purpose of using of trade credit is to build customer loyalty and increase repeat purchase from customers which leads to growth of their businesses. The findings concur with Rodriguez (2006) who argued in favor of trade credit maintaining that it helps SMEs to establish a stable commercial relationship in long run and that it helps suppliers cut down transaction costs associated with the insolvency of each individual commercial exchange. The scholar equally adds that SMEs receive more capital from the market, gaining more investment and growth opportunities through the use of trade credit finance structure.

Krolikowski and Yuan (2017) similarly found that trade credit can act as a substitute for bank credit during periods of monetary tightening. The authors however warn of potential effects from increasing accounts payable for credit constrained firms. Huang, Shi and Zhang (2015) used data from Chinese firms to highlight evidence of substitution of trade credit for bank credit which show counter-cyclical patterns.

Ferrando, Popov and Udell, (2017) opines that firms that are financially limited will most likely benefit from use trade credit while pursuing their growth and expansion. Freeman, (2018) find that larger more credit worthy buyers receive longer trade credit terms consistent with the view that suppliers grant more credit to customers with low credit risk while Ahmad, Afza, and Nafees, (2017) showed that firms' creditworthiness is positively associated with trade credit extended to them. Carbó et al. (2013) similarly used Spanish firms to investigate effects of over reliance on trade credit by firms that are highly credit constrained.

Table 4.21: Descriptive Results on Trade Credit Finance structure

	Statements	SD	D	NS	A	SA	Mean	Std Dev
1.	Customers always honor their commitment to make payment in agreed credit period	2.7%	28.0%	6.7%	46.7%	16.0%	3	0.74
2	Appropriate credit period creates repeat business for my company	2.7%	37.3%	10.7%	44.0%	5.3%	3	0.68
3	The business considers the length of credit period for the customer before trade credit approval	2.7%	34.7%	5.3%	53.3%	4.0%	3	0.65
4	The business prefers giving favorable credit terms and standards to customers than cash sales in return of long-term relationship building	4.0%	34.7%	13.3%	41.3%	6.7%	3	0.69
5	The business receives payments from suppliers based on contract credit terms and standards	4.0%	16.0%	9.3%	64.0%	6.7%	4	0.67
6	Shorter and strict credit terms and standards reduce sales revenue for my business	10.7%	29.3%	12.0%	42.7%	5.3%	3	0.77
7	The business trade discounts do not conflict with the liquidity demands of the firm	8.0%	32.0%	1.3%	53.3%	5.3%	3	0.67
8	Customers' loyalty and goodwill increase whenever I offer favorable trade discount facilities	13.3%	24.0%	5.3%	53.3%	4.0%	3	0.71
9	The business grants trade discount only to big organizations	28.0%	32.0%	2.7%	33.3%	4.0%	3	0.61

4.7.3 Correlation Analysis for Trade Credit Finance structure and SMEs Growth

The study used correlation analysis to check for the nature of relationship between trade credit finance and growth of manufacturing SMEs in Rwanda. Table 4.22 reveals that trade credit finance has a moderate positive association with growth of manufacturing SMEs in Rwanda as shown by the correlation value of r = 0.428 and p=0.000. The correlations were found to be significant at 0.05. The results imply that increasing trade credit finance leads to a rise in growth of manufacturing SMEs in Rwanda. The finding corroborates those by Nasr and Pearce (2012) in Egypt, who found that most SMEs deploy alternative finance in the form of trade credit as it helps firms generate growth and expansion unlike debt. Ogawa, Sterken, and Tokutsu (2014) equally maintain that firms tend to rely more on trade credit when distressed financially and this plays a crucial role in substituting bank credit while helping financially constrained firms leverage their growth and expansion prospects.

Table 4.22: Trade Credit Finance structure and SMEs Growth

Variable	Statistics	Trade Credit Finance	Growth SMEs
Trade Credit Finance	Pearson Correlation	1	.428**
	Sig. (2-tailed)		0
	N	225	225
Growth of SMEs	Pearson Correlation	.428**	1
	Sig. (2-tailed)	0	
	N	225	225

**. Correlation is significant at the 0.05 level (2-tailed).

4.7.4 Univariate regression analysis of trade credit finance structure and SMEs growth

The study further used univariate regression to test the influence of trade credit finance on the growth of small and medium manufacturing enterprises in Rwanda. The results of the regression analysis are presented in tables 4.23 to 4.25.

Table 4.23: Model Summary trade credit and SMEs growth

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.428[a]	0.183	0.179	.43433

a. Predictors: (Constant), Trade Credit Finance

Table 4.23 shows coefficient of determination (R-square) =0.183 which reveals that other factors held constant, trade credit finance accounts for 18.3% of the variation in the growth of the manufacturing SMEs in Rwanda. The findings further imply that trade credit finance is a good predictor variable for growth of small and medium manufacturing enterprises. The results are congruent with Shao, (2019) who argues that trade credit helps direct resources flow to the financially constrained SMEs hence increasing their aggregate productivity and fostering their growth prospects. According to Fu, Matous, and Todo, (2018) trade credit is the most important source of short-term financing for firm growth and expansion in Japan where 78 percent of small and medium enterprises (SMEs) in the manufacturing sector utilize trade credit, and 34 percent rely more on transactions using trade credit than on immediate payments. Rodriguez (2006) also found that SMEs receive more capital from market, gaining more investment and growth opportunities through the use of trade credit finance structure.

Table 4.24: ANOVA for Trade Credit Finance structure and SMEs Growth

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.421	1	9.421	49.941	.000[b]
	Residual	42.067	223	.189		
	Total	51.488	224			

a. Dependent Variable: Growth of SMEs
b. Predictors: (Constant), Trade Credit Finance

Table 4.24 highlights findings from analysis of the variance (ANOVA) of the model used to link manufacturing SME growth to use of trade credit. As it is quite evident, the result of F=49.941with a corresponding p=0.000 imply that the model was found to be statistically significance. This means that the study failed to reject the null hypothesis on the goodness of fit and so, trade credit finance was found to

significantly explain the variation in growth of manufacturing SMEs in Rwanda. Such finding is concomitant with one earlier found by such scholars as Boissay and Gropp, (2007) as well as Cunat (2007) who maintain that trade credit provides a safety valve for firms facing distinctive liquidity shocks. Cole (2012) in addition finds that 20 percent of small firms used trade credit to boost their firm growth, and about 40 percent used both bank and trade credit which is evidence that trade credit can be complementary to bank credit since trade credit is primarily short term

Table 4.25: Regression Coefficients for Trade Credit Finance structure and SMEs Growth

Variables	Unstandardized coefficients β	Std. Error	Standardized coefficients Beta	t	Sig.
(Constant)	2.743	0.115		23.9	0.000
Trade Credit Finance	0.25	0.035	0.428	7.067	0.000

a Dependent Variable: Growth of SMEs

Table 4.25 presents the findings of regression coefficients for trade credit finance structure and growth of manufacturing SMEs. The findings reveal a beta coefficient value of $\beta=0.250$, $p=0.000 <0.05$ which implies that trade credit finance has a positive and significant effect on growth of manufacturing SMEs in Rwanda when all other factors are held constant. Hence, a unit increase in trade credit finance would results into a proportionate rise of 0.250 units in growth of manufacturing SMEs in Rwanda. The findings concur with those of Rodriguez (2016) who maintains that trade credit helps suppliers reduce transaction costs related to insolvency of each specific commercial transaction thus fostering survival, growth and expansion of firms. Mateut and Chevapatrakul (2018) further contend that trade credit enables small firms build a stable commercial relationship which is ultimately essential for growth in the long run while Hermes, Lensink and Meesters (2018) argue that firms need to rely on suppliers to for key resources.

4.8 Influence of Debt Finance Structure on SMEs Growth

The third objective of the study involved analysis of how the use of debt finance influences manufacturing SMEs in Rwanda. Hence, the study used factors analysis, descriptive statistics and inferential statistics to answer the objective and the findings are presented in the subsections that follow.

4.8.1 Factors Analysis for Debt Finance Structure Indicators

The findings of factor analysis presented in Table 4.26 shows that all the constructs used to assess for debt finance structure registered factor loading values above the cutoff point of 0.4 which this study adapted. The results of the factor analysis procedure reveal that all the attributes used to assess for debt finance were significant in terms of explaining the variable. Hence, none of them was removed because they were found to possess acceptable factor loading values above the conventional cutoff threshold as all values varied between 0.524 and 0.825.

Table 4.26: Factors Analysis for Debt Finance Structure Indicators

No	Statements	Factor Loading
1	Interest rates charged by lenders have an effect on the business.	0.809
2	Interest rates influence the business to refrain from accessing debt finance.	0.731
3	Interest rates level influence decisions to acquire debt finance for the business.	0.787
4	Business financing decisions are formulated based on interest rate costs.	0.61
5	Possession of required collateral determines access to business finance.	0.825
6	Having assets as a collateral enabled the company to access debt finance.	0.746
7	Lenders ask for extra collateral if I don't fulfill monthly repayment plans.	0.524
8	Long-term debt payback period motivates me to acquire extra business loan.	0.596
9	Past investment successes motivate me to acquire bigger amounts of debt.	0.575
10	Business asset market value determines loan size advanced to my business.	0.706
11	The business fully utilizes the loan facility given its investment potential.	0.586

Extraction Method: Principal Component Analysis.

4.8.2 Descriptive Results on Debt Finance structure

In this section the study used percentages, average weighted means and standard deviation to analyze responses to various constructs used to measure the influence of debt finance by SMEs in Rwanda on SME growth in Rwanda. The study inquired whether interest rates charged by lenders have a positive impact on small

manufacturing businesses in Rwanda. The findings show that 54.7% and 16.0% agree and strongly agree respectively. On whether interest rates influence small manufacturing businesses to refrain from accessing debt finance, 53.3% of the respondents disagree while 32.0% agree. The findings imply that some manufacturing SMEs fail to access debt finance due to high interest rates while others access debt finance regardless of the rate at which interest is charged.

Furthermore, the findings show that 62.7% agree and 12.0% strongly agree that interest rate levels influence their decisions to acquire debt finance for their businesses. On whether business financing decisions are formulated based on interest rate costs, 45.3% agree and 10.7% strongly agree while on the other hand, 22.7% disagree while 6.7% strongly disagree. On whether collateral requirements have a negative effect on access to business finance, study findings reveal varying opinions as indicated by 36.5% who agree and 35.1% who disagree. The findings further showed that 64.0% of the respondents agree that having assets as a collateral requirement enables their firms to access debt finance. Hence, a majority of the SMEs that participated in the study had accessed debt finance by providing collateral.

The study also asked whether lenders require additional collateral whenever they fail to fulfill their monthly repayment plans. The findings show that 40.0% disagree while 36.0% agree. On whether, long-term debt repayment periods motivate small manufacturing businesses to acquire extra amounts of loan for their business, the findings show that the respondents had varying opinions as shown by 46.7% who disagree while 34.7% agree. The results imply that some small manufacturing businesses are motivated by long term debt repayment while others are not. Most respondents (52.0%) agree that their past investment successes motivated them to acquire a bigger amount of debt. The study established varying opinion among small manufacturing businesses on whether business asset market value determines the size of loan advanced to them and whether their business had fully utilized the loan facility according to its investment potential.

Generally, the study established varying opinions on the use and access of debt finance by small manufacturing businesses in Rwanda. Some of the business agree that debt finance is accessible and influences the growth of the business while others say they find it hard to access debt finance. The study further established that collateral plays a critical role in accessing debt finance by small manufacturing businesses in Rwanda. These findings are congruent with those of Ayuma, Namusonge and Iravo (2014) who observed that collateral, interest rates and debt spread are the common terms used by financial institutions to determine loan contracts for borrowers such as small and medium enterprises.

Ayyagari, Demirguc-Kunt and Maksimovic (2014) reveal that bank finance in particular is the most common type of external finance for SMEs across these countries while Robb and Robinson (2014) find that debt financing was the second most important source of start-up capital as they find that nearly 40 percent of start-ups in their study reported obtaining external credit in form of personal bank loan, business loan, business credit card. Furthermore, De Maeseneire and Claeys (2012) observe that lack of collateral was the most constraining factor that SMEs faced in accessing lines of credit from the formal financial system. Musabanganji, Karangwa, and Lebailly (2015) reveal that 87.2% of requested and approved loans in Rwanda came from informal financial sources While Omboi and Wangai (2011) underscore that unfriendly lending policies limit on the amount loaned to SMEs in addition to complex and bureaucratic application procedure that serve to block prospective SMEs from accessing credit facilities. Ochanda (2014) observes that inaccessibility to bank loans and other credit makes owners and managers of SMEs to face huge financial gaps as their savings and accruing profits from their businesses are insufficient.

Hatfield, (2017), further opines that SMEs have a high probability of facing barriers to accessing finance since lenders and investors struggle to assess their growth potential while Miller, Hoffer, and Wille, (2016) discuss that small firms rely heavily on credit from the traditional financial services industry as a source of financing for both start-up, expansion and growth with their findings adding to a

paucity of most recent research which underpins the importance of external financing, especially bank credit, as a source of capital for new firms.

Table 4.27: Descriptive Results on Debt Finance structure

No.	Statements	SD	D	NS	A	SA	M	Std Dev
1	Interest rates charged by lenders have an effect on the business	2.7%	24.0%	2.7%	54.7%	16.0%	4	0.71
2	Interest rates influence the business to refrain from accessing debt finance.	6.7%	53.3%	6.7%	32.0%	1.3%	3	0.70
3	Interest rates level influence decisions to acquire debt finance for the business.	2.7%	14.7%	8.0%	62.7%	12.0%	4	0.68
4	Business financing decisions are formulated based on interest rate costs.	6.7%	22.7%	14.7%	45.3%	10.7%	3	0.78
5	Possession of required collateral determines access to business finance.	10.8%	35.1%	10.8%	36.5%	6.8%	3	0.69
6	Having assets as a collateral enabled the company to access debt finance.	4.0%	16.0%	5.3%	64.0%	10.7%	4	0.71
7	Lenders ask for extra collateral if I don't fulfill monthly repayment plans.	4.0%	40.0%	14.7%	36.0%	5.3%	3	0.75
8	Long-term debt payback period motivates me to acquire extra business loan.	4.0%	46.7%	10.7%	34.7%	4.0%	3	0.55
9	Past investment successes motivate me to acquire bigger amounts of debt.	4.0%	33.3%	5.3%	52.0%	5.3%	3	0.56
10	Business asset market value determines loan size advanced to my business.	6.7%	26.7%	9.3%	46.7%	10.7%	3	0.74
11	The business fully utilizes the loan facility given its investment potential.	9.3%	25.3%	10.7%	45.3%	9.3%	3	0.71

4.8.3 Correlation analysis for debt finance structure and SMEs of growth

The study utilized correlation analysis to check for the link between debt finance and growth of the manufacturing SMEs in Rwanda. Table 4.28 indicates that debt finance structure has a weak positive relationship with growth of manufacturing SMEs in Rwanda as shown by correlation coefficient value of r=0.249 and p =0.000. The correlation was significant at the level of 0.05. The results imply that increasing debt

finance leads to a proportionate increase in growth of manufacturing SMEs in Rwanda by 0.249. The study findings concur with those of Fatoki and Smit (2011) who found that bank financing is very crucial for the growth of small firms while Dzomonda and Fatoki (2019) argue that debt financing is the most widely used tool in the financial market for obtaining investment capital and funding new businesses including SMEs and it includes secured loans. Legesse and Guo (2020) opine that when using debt capital, firms gain advantages in various ways through providing tax shield, minimizing agency problems between firm managers and shareholders as well as transmitting positive signals regarding firm productivity since managers possess inside information about the future productivity gains of the firm. Harelimana (2017) equally finds a strong positive relationship between firm profitability and the level of debt possessed by a firm while Egwakhe and Kabasha, (2016) argue that access to credit finance is the second most important impediment to SMEs growth after shortage of raw materials.

Table 4.28: Correlation Results on Debt Finance Structure and SMEs of Growth

Variables		Debt Finance	Growth of SMEs
Debt Finance	Pearson Correlation	1	.249**
	Sig. (2-tailed)		.000
	N	225	225
Growth of SMEs	Pearson Correlation	.249**	1
	Sig. (2-tailed)	.000	
	N	225	225

**. Correlation is significant at the 0.05 level (2-tailed).

4.8.4 Univariate Regression Analysis Debt Finance structure and SMEs growth

The study conducted a univariate regression analysis to test the influence of debt finance on the growth of manufacturing SMEs in Rwanda. The findings of model summary (coefficient of determination) ANOVA and regression coefficients are presented in Tables 4.29 to 4.31.

Table 4.29: Model Summary Debt Finance structure and Manufacturing SMEs Growth

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate
1	.512[a]	.262	.058	.46537

a. Predictors: (Constant), Debt Finance

Table 4.29 reveals that R-square for the model used to link debt finance and growth of manufacturing SMEs in Rwanda was 0.262. These results imply that other factors remaining constant, debt finance accounts for 26.2% of the growth of manufacturing SMEs in Rwanda. The findings further imply that debt finance influences growth of SMEs in Rwanda. The finding is in line with that by Safiuddin and Mohedul (2015) who argue that bank financing largely accounts for growth of small firms stressing that startups and any other enterprises need to deploy bank credit to boost their business and to carry out new investment projects. Gomis, and Khatiwada, (2016) similarly report a positive relationship between debt and future productivity growth of a firm while Auma and Muturi (2017) reveal that credit access was the most critical predictor of SMEs performance.

Table 4.30: ANOVA for Debt Finance structure and SMEs Growth

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.193	1	3.193	14.745	.000[b]
	Residual	48.295	223	.217		
	Total	51.488	224			

a. Dependent Variable: Growth of SMEs
b. Predictors: (Constant), Debt Finance

Table 4.30 presents the findings on the analysis of the variance (ANOVA) of the model used to link debt finance with growth of manufacturing SMEs in Rwanda. The results of F=14.745 with a corresponding p=0.000 implying that the used model for the study was statistically significant. Thus, the study failed to reject the null hypothesis on the goodness of fit. The finding further means that debt finance structure significantly explains the variation in growth of manufacturing SMEs in Rwanda.

Table 4.31: Regression Coefficients for Debt Finance structure and SMEs Growth

Variables	Unstandardized coefficients β	Std. Error	Standardized coefficients Beta	t	Sig.
(Constant)	3.041	0.131		23.296	0.000
Debt Finance	0.152	0.039	0.249	3.84	0.000

a Dependent Variable: Growth of SMEs

Table 4.31 showed β=0.152, p=0.000 <0.05. These findings imply that debt finance structure has a positive and significant effect on growth influence in Rwanda. Hence, other factors remaining constant a unit increase in debt finance would results to increase on 0.152 units in growth of manufacturing SMEs. The study findings are congruent with those of Kubwimana (2016) who reveals that after acquiring a loan, 50.0% of business owners in Rwanda report an increase in profitability of their business, a rise in sales, increase in stock level, working capital increase and expansion of business.

Fatoki and Smit, (2011) equally argue that bank financing makes a significant contribution towards the growth of small firms while Biggs and Shah (2016) observe that there is ample evidence that bank finance accessibility is linked to the size of firms. Davydov (2014) similarly argues that the use of debt financing enables SMEs and other firms generate revenues that would be nearly impossible to attain devoid of additional external financing in the form of debt or equity capital.

4.9 Influence of Equity Finance Structure on Manufacturing SMEs Growth

The fourth objective of the study was to determine how equity finance structure influences the growth of manufacturing SMEs in Rwanda. The study employed factors analysis, descriptive statistics and inferential statistics so as to answer the objective.

4.9.1 Factors Analysis for Equity Finance Structure Indicators

The findings of factor analysis as presented in Table 4.32 indicate that all constructs used to measure equity finance had factor loading values above the threshold of 0.4 adopted by the study. The finding implies that all the factors reached significant levels in terms of explaining equity finance structure as a study variable and none of the attributes was eliminated since they loaded appropriately. As observed from Table 4.31, all factor loading values varied between 0.652 and 0.920.

Table 4.32: Factors Analysis for Equity Finance Structure Indicators

No.	Statements	Factor Loading
1	Personal savings were used to grow the business for the past years of operations	0.652
2	Personal savings constitute a large share of the business capital finance to meet business investment obligations.	0.77
3	The business relies on personal savings more than other forms of equity finance.	0.687
4	Use of angel investors' finance is preferable for sustaining net value of the business.	0.773
5	Use of angel investors' finance has led to steady growth in profits for my business.	0.843
6	Angel investors' contributions to the business are in line with the firm's finance structure policy.	0.887
7	The business relies on family and friends' contributions and reinvested profits to finance business operations.	0.882
8	It is preferable to employ family and friends' capital to finance business operating activities.	0.92
9	Family and friends' involvement in my business is important to achieving high profits.	0.845

Extraction Method: Principal Component Analysis.

4.9.2 Descriptive Results on Equity Finance structure

The study used percentages, means and standard deviations to analyze responses to the attributes used to assess how equity finance influences growth of manufacturing SMEs in Rwanda. The study inquired whether their personal savings contribute to the business growth success for the past years of operations. The findings show that

61.3% of the respondents agree. The findings also reveal that majority agree (54.7%) that their own personal savings constitute a large share of their small business capital finance to meet business investment obligations. On whether their businesses rely on personal savings more than any other form of equity finance, the finding shows that 44.0% agree and 38.7% strongly agree.

The study equally intended to find out if SMEs in Rwanda prefer using angel investors' finance to sustain net value of the business; the results show that 50.7% disagree while 34.7% agreed. The results further show that 57.3% of the respondents disagree that use of angel investors' finance has led to steady growth in profits for my business. On whether angel investors' contributions to the business were in line with the firm's finance structure policy, the findings show that 48.0% disagree while 36.0% agree. The mean of 3 indicates that respondents had varying opinion on angel investors' contributions to their business financial structure.

Furthermore, the study findings indicate that there were varying opinions on whether respondents' businesses mainly rely on family and friends' contributions and plough back profits to finance business operations. This is revealed by 41.3% who agree to the attribute while 32.0% disagree. On whether small manufacturing businesses prefer employing family and friend capital to finance business operating activities, the findings show that 33.3% and 20.0% disagree and strongly disagree respectively while 37.3% consent to the statement. Finally, on whether family and friends' involvement in business is important to achieving high profits, the findings show that 26.7% disagree with a further 22.7% who strongly disagree. On the other hand, 45.3% of the respondents agree. These findings imply that use of equity finance by manufacturing SMEs in Rwanda varies from one firm to another.

However, most of the manufacturing SMEs in Rwanda rely on equity financing to fund operations. This is because equity finance is readily available as proponents of the pecking order theory suggest. The study findings corroborate those by several authors. For instance, Daskalakis, Jarvis and Schizas, (2013) found that Greek small and medium enterprises relied on private funds with often little or no initiative to create additional capital from external sources outside the family while Abbasi,

Wang and Abbasi, (2017) maintain that equity financing benefits SMEs by providing long-term capital with low cash outflow risks in terms of interest thereby helping new businesses to expand.

Table 4.33: Descriptive Results on Equity Finance Structure

No	Statements	SD	D	NS	A	SA	Mean	Std Dev
1	Personal savings were used to grow the business for the past years of operations.	0.0%	1.3%	0.0%	61.3%	37.3%	4	0.55
2	Personal savings constitute a large share of the business capital finance to meet business investment obligations.	0.0%	12.0%	0.0%	54.7%	33.3%	4	0.69
3	The business relies on personal savings more than other forms of equity finance.	1.3%	13.3%	2.7%	44.0%	38.7%	4	0.73
4	Use of angel investors' finance is preferable for sustaining net value of the business.	2.7%	50.7%	6.7%	34.7%	5.3%	3	0.68
5	Use of angel investors' finance has led to steady growth in profits for my business.	6.7%	57.3%	5.3%	26.7%	4.0%	3	0.67
6	Angel investors' contributions to the business are in line with the firm's finance structure policy.	6.7%	48.0%	8.0%	36.0%	1.3%	3	0.66
7	The business relies on family and friends' contributions and reinvested profits to finance business operations.	20.0%	32.0%	1.3%	41.3%	5.3%	3	0.61
8	It is preferable to employ family and friends' capital to finance business operating activities.	20.0%	33.3%	2.7%	37.3%	6.7%	3	0.56
9	Family and friends' involvement in my business is important to achieving high profits.	22.7%	26.7%	2.7%	45.3%	2.7%	3	0.72

4.9.3 Correlation Analysis for Equity Finance structure and SMEs Growth

The study further used a correlation analysis to test for the effect of equity finance structure on the growth of manufacturing SMEs in Rwanda. Findings as indicated in Table 4.34 show a Pearson correlation value of r=0.423, p=0.000 which implies that equity finance has a moderate positive association with growth of manufacturing SMEs in Rwanda. The finding equally means that increasing use of equity finance by manufacturing SMEs could lead to a corresponding rise in growth of manufacturing

SMEs in Rwanda. The findings is supported by earlier studies such as Reverte and Badillo, (2019) who observe that since no collateral is required on equity, it represents a good financing alternative for entrepreneurial ventures. The authors further stress that the low value of collateral in form of tangible assets is an added deterrent for debt providers to bear the high risk of investments in young entrepreneurial ventures, which results in many entrepreneurial companies forgoing their growth opportunities when external financing is also required. Barclay and Smith (2005) posited that firms prefer internal financing to external financing to foster growth since internal financing sources are not subject to interest rates while Saad, Madya, Ghani, Shuhymee, and Salim, (2014) observe that SMEs in Vietnamese capital city, Lao PDR prefer use of equity as it has a significantly positive effect over the performance of the business in Vietnam.

Table 4.34: Correlation Results for Equity Finance and SMEs Growth

Variables		Equity Finance	Growth of SMEs
Equity Finance	Pearson Correlation	1	.423**
	Sig. (2-tailed)		.000
	N	225	225
Growth of SMEs	Pearson Correlation	.423**	1
	Sig. (2-tailed)	.000	
	N	225	225

**.Correlation is significant at the 0.05 level (2-tailed).

4.9.4 Univariate Regression Analysis Equity Finance structure and SMEs growth

To test the effect of equity finance on growth of manufacturing SMEs when all other factors are held constant, the study used univariate regression analysis. The results for the regression operation are presented from Table 4.35 to 4.37.

Table 4.35: Model Summary for Equity Finance and SMEs Growth

Model	R	R-Square	Adjusted R Square	Std. Error of the Estimate
1	.423[a]	.179	.175	.43540

a. Predictors: (Constant), Equity Finance

Table 4.35 reveals that the R-square for the model used to link equity finance and growth of manufacturing SMEs in Rwanda is 0.179. The finding implies that other factors put on hold, equity financing accounts for 17.9% of the growth of manufacturing SMEs in Rwanda. The findings further mean that equity finance has a significant influence on expansion and growth of manufacturing SMEs in Rwanda.

Table 4.36: ANOVA for Equity Finance structure and SMEs Growth

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.214	1	9.214	48.604	.000[b]
	Residual	42.274	223	.190		
	Total	51.488	224			

a. Dependent Variable: Growth of SMEs
b. Predictors: (Constant), Equity Finance

Results of analysis of the variance (ANOVA) of the model used to link equity finance and growth of manufacturing SMEs in Rwanda is presented in Table 4.36. The obtained value of F=48.604 and a corresponding p=0.000 imply that the study model deployed was found statistically significant. Therefore, the study accepted the alternative hypothesis of the goodness of fit. Hence, equity finance makes a significant contribution to the variation in growth of manufacturing SMEs in Rwanda.

Table 4.37: Regression Coefficients for Equity Finance structure and SMEs Growth

Variables	Unstandardized coefficients β	Std. Error	Standardized coefficients Beta	t	Sig.
(Constant)	2.554	0.143		17.909	0.000
Equity Finance	0.300	0.043	0.423	6.972	0.000

a Dependent Variable: Growth of SMEs

As observed from Table 4.37, results of analysis yielded a beta value of β=0.300, p=0.000 <0.05 which imply that equity finance makes a positive and significant

influence on growth of the manufacturing SMEs in Rwanda when all other factors are held constant. Thus, a unit increase in equity finance would lead to an increase of 0.300 units on the growth of manufacturing SMEs in Rwanda controlling for all other factors. This study finding concurs with proponents of pecking order theory who argue that majority firms rely first on equity financing before considering external sources. Other theorists on equity finance such as Kepha and Muturi (2013) argue that SMEs are financed by the owners and their relatives detest external finance given its implications such as a reduction in freedom of running the firm. So, SMEs deploy equity financing so as to keep control and independence. Bunyasi, Bwisa and Namusonge (2016) implicitly allude to use of equity by entrepreneurs when they suggest in their study that it is imperative for SMEs to devise networking strategies to raise finite resources.

4.10 Firm Size and SMEs Growth

The study also evaluated the moderating influence of firm size on the growth manufacturing SMEs in Rwanda. The study assessed for firm size using the number of employees, number of subsidiaries and capital invested for small businesses. In this section the study conducted factor analysis to test for construct validity and descriptive statistics to analyze the respondents' feedback on government regulatory environment.

4.10.1 Factors Analysis for firm size Indicators

The findings of factor analysis as presented in Table 4.38 show that all the factors used to measure firm size had factor loading values above the threshold of 0.4 which the study considered. Hence, all factors were found to be significant in explaining firm size in Rwanda and none of the attributes was removed because they loaded appropriately. There was a variation in factor loading between results 0.584 and 0.865 as indicated in Table 4.38

Table 4.38: Factors Analysis for firm size Indicators

No.	Statements	Factor Loading
1	The asset size of my firm generation of extra money to be reinvested in the business	0.804
2	We can borrow significant amount of the money to invest in our business because of the size of our SMEs	0.865
3	The amount of the capital we invested was so small which affected our growth	0.619
4	Having a good number of employees to handle different section of the business enhance growth	0.584
5	The number of emplyees working in our business are not enough compared to the work load	0.773
6	The size of the business determine it access o various type of finance	0.66
7	The size of our firm affects our business growth in many ways	0.666
8	Because of our size we find it more difficult to maintain an atmosphere of continuous change	0.817
9	The size of our firm makes it more diififul to be more efficient and foster growth	0.817

Extraction Method: Principal Component Analysis.

4.10.2 Descriptive Results on Firm Size

To analyze responses to various attributes used to measure the influence of firm size on the relationship between finance structure and growth of manufacturing SMEs in Rwanda the study used percentages, mean and standard deviation. Hence, on whether the size of my firm generation of extra money to be reinvested in the business, results show that 40.0% of the respondents agree with a further 54.7% who strongly agree. Equally, on whether SMEs can't borrow significant amount of the money to invest in our business because of their size, the finding show that 36.0% agree and 53.3% of respondents strongly agree.

As indicated by the mean of 4, most respondents also agree that the amount of the capital we invested was so small which affected our growth. Furthermore, on whether having a good number of employees to handle different section of the business enhance growth, findings show that 62.7% agree while 30.7% strongly agree with the attribute. Similarly, results further indicate that most respondents as shown by mean of 4, agree and strongly agree that the number of emplyees working in our business are not enough compared to the work load. Further, on whether the size of the business determine it access o various type of finance, findings reveal that 68.0% of respondents agree while 28.0% strongly agree. It was also revealed that 58.7% agree and 20% strongly agree that the size of our firm affects our business growth in many ways. Furthermore, the results reveal that most respondents agree that because of our size we find it more difficult to maintain an atmosphere of continuous change.

These findings also indicate that majority of the small manufacturing firms in Rwanda agree that firm size was critical in accessing finance facilities that may affect the expansion of their budding businesses. This study finding supported those of Dao and Bui (2020) who found that larger companies are more likely to have more layers of management, greater number of departments, increased specialization of skills and functions, greater centralization and greater bureaucracy than smaller life insurance companies. Similarly, Ayuba et al. (2019) found that size of a firm affects performance in many ways. Key features of a large firm are its diverse capabilities,

the abilities to exploit economies of scale and scope and the formalization of procedures. The study finding further support Ilaboya and Ohiokha (2016) whose study indicated a significant positive association between firm age, firm size and profitability. Finally, the finding agreed with Rauch et al. (2009) who reported that size of the organization as well as environmental philanthropy played a role of moderator variable between entrepreneurial orientation and performance

Table 4.39: Descriptive Results on Firm size

	Statements	SD	D	NS	A	SA	Mean	Std Dev
1	The asset size of my firm generation of extra money to be reinvested in the business	0.0%	5.3%	0.0%	40.0%	54.7%	4	0.75
2	We can't borrow significant amount of the money to invest in our business because of the size of our SMEs	0.0%	9.3%	1.3%	36.0%	53.3%	4	0.79
3	The amount of the capital we invested was so small which affected our growth	0.0%	6.7%	2.7%	44.0%	46.7%	4	0.82
4	Having a good number of employees to handle different section of the business enhance growth	0.0%	5.3%	1.3%	62.7%	30.7%	4	0.71
5	The number of emplyees working in our business are not enough compared to the work load	0.0%	1.3%	2.7%	62.7%	33.3%	4	0.58
6	The size of the business determine it access o various type of finance	0.0%	1.3%	2.7%	68.0%	28.0%	4	0.56
7	The size of our firm affects our business growth in many ways	1.3%	17.3%	2.7%	58.7%	20.0%	4	0.56
8	Because of our size we find it more difficult to maintain an atmosphere of continuous change	1.3%	6.7%	5.3%	53.3%	33.3%	4	0.87
9	The size of our firm makes it more diifiult to be more efficient and foster growth	2.7%	21.3%	2.7%	49.3%	24.0%	4	0.67

This section finally presents finding on the growth of manufacturing SMEs in Rwanda. Factor analysis was performed to establish the significance of each construct used to measure the growth the manufacturing SMEs in Rwanda. Equally, a descriptive analysis was conducted on responses by study participants on attributes used to measure growth of manufacturing SMEs in Rwanda.

4.11.1 Factor Analysis of Growth of Manufacturing SMEs in Rwanda

Table 4.40 presents findings from factor analysis performed on all the constructs used to assess growth of manufacturing SMEs in Rwanda. It is shown in the Table that all constructs had factor loading values greater than the considered threshold of 0.4 adapted by this study. The findings therefore imply that all the factors were found to be significant in terms of explaining the growth of manufacturing SMEs. Hence, none of the constructs was removed because they all loaded appropriately. The factor values ranged between 0.573 and 0.788.

4.11 Analysis on Growth of Manufacturing SMEs in Rwanda

The study assessed for growth of manufacturing SMEs in Rwanda using three constructs on firm profitability, sales growth and market share. In this section the study conducted factor analysis to test for construct validity of attributes linked to the three constructs and descriptive statistics to analyze the respondents' feedback on growth of manufacturing SMEs in Rwanda.

Table 4.40: Factors Analysis for Growth of Manufacturing SMEs in Rwanda

	Statements	Factor Loading
1	Business profits have been increasing for the last five years.	0.732
2	Business profits are used in equipment and assets expansion for the business.	0.748
3	Liquidity of the business increases every year.	0.748
4	Sales turnover has been reducing every year.	0.713
5	Sales turnover moderately increases every year.	0.788
6	Sales turnover has been rapidly increasing every year.	0.672
7	Business branch networks have expanded to cover major cities and towns.	0.737
8	The business deploys new technologies to reach out to customers ahead of competition.	0.623
9	The business creates partnership with strategic product distributors/whole sellers and retailers before competitors.	0.573

Extraction Method: Principal Component Analysis.

4.11.2 Descriptive Results on Growth of Manufacturing SMEs in Rwanda

Descriptive statistics such as percentages, mean and standard deviation were obtained as part of the analysis on responses to constructs used to measure growth of manufacturing SMEs in Rwanda. On whether business profits increased for the last five years, the findings show that 70.7% of the respondents agree. Furthermore, findings show that 70.7% agree that their business profits are used for equipment and assets expansion program. While, on whether liquidity of the business had been increasing every year, 74.7% agree. Also, on whether sales turnover had been reducing every year, 29.3% of respondents agree that some small manufacturing firms had reduced their sales turnover while 14.7% strongly agree. On the contrary, the study finds that other firms registered increases in sales turnovers as indicated by 49.3% who disagree and 4% who strongly disagree that their sales turnover has been reducing every year. In terms of sales turnover, 70.7% agree that it has been moderately increasing every year while on whether business branch networks expanded to cover major cities and towns, 50.7% of the respondent disagree while only 33.3% of the respondents agree. The results further indicate that 77.3% of the respondents agree that they often use emerging technologies to reach out to the customers ahead of the competition.

The results are concomitant with those of several theorists, for instance, Sindini, Namusonge and Sakwa (2016) opine that the limited growth and expansion of majority SMEs is as a result of limited finances adding that millions of SMEs go bankrupt due to poor cash flow. Ndikubwimana, (2016) finds that SMEs in Rwanda fail after operating in a short time due to a range of factors such as poor nature of their capital structure, overspending, absence of reserve funds and poor business location while Alibhai, Bell and Conner (2017) argue that the hurdles of finding and acquiring financing is often one of the top three constraints that limit SMEs growth and expansion. Equally, the International Finance Corporation (2017) highlights lack of access to finance as the most significant limiting factor to SME growth

Table 4.41: Descriptive Results on Growth of Manufacturing SMEs

	Statements	SD	D	NS	A	SA	Mean	Std. Dev
1	Business profits have been increasing for the last five years.	2.7%	14.7%	2.7%	70.7%	9.3%	4	0.63
2	Business profits are used in equipment and assets expansion for the business.	0.0%	18.7%	2.7%	70.7%	8.0%	4	0.67
3	Liquidity of the business increases every year.	0.0%	10.7%	1.3%	74.7%	13.3%	4	0.55
4	Sales turnover has been reducing every year	4.0%	49.3%	2.7%	29.3%	14.7%	3	0.64
5	Sales turnover moderately increases every year.	0.0%	9.3%	4.0%	70.7%	16.0%	4	0.66
6	Sales turnover has been rapidly increasing every year.	1.3%	34.7%	5.3%	48.0%	10.7%	3	0.56
7	Business branch networks have expanded to cover major cities and towns.	5.3%	50.7%	6.7%	33.3%	4.0%	3	0.59
8	The business deploys new technologies to reach out to customers ahead of competition.	0.0%	14.7%	1.3%	77.3%	6.7%	4	0.58
9	The business creates partnership with strategic product distributors/whole sellers and retailers before competitors.	0.0%	21.3%	1.3%	69.3%	8.0%	4	0.59

4.11.3 Secondary Data output on Growth of Manufacturing SMEs in Rwanda

In this section, trend analysis for secondary data is presented to assess SMEs growth in Rwanda based on profitability, market share and sales growth for small and medium manufacturing enterprises involved in the study. The study sought to establish the profitability trend for both small and medium enterprises as an indicator of SMEs growth. Profitability was calculated by subtracting firm operating costs from sales revenue considering the period of five years from 2014 to 2018. For small enterprises, the results indicate a declining average profitability for the selected enterprises from 5.9 m Rwf in 2014, to 5.1 m in 2015. This decline more in 2016 to 4.8 with a further fall in 2017 to 4.4 m Rwf finally winding up at 4.1 m Rwf in 2018.

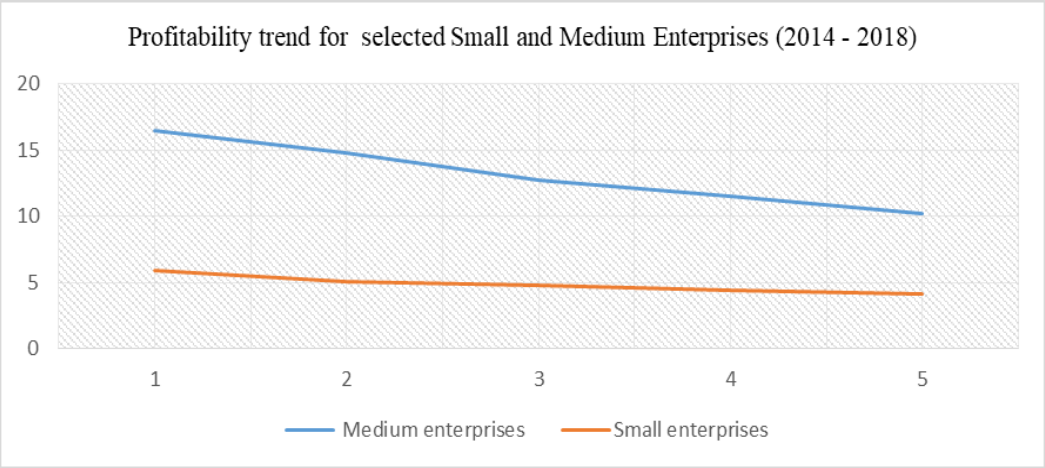


Figure 4.1: Trend curve on SME profitability

With regard to medium enterprises, similar results are found since average firm profitability stood at 16.5 m Rwf in 2014. It however declined in 2015 to 14.8 m with a further decline in 2016 at 12.7 m. it plummeted further to 11.2 m in 2017 ending at 10.24 m in 2018. The findings are congruent with several theorists (Kamanzi, 2019; Klyton and Ngoga, 2018; Akimana, 2017; Harelimana, 2017 and Gamba, 2019) who highlight the fact that many SMEs face declining profits and struggle to break even which subsequently leads to a high mortality rate among SMEs in Rwanda.

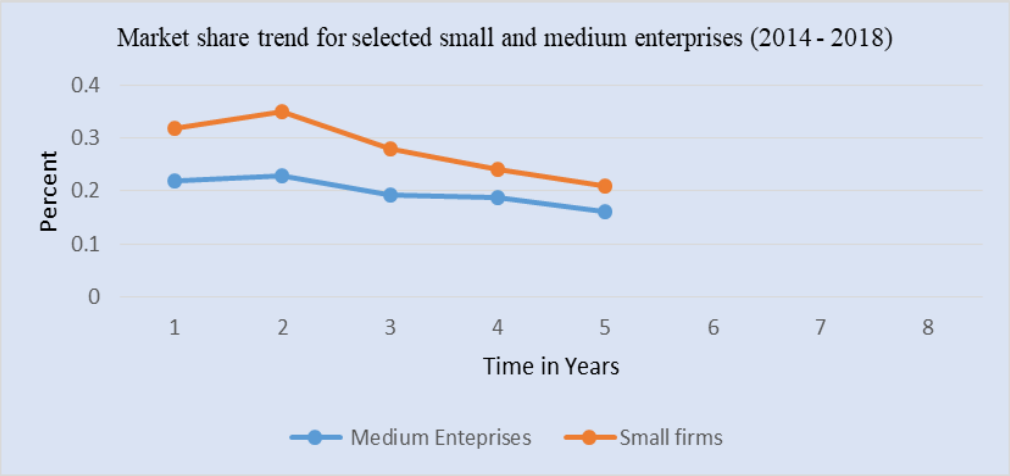


Figure 4.2: Trend curve for SME market share growth

The study sought to determine the growth trend in SMEs market share obtained by considering firm sales against total industrial sales. As indicated in the curves, there is generally a declining growth in market share for both small and medium enterprises in the period considered between 2014 and 2018. For medium enterprises, the period between 2014 and 2015 shows a slight rise from 0.32 percent to 0.35 percent. This was followed by a continuous decline in 2016 at 0.28 percent to 0.24 percent finally plummeting to 0.21 in 2018. Small firms equally register similar results as there is a slightly rise in their market share from 0.22 percent to 0.2 percent between 2014 and 2015 which was subsequently followed by declining scores; 0.19 in 2016, 0.18 in 2017 finally registering 0.16 in 2018.

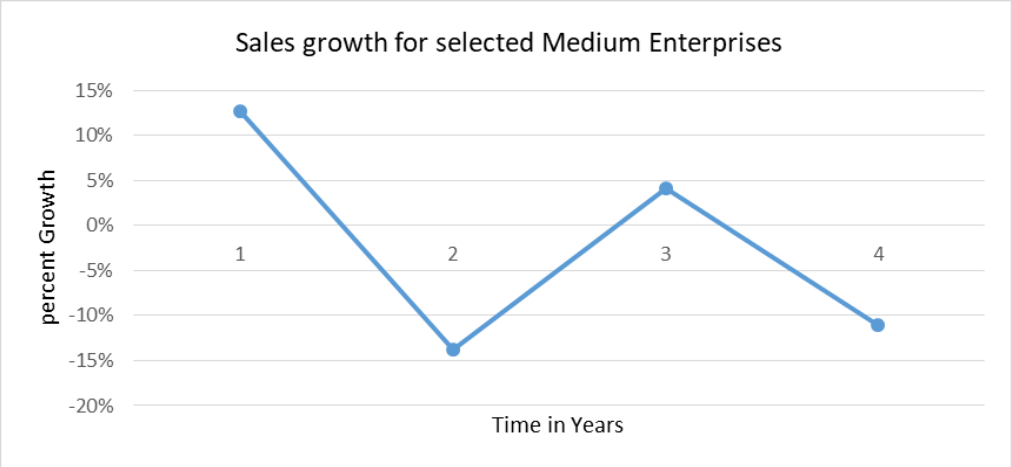


Figure 4.3: Trend curve for Sales growth for Selected Medium Size Enterprises

The study sought to determine the growth trend in SME sales as an indicator of SME growth. As indicated in the curves, sales growth for medium enterprises selected in the study generally reveals a negative growth trend. However, the period between 2014 and 2015 reveals a positive trend for medium enterprises which registered 13 percent. This was followed by an almost equal decline in market share at -14 percent in 2016 which rose slightly to -4 in 2017 winding up with a further decline at -11 percent in 2018.

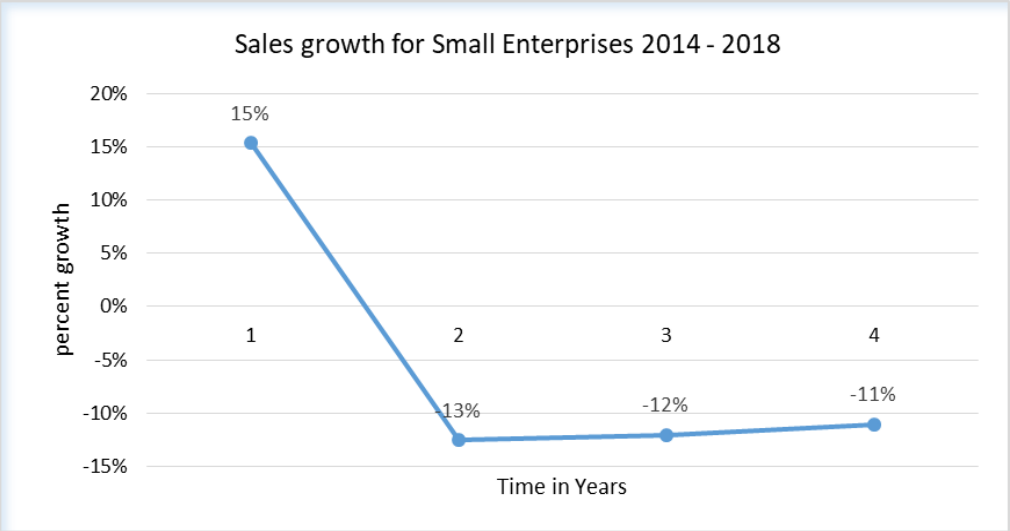


Figure 4.4: Trend curve for Sales growth for Selected Small Enterprises

As indicated in the trend curve, sales growth for small enterprises included in the study generally reveal a negative growth trend although the period between 2014 and 2015 reveals a positive trend for small enterprises which registered 15 percent growth. This was followed by a sharp decline in market share for small firms at -14 percent in 2016 although it slightly rose to 12 percent and finishing off at 11 percent in 2018.

4.12 Overall Correlation Analysis

The study conducted an overall correlation analysis to test for the presence of multicollinearity and check for existence of a relationship between independent variables and dependent variables. It was found that there was no presence of multicollinearity among the independent variables hence all the variables were subjected to in the analysis. The overall correlation results reveal that retained earnings finance structure had a weak positive association with growth of manufacturing SMEs in Rwanda as shown by r=0.258 and p=0.000. Further findings highlight that trade credit finance has a moderate positive association with growth of manufacturing SMEs in Rwanda as shown by r=0.428 and p=0.000. The results further reveals that debt finance structure has a weak positive association with growth of manufacturing SMEs in Rwanda as shown by r=0.249 and p=0.000. Finally, the findings equally reveal that equity finance has a moderate and positive

association with growth of manufacturing SMEs given the obtained P value of r=0.423, p=0.000.

Table 4.42: Overall Correlation Analysis

Variables		Retained Earnings Finance	Trade Credit Finance	Debt Finance	Equity Finance	Government Regulation	Growth SMEs
Retained Earnings Finance	Pearson Correlation	1					
Trade Credit Finance	Pearson Correlation	.547**	1				
Debt Finance	Pearson Correlation	.429**	.556**	1			
Equity Finance	Pearson Correlation	.374**	.589**	.407**	1		
Firm size	Pearson Correlation	-.206**	-0.043	0.018	0.025	1	
Growth SMEs	Pearson Correlation	.258**	.428**	.249**	.423**	-0.028	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.671	
	N	225	225	225	225	225	225

****** Correlation is significant at the 0.01 level (2-tailed)

4.13 Multivariate Regression Analysis Test of Hypotheses

This section presents the findings on test of hypotheses. A multivariate regression analysis was used by the study to test the hypotheses. A 0.05 level of significance was considered in hypothesis testing. Hence, the null hypothesis was rejected if p-value was less than 0.05. This implies that the study failed to reject the null hypothesis if the p-value was greater than 0.05. The results of a multi regression analysis are highlighted in Table 4.49.

Table 4.43: Multiple Regression Model Summary

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate
1	.654[a]	.428	.418	.36583

a. Predictors: (Constant), Equity Finance, Trade Credit Finance, Retained Earning Finance, Debt Finance

The results revealed R = 0.654 and R=squared = 0.428. The obtained R value is indicative of strong relationship between all the independent variables used in the

study combined with the growth of manufacturing SMEs in Rwanda. The obtained R^2 also suggests that when all other factors are held constant, finance structure singularly accounts for 42.8% of the variation in the growth of manufacturing SMEs in Rwanda. Hence, equity finance, retained earning finance, debt finance, trade credit finance supposedly accounts for 42.8% of the variation in growth of small and medium manufacturing enterprises in while the remaining 57.2% of the variation in growth of small and medium manufacturing enterprises in Rwanda is explained by other variables not included in this study model. Thus, the financial structure of manufacturing SMEs is a good predictor of growth. This concurs with Mwangi's (2016) study which finds that when treated in isolation, short term debt, long term debt, retained earnings and external equity have a positive insignificant effect on return on equity.

Table 4.44: Multiple Regression Model ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.045	4	5.511	41.179	.000b
	Residual	29.444	220	0.134		
	Total	**51.488**	**224**			

a Dependent Variable: Growth SMEs
b Predictors: (Constant), Equity Finance, Trade Credit Finance, Retained Earning Finance, Debt Finance

Anderson, Sweeney and Williams (2002) argue that analysis of variance (ANOVA) helps in testing for goodness of fit of the regression model in order to ascertain how well the model fits the data. The findings of ANOVA reveal an F-statistic of 41.179 with a p-value of 0.000 which is not greater than the significance level of 0.05. The study hence concludes that the model used to link the independent variables to dependent variable has a goodness of fitness. Hence, the study accepted the alternative hypothesis that financial structure significantly predicts growth of manufacturing SMEs in Rwanda.

Table 4.45: Multiple Regression Coefficients

Variables	Unstandardized coefficients β	Std. Error	Standardized coefficients Beta	t	Sig.
(Constant)	1.214	0.192		6.338	0.000
Retained Earnings Finance	0.246	0.061	0.248	4.032	0.000
Trade Credit Finance	0.082	0.041	0.119	2.001	0.047
Debt Finance	0.237	0.045	0.33	5.296	0.000
Equity Finance	0.110	0.044	0.149	2.475	0.014

a Dependent Variable: Growth of SMEs

This study sought to test the conceptual model

$Y= \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$

The general model after testing the hypotheses therefore became;

Y= 1.214+ 0.246 (Retained Earnings Finance) +0.082(Trade Credit Finance) +0.237(Debt Finance) +0.110(Equity Finance) + ε

4.12.1 Hypothesis One: Retained Earnings Finance Structure and Growth of Manufacturing SMEs in Rwanda

The study tested the null hypothesis that there is no significant influence of retained earnings finance structure on the growth of manufacturing SMEs in Rwanda. In the multivariate model, the coefficient for retained earnings finance structure was β = 0.246 with a P -value of 0.000 which was less than 0.05. The finding implies that retained earning finance has a positive and significant influence on growth of manufacturing SMEs in Rwanda. Hence, the null hypothesis that there is no significant influence of retained earnings finance structure on the growth of manufacturing SMEs in Rwanda was rejected.

These findings showed that SMEs in the manufacturing sector in Rwanda cannot rely entirely on retained earnings finance for growth since it is hardly enough to

finance growth. Therefore, they require other forms of financing to support the growth activities. However, the findings also point to importance of retained earnings finance structure just as some previous studies have concluded; Njeru, Namusonge and Kihoro (2012) observe that retained earnings are a major source of financing for most established small and medium enterprises just as Ravindra, et al. (2014) highlights retained credit as one of the most important financing options for start ups.

4.12.2 Hypothesis Two: Trade Credit Finance structure and Growth of Manufacturing SMEs in Rwanda

The study also tested the null hypothesis that there is no significant influence of trade credit finance structure on the growth of manufacturing SMEs in Rwanda. In the multivariate model, the coefficient for trade credit finance structure was $\beta = 0.082$ with a P – value of 0.047 that is less than 0.05. The findings therefore meant that trade credit finance structure positively and significantly affect the growth of manufacturing SMEs in Rwanda. The study therefore rejected the null that hypothesis.

The study finding implies that manufacturing SMEs in Rwanda can rely on debt finance structure to grow their businesses. The finding is congruent with many theorists on the subject who argue in favor of trade credit; Al-Qaisi (2018) opines that trade credit is a key source of funds for firms especially where external funding via credit institutions is not a viable option while Ferrando, Popov and Udell, (2017) stress that firms that are financially limited will most likely use trade credit while pursuing their growth and expansion. Finally, Tan and Ma (2016) finds that firms in East Asia use trade credit to stimulate their growth and expansion.

4.12.3 Hypothesis Three: Debt Finance structure and Growth of Manufacturing SMEs in Rwanda

Hypothesis three HO_3 which states that there is no significant influence of debt finance structure on the growth of manufacturing SMEs in Rwanda was tested by the study. A result from the multivariate model reveals a beta coefficient for debt finance structure of $\beta = 0.237$ with a p-value of 0.000which was less than 0.05. The findings

therefore imply that debt finance structure has a positive and significant influence on growth of manufacturing SMEs in Rwanda. The study hence, rejected the null hypothesis **$H0_3$** that there is no significant influence of debt finance structure on the growth of manufacturing SMEs in Rwanda.

The study findings implied that manufacturing SMEs in Rwanda debt financing cannot be significantly enhance the growth. the study finding agreed with (Osano, and Languitone, 2016) who argued that most of the lenders are more unlikely to provide unsecured loans to the small businesses unless there was a lot of business that were made in the past between the borrower and lender, otherwise the lender will still insist that the borrower provide collateral for the loans. These findings imply that small manufacturing businesses in Rwanda cannot rely on debt for growth because of lack of trust from majority of lenders who consider them to the highly risky.

4.12.4 Hypothesis Four: Equity Finance structure and Growth of Manufacturing SMEs in Rwanda

The study also tested **$H0_4$:** There is no significant influence of equity finance structure on the growth of manufacturing SMEs in Rwanda. Given the results obtained from the multivariate model, the beta coefficient for equity finance structure was $\beta = 0.110$ which reached statistically significant levels given a p-value of 0.014 which was less than the traditional threshold of 0.05. These findings further imply that equity finance structure has a positive and significant effect on growth of manufacturing SMEs in Rwanda.

The study therefore, rejected null hypothesis **$H0_4$** that there is no significant influence of equity finance structure on the growth of manufacturing SMEs in Rwanda and concluded that equity finance significant influences growth of manufacturing SMEs in Rwanda. This study finding concurs with proponents of pecking order theory who argue that most firms utilize first equity financing before considering other external sources of finance. Furthermore, several authors who present the case for equity financing as promising for SMEs; Gbandi and Amissah (2014) found that auxiliary sources of investment finance for SMEs in Nigeria included proprietor's savings,

moneylenders, and local authorities. Equally, the World Bank, (2018) argues that equity financing is the most appropriate form of funding to support innovative high-growth firms.

4.12.5 Hypothesis Five: Test for Moderating Effect of Firm size

The final hypothesis of the study was **$H0_5$:** firm size does not significantly moderate the relationship between financial structure and manufacturing SMEs in Rwanda. The study employed the moderated regression analysis to test for the moderating effect of firm size on the relationship between financial structure and growth of manufacturing SMEs in Rwanda. A composite for all independent variables (X) was computed, the interaction variables (X*Z) was also computed. The predictor variables in the moderated regression included firm size (Z), financial structure (X) and interaction variables (X*Z). The interaction variables (X*Z) were found to be statistically significant implying that the null hypothesis that there is no significant moderating effect of firm size on the growth of manufacturing SMEs in Rwanda was rejected. The findings are presented in Table 4.46 to 4.48

Table 4.46: Moderated Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.444[a]	.197	.186	.43244

a. Predictors: (Constant), X*Z, Firm Size (Z), Financial Structure Composite (X)

The moderated regression analysis yielded R-square of 0.197 which implied that firm size (Z), financial structure (X) and interaction variables (X*Z) accounted for 19.7% of the variation in growth of small manufacturing firms in Rwanda. Since the R-square obtained in this model was less than 22.7% obtained without the inclusion of the moderating variables. The study findings imply that firm size negatively influence the relationship between financial structure and growth of the manufacturing SMEs in Rwanda.

Table 4.47: Moderated Regression ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	10.161	3	3.387	18.111	.000[b]
	Residual	41.328	221	.187		
	Total	51.488	224			

a. Dependent Variable: Growth of SMEs

b. Predictors: (Constant), XZ, Firm Size (Z), Financial Structure Composite (X)

The findings of ANOVA revealed F-statistics of 18.111 with a p-value of 0.000 which was less than significance level of 0.05. The study hence concluded that the model used to link the independent variables (firm size (Z), financial structure (X) and interaction variables (X*Z)) to dependent variable (growth of manufacturing SMEs in Rwanda) had a good fitness.

Table 4.48: Moderated Regression Coefficients

Model	Unstandardized coefficients B	Std. Error	Standardized coefficients Beta	t	Sig.
(Constant)	2.935	1.368		2.145	0.033
Financial Structure Composite (X)	1.515	0.343	1.382	4.416	0.000
Firm Size (Z)	1.43	0.434	1.282	3.292	0.001
X*Z	0.282	0.108	1.438	2.622	0.009

a Dependent Variable: Growth of SMEs

The results of regression coefficient presented in Table 4.48 highlights that all the variables including the interaction between financial structure and firm size (X*Z) have a beta coefficient value of β=0.282, p=0.009 which was significant at 0.05. The results implied that firm size significantly moderated the relationship between financial structure and growth of the manufacturing SMEs in Rwanda.

The study rejected **$H0_5$:** There is no significant moderating effect of firm size on the relationship between financial structure and growth of manufacturing SMEs in Rwanda and concluded that firm size significantly moderated the effect of financial

structure on growth of manufacturing SMEs in Rwanda. The findings concur with those of several authors; Dao and Bui (2020) who found that larger companies are more likely to have more layers of management, greater number of departments, increased specialization of skills and functions, greater centralization and greater bureaucracy than smaller life insurance companies. Similarly, Ayuba et al. (2019) found that size of a firm affects performance in many ways. Key features of a large firm are its diverse capabilities, the abilities to exploit economies of scale and scope and the formalization of procedures. The study finding further support Ilaboya and Ohiokha (2016) whose study indicated a significant positive association between firm age, firm size and profitability. Finally, the finding agreed with Rauch et al. (2009) who reported that size of the organization as well as environmental philanthropy played a role of moderator variable between entrepreneurial orientation and performance

4.12.6: Summary of the Test of Hypothesis

This section presents the summary of the test of the hypotheses, in terms of method used, criteria adopted and final conclusion.

Table 4.49: Summary of hypothesis tests

Hypothesis	Method and Criteria	conclusions
$H0_1$: There is no significant influence of retained earnings finance structure on the growth of manufacturing SMEs in Rwanda	Multivariate regression analysis, (β=0.246, P-value= 0.000)	Rejected **$H0_1$**
$H0_2$: There is no significant influence of trade credit finance structure on the growth of manufacturing SMEs in Rwanda	Multivariate regression analysis, (β=0.082,P-value= 0.047)	Rejected **H_{02}**
$H0_3$: There is no significant influence of debt finance structure on the growth of manufacturing SMEs in Rwanda	Multivariate regression analysis, (β=-0.237, Pvalue= 0.000)	Rejected **$H0_3$**
$H0_4$: There is no significant influence of equity finance structure on the growth of manufacturing SMEs in Rwanda	Multivariate regression analysis, (β=0.11, P-value= 0.000)	Rejected **$H0_4$**
$H0_5$: There is no significant moderating effect of firm size on the relationship between financial structure and growth of manufacturing SMEs in Rwanda	Moderated Multivariate regression analysis, (β=0.282, P-value= 0.009)	Rejected **$H0_5$**

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of research findings, general background information and statistical analysis of specific objectives/research hypotheses. The chapter also outlines a summary of the major findings presented based on the specific research objectives. The conclusions and recommendations relating to specific objectives as well as suggestions for further research are also included herein.

5.2 Summary of the Findings

This study generally aimed at analyzing the influence of finance structure on the growth of manufacturing SMEs in Rwanda. Five specific objectives guided the study; to evaluate the influence of debt finance, equity finance, firm size, retained earnings and trade credit on the growth of manufacturing SMEs in Rwanda. To achieve the objectives, use of mixed research design for collecting, analyzing and integrating data was utilized.

868 manufacturing SMEs registered with Rwanda Development Board as of November 2017 comprised the study target population. The study deployed stratified random sampling techniques to determine a sample size of 273 SMEs and close-ended questionnaire was used to collect data. Collected data was processed and analyzed by way of SPSS so as to generate descriptive and inferential statistics. In order to test for relationships between study variables, the study employed multiple regression technique. Moreover, Analysis of variance (ANOVA) was used to test the significance of the model used in the study while R^2 helped to determine the level of the goodness fit of the regression model.

5.2.1 Retained Earnings finance structure and Manufacturing SMEs growth in Rwanda

The first objective of the study was to determine the influence of retained earnings finance structure on the growth of manufacturing SMEs in Rwanda. The study used factor analysis, descriptive statistics, correlation and univariate regression analysis to determine how retained earning finance influences the growth of manufacturing SMEs in Rwanda.Generally, findings from descriptive analysis revealed that manufacturing SMEs in Rwanda had retained earnings at their disposal which they used to further expansion of their businesses. Results of correlation analysis revealed retained earnings finance has a weak positive association with growth of manufacturing SMEs in Rwanda. This implies that increasing retained earnings finance would lead to increase in growth of manufacturing SMEs in Rwanda. The findings of multivariate regression analysis further indicate that retained earning finance positively and significantly affects the growth of manufacturing SMEs in Rwanda which implies that other factors remaining constant, retained earnings finance contributes 36.6% of variation in growth of manufacturing SMEs in Rwanda. Hence, the study rejected the null hypothesis that there is no significant influence of retained earnings finance structure on the growth of manufacturing SMEs in Rwanda. These findings showed that in Rwanda, manufacturing SMEs can exploit benefits of retained earnings finance to leverage their growth.

5.2.2 Trade Credit Finance structure and Growth of Manufacturing SMEs in Rwanda

The second objective of the study was to determine how the use of trade credit finance structure affects the growth of manufacturing SMEs in Rwanda. Similarly, the study employed factor analysis, descriptive and inferential statistics to assess how use of trade credit finance in Rwanda affects the growth of manufacturing SMEs. To determine how trade credit finance is linked to growth of manufacturing SMEs in Rwanda, the study utilized correlation analysis. Results revealed trade credit finance has a weak positive relationship with growth of manufacturing SMEs in Rwanda. This implies that increasing trade credit finance would equally lead to increase in

manufacturing SMEs in Rwanda. Similarly, findings of regression analysis indicate that hen all other factors are controlled for, trade credit finance has a positive and significant effect on growth of the manufacturing SMEs in Rwanda. Thus, the studies rejected null that hypothesis that there is no significant influence of trade credit finance structure on the growth of manufacturing SMEs in Rwanda.

5.2.3 Debt Finance structure and Growth of Manufacturing SMEs in Rwanda

The third objective of the study was to evaluate the influence of debt finance structure on the growth of manufacturing SMEs in Rwanda. The descriptive results established that some business firms interviewed accessed debt finance and that it had influence the growth of the business while other found it hard to access debt finance. It was also revealed that collateral played a critical role in accessing debt finance by SMEs in in Rwanda.

Furthermore, to check for association between debt finance and growth of the manufacturing SMEs in Rwanda the study used correlation analysis. Findings depict debt finance having a moderate positive link to growth of manufacturing SMEs in Rwanda. This implies that increasing debt finance would lead to increase in growth of manufacturing SMEs in Rwanda.

In the multivariate model, the coefficient beta value for debt finance structure was significant implying that debt finance structure positively and significantly affected growth of manufacturing SMEs in Rwanda. Hence, the study rejected the null hypothesis that there is no significant influence of debt finance structure on the growth of manufacturing SMEs in Rwanda.This means that manufacturing SMEs in Rwanda can deploy debt financing to maximize their growth potentialities.

5.2.4 Equity Finance structure and Growth of Manufacturing SMEs in Rwanda

The study fifth objective was to determine the influence of equity finance structure on the growth of manufacturing SMEs in Rwanda. Through use of varied techniques such as factors analysis, descriptive statistics and inferential statistics, the effect of equity finance on growth of manufacturing SMEs in Rwanda was examined.

Findings of descriptive analysis for instance, highlight that majority of the manufacturing SMEs in Rwanda relied on equity financing to fund their business operations

To further test the nature of the relationship between equity finance and growth of manufacturing SMEs in Rwanda, the study used correlation analysis. Findings showed that equity finance had a weak positive association with growth of manufacturing SMEs in Rwanda. Moreover, in the multivariate operation, the beta coefficient value obtained for equity finance structure was significant which meant that controlling for all other variables, equity finance structure has a positive and significant effect on growth of manufacturing SMEs in. The study therefore, rejected null hypothesis that there is no significant influence of equity finance structure on the growth of manufacturing SMEs in Rwanda and concluded that manufacturing SMEs in Rwanda need equity finance to fund their growth and expansion objectives.

5.2.5 Moderating Effect of firm Size

In the test for moderation, the interaction between financial structure and firm size (X*Z) have a beta coefficient. The results implied that firm size significantly moderated the relationship between financial structure and growth of the manufacturing SMEs in Rwanda. The study therefore failed to reject that there is no significant moderating effect of firm size in the relationship between financial structure and growth of manufacturing SMEs in Rwanda.

5.3 Conclusions

This study established that financial structure has a significant influence on the growth of manufacturing SMEs in Rwanda. Based on the above summarized findings, the study made the following conclusions; that retained earnings of small and medium manufacturing enterprises in Rwanda should be leveraged to support growth and expansion of the enterprises although these enterprises require combination of various financial structures when especially seeking growth and expansion. The study concluded that small and medium manufacturing enterprises in

the country that rely in retained earnings to finance their growth are likely to fail in achieving their objectives.

The study further concluded that manufacturing SMEs that use trade credit finance in their financial structure have high probability of the achieving their growth objectives. Trade credit ensures that firms continue to be serviced by their suppliers on credit and the available resources can be channeled into other growth opportunities unlike firms which use their available resources to pay suppliers. In terms of the relationship between debt finance and growth of manufacturing SMEs, the study concluded that debt finance is the least supportive to the growth of SMEs. This is because lack of accessed to debt by small business due to risk perception and lack of adequate collaterals required by the lending institutions. Only small business that meet the strict demands by lending institutions can use debt finance to support growth. The study concluded that manufacturing small business that opts for other financial structure is likely to achieve their growth objectives.

The study concluded those small and medium enterprises that have adequate equity finance stand a real chance of growth. Equity finance is cheap and doesn't accumulate interest compared to other forms of financial structure that attracts interests. Equity finance was found to have the most significant influence on SME growth. Finally, the study concludes that SMEs in the manufacturing franchise should operate business in an environment that is conducive in terms of easy registration, friendly taxation policies among others so as to optimize chances of achieving their growth objectives faster.

5.4 Recommendations

The study made recommendations for practice improvement, recommendation for policy formulation and finally recommendation for further research as discussed further below.

Recommendations for Policy Makers.

SMEs especially in the manufacturing sector are the cornerstone of the economic development for developing countries such as Rwanda. It has been reiterated that countries that ensure that SMEs thrive will perform well in terms of job creation, wealth creation, increased tax revenue and overall economic development. Thus, different players in the sector need to ensure availability of varied financing options for SMEs in order to achieve vibrant small and medium enterprises.

Recommendation for Management.

Secondly, the management of the SMEs should be trained on the need to reinvest some of the profits into business to support growth. Governments, NGOs and Lending institutions must come together to create forum where small businesses are trained in cash and capital management. This will ensure that small retained some of their earning to finance growth. The management of the SMEs should further learn how to use account receivables and account payables to fully take advantage of trade credit finance structure. This will ensure the SMEs continue producing or manufacturing during time of low liquidity. Both the government and SMEs should come up with proper legal framework to regulate the use of trade credit finance.

Recommendation for Lending institutions.

The study also recommends that lending institution should have revised their lending models to SMEs to increase access to credit by small business that can be used for growth purposes. On the other hand, small businesses should work extremely hard to conform to the demands of lending institutions to increase their use of debt finance in supporting growth and expansion of their businesses.

Recommenadtion to SMEs owners

The study further recommends that owners of small businesses must seek to increase the number of shareholders through selling some their stock to friends and family's members to raise equity that can be used to finance growth and expansion. The small

firms can also use stock dividends to ensure that the business remains with enough resources to support growth objectives and ensure better performance.

5.5 Areas for Further Research

The focus for this research was on the influence of finance structure on the growth of manufacturing SMEs in Rwanda. Based on the study findings, it was established that finance structure explained small proportion of the variance in growth of manufacturing SMEs in Rwanda. Further studies should focus on other factors that account for the remaining proportion. More recommendations by the study relate to the need for further studies focusing on SMEs in other sectors of Rwanda's economy such as insurance, tourism, mining or agriculture so to establish the influence of finance structure on growth of the SMEs in those sectors. These studies will add knowledge on the role of finance structure on growth of small business enterprises. The study further recommends that further studies on influence of financial structure on enterprises growth should focus on large enterprises to bridge the methodological gaps.

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APPENDICES

Appendix I: Introduction Letter

Dear Sir/Madam,

RE: RESEARCH QUESTIONAIRE

My name is Emmaboles Rubunda. I am a PhD candidate at Jomo Kenyatta University of Agriculture and Technology undertaking research on **"Finance structure and the growth of small and medium manufacturing enterprises in Rwanda**". I am requesting your participation in filling this questionnaire to enable me achieve the research objectives. I assure you that responses provided to this questionnaire will be treated with utmost confidentiality and anonymity. You are requested to kkindly respond to all questions.

With thanks,

Emmaboles Rubunda.

PhD candidate,

Jomo Kenyatta University of Agriculture and Technology in Kenya

For more information you may contact me via my e-mailerubunda@yahoo.co.uk, +250788301628,

Appendix II: Research Questionnaire

Instructions

This questionnaire aims at assessing the **Finance structure and the growth of small and medium manufacturing enterprises (SMEs) in Rwanda**. Read each statement carefully before you mark the answer; be honest about the answer and the information you provide.

SECTION A (1): DEMOGRAPHIC INFORMATION

1. Age:
   a) Under 20 years ()
   b) 21-30 years ()
   c) 31-40 years ()
   d) 41-50 years ()
   e) 51-60 years ()
   f) Over 60 years ()
2. **Respondent's Gender**

   a) Male ()
   b) Female ()

3. **Level of education**

   a) Primary School ()
   b) Secondary School ()
   c) Undergraduate ()
   d) Graduate ()
   e) Post Graduate ()

4. **Position in the business.**

   a) CEO ()
   b) Owner ()
   c) Finance Manager ()
   d) Others (please specify) _____

5. **Experience in the business**
   a. Less than 1 year ()
   b. 1-2 years ()
   c. 3-5 years ()
   d. 5-7 years ()
   e. Above 8 years ()
6. Indicate the number of employees in your business for the period specified

	Number of employees
2014	
2015	
2016	
2017	
2018	

7. The year of business registration _____
8. Form of business ownership

a) Foreign ()
b) Local ()
c) Individual ()
d) Groups ()
e) Co-owned ()

SECTION A: RETAINED EARNINGS FINANCE STRUCTURE

This section aims to explore the influence of retained earnings on growth of small and medium size manufacturing firms in Rwanda. Indicate the extent to which you agree with the following statements using the Likert scale. Key: 5=strongly Agree 4=Agree 3=Not sure 2=Disagree 1=strongly Disagree

Statement	5	4	3	2	1
The business declares dividends each year.					
Dividends per share for the business have been increasing each year.					
Paying dividends helps the business return profit gained to shareholders.					
Net income after tax has been increasing each year.					
Optimal net income after tax is maintained by the business at all times.					
The business use net income after tax to finance business operating expenses.					
The business investments in tangible assets have increased each year.					
Maintenance costs for tangible assets have reduced in the last five years.					
The business invests in plant expansion and acquisition of modern equipment using retained earnings.					

10. In your view, does a net income after tax influence the growth of your business?

Yes [ ] No [ ]

11. If yes above, how does net income after tax influences the growth of your business?.....

SECTION B: TRADE CREDIT FINANCE STRUCTURE

This section aims to explore the influence of trade credit on growth of small and medium size manufacturing enterprises in Rwanda. Indicate the extent you agree with the following statements using the Likert scale. Key: 5=strongly Agree 4=Agree 3=Not sure 2=Disagree 1=strongly Disagree

Statement	5	4	3	2	1
Ccustomers honor their commitment to pay in agreed credit period					
Appropriate credit period creates repeat business for the company.					
The business considers length of credit period for the customer before trade credit approval.					
The business prefers giving favorable credit terms and standards to customers than cash sales in return of long-term relationship building.					
The business receives payments from suppliers based on contract credit terms and standards.					
Shorter and strict credit terms and standards reduce sales revenue for my business.					
Business trade discounts do not conflict with the liquidity demands of the firm.					
Customer loyalty and goodwill increases whenever I offer favorable trade discount facilities.					
Business grants trade discount only to big organizations.					

10. In your view, do credit terms and standards influence the growth of your business?

Yes [ ] No [ ]

11. If yes above, how does credit terms and standards influence the growth of your business?

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SECTION C: DEBT FINANCE STRUCTURE

This section aims to explore the influence of debt finance on growth of manufacturing SMEs in Rwanda. Please indicate the extent to which you agree with the following statements using the Likert scale. Key: 5=strongly Agree 4=Agree 3=Not sure 2=Disagree 1=strongly Disagree

Statement	**5**	**4**	**3**	**2**	**1**
Interest rates charged by lenders have an effect on the business.					
Interest rates influence the business to refrain from accessing debt finance.					
Interest rates influence decisions to acquire debt finance for the business.					
Business financing decisions are formulated based on interest rate costs.					
Possession of required collateral determines access to business finance.					
Having assets as a collateral enabled the company to access debt finance.					
Lenders ask for extra collateral if I don't fulfill monthly repayment plans.					
Long-term debt payback period motivates me to acquire extra business loan.					
Past investment successes motivate me to acquire bigger amounts of debt.					
Business asset market value determines loan size advanced to my business.					
The business fully utilizes the loan facility given its investment potential.					

9. Does having a loan affect the growth of your business?

Yes [ ] No [ ]

11. If yes above, how does having a loan affect the growth of your business?

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SECTION D: EQUITY FINANCE STRUCTURE

This section aims to explore the influence of equity finance on the growth of manufacturing SMEs in Rwanda. Please indicate the extent to which you agree with the following statements using the Likert scale. Key: 5=strongly Agree 4=Agree 3=Not sure 2=Disagree 1=strongly disagree

Statement	**5**	**4**	**3**	**2**	**1**
Personal savings were used to grow the business for the past years of operations					
Personal savings constitute a large share of the business capital finance to meet business investment obligations.					
The business relies on personal savings more than other forms of equity finance.					
Use of angel investors' finance is preferable for sustaining net value of the business.					
Use of angel investors' finance has led to steady growth in profits for my business.					
Angel investors' contributions to the business are in line with the firm's finance structure policy.					
The business relies on family and friends contributions and reinvested profits to finance business operations.					
It is preferable to employ family and friends' capital to finance business operating activities.					
Family and friends involvement in my business is important to achieving high profits.					

10. In your view, do family and friends finance influence the growth of your business?

Yes [ ] No [ ]

11. If yes above, how does do family and friends influences the growth of your business?

.....

SECTION E: FIRM SIZE

This section aims to evaluate the moderating effect of firm siez on finance structure growth of small and medium size manufacturing firms in Rwanda**.** Indicate the extent you agree or disagree with the following statements using the Likert scale. Key: 5=strongly Agree 4=Agree 3=Not sure 2=Disagree 1=strongly Disagree

Statement	**5**	**4**	**3**	**2**	**1**
The size of my firm generation of extra money to be reinvested in the business.					
We can borrow significant amount of the money to invest in our business because of the size of our SMEs					
The amount of the capital we invested was small which affected our growth					
Having a good number of employees to handle different section of the business enhance growth					
The number of emplyees working in our business are not enough compared to the work load					
The size of the business determine it access o various type of finance					
The size of our firm affects our business growth in many ways					
Because of our size we find it more difficult to maintain an atmosphere of continuous change					
The size of our firm makes it more difficult to be efficient and foster growth					
Firm age determines which financial structures the firm uses					

SECTION F: THE GROWTH OF SMALL AND MEDIUM SIZE MANAUFACTURING ENTERPRISES.

This section aims to explore growth of small and medium size manufacturing enterprises in Rwanda. Indicate the extent you agree or disagree with the following

statements using the Likert scale. Key: 5=strongly Agree 4=Agree 3=Not sure 2=Disagree 1=strongly Disagree

Statement	**5**	**4**	**3**	**2**	**1**
Business profits have been increasing for the last five years.					
Business profits are used in equipment and assets expansion for the business.					
Liquidity of the business increases every year.					
Sales turnover has been reducing every year.					
Sales turnover moderately increases every year.					
Sales turnover has been rapidly increasing every year.					
Business branch networks have expanded to cover major cities and towns.					
The business deploys new technologies to reach out to customers ahead of competition.					
The business creates partnership with strategic product distributors/whole sellers and retailers before competitors.					

10. In your view, is profitability, sales revenue and market share appropriate measure of your business growth?

Yes [ ] No [ ]

11. If yes, how do you use sales revenue use to measure business growth?

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Appendix III: Registered Manufacturing SMEs in Rwanda.

#	Firm Name	Location
1	Africa Sewing club	Gasabo, Ndera
2	African Buffalo Gin	Gasabo, Rusororo
3	Alliance Industries	Gasabo, Ndera
4	Alyvo Rwanda Ltd	Gasabo, Remera
5	Atlas Windows	Gasabo, Ndera
6	Best Hardware Stores Ltd	Gasabo, Ndera
7	CAFERWA	Gasabo Kimironko
8	DOKMAI Rwanda	Gasabo, Gatsata
9	Imena Dairy	Gasabo, Kimironko
10	Kasese distilleries Ltd	Gasabo Kacyiru
11	Kigali plastics Ltd	Gasabo, Kimironko
12	AGGREKO Rwanda	Kicukiro, Gatenga
13	ALB Investment Group	Kicukiro, Niboye
14	AMEGERWA Ltd	Kicukiro, Kigarama
15	BANDAG SA	Kicukiro, Nyarugunga
16	Bonus industries Ltd	Kicukiro, Kagarama
17	CEJA Suppliers	Kicukiro, Masaka
18	Chillington Rwanda Ltd	Kicukiro, Niboye
19	COFATOLE Ltd	, Kicukiro Nyarugunga
20	East African foods and beverages Ltd.	Kicukiro, Gatenga
21	Flexifoam Ltd	Kicukiro, Nyarugunga
22	Global trading impex Ltd	Kicukiro, Gatenga
23	Alpine	Nyarugenge, Kanyinya
24	Branded fine foods (Rwanda) Ltd	Nyarugenge, Gitega
25	Manumetal Ltd	Nyarugenge, Kanyinya
26	Metafoam	Nyarugenge, Nyamirambo
27	Ufaco&Vlisco	Nyarugenge, Muhima
28	AAVS Company Ltd	Gasabo,Gatsata
29	ABC working Ltd	Gasabo,Gisozi
30	Wood Pecker Ltd	Gasabo,Rusororo
31	Africa improved foods Rwanda Ltd	Gasabo,Ndera
32	Agroganic forest Ltd	Kicukiro, Masaka
33	Akariba general supplies Ltd	Nyarugenge,Muhima
34	AL Halal boucher Ltd	Nyarugenge, Nyamirambo
35	AL Najmu furniture Ltd	Gasabo, Gisozi
36	ALB Investments group Ltd	Kicukiro, Masaka

37	Viva products Ltd	Gasabo, Kinyinya
38	VICMEM Investments services Ltd	Gasabo, Remera
39	Vibrant 2020 Rwanda Ltd	Nyarugenge, Muhima
40	Alpha solutions company Ltd	Nyarugenge, Nyakabanda
41	Amizero y'ubuzima bushya Ltd	Gasabo, Gisozi
42	Anima Ltd	Gasabo, Kimironko
43	Aquaculture & business solutions Ltd	Gasabo, Bumbogo
44	Asalaam Rwanda Ltd	Gasabo, Ndera
45	Asjebatectane (A.T.E.C) Ltd	Gasabo, Kimironko
46	Atelier de transformation de bois Ltd	Gasabo, Gatsata
47	Atepo plus Ltd	Gasabo, Kimironko
48	Aurex Ltd	Nyarugenge, Gitega
49	B.E.S & Supply Ltd	Kicukiro, Niboye
50	Banana promotions comapnt Ltd	Nyarugenge, Gitega
51	Bangel co. &Partners Ltd	Kicukiro, Kicukiro
52	BENICO Ltd	Gasabo, Kacyiru
53	Bergo green world company Ltd	Nyarugenge, Gitega
54	Veropera Ltd	Kicukiro, Gatenga
55	Vaishali enterprises Ltd	Gasabo, Kimironko
56	Birashoboka mining Ltd	Kicukiro, Gikondo
57	Blessed vision company Ltd	Nyarugenge, Kimisagara
58	Bom dia coffee &Resto Ltd	Nyarugenge, Nyakabanda
59	Urugero Rab Ltd	Nyarugenge, Muhima
60	Braimpire Ltd	Nyarugenge, Kimisagara
61	Bridgestone company Ltd	Gasabo, Remera
62	Brighter future Ltd	Nyarugenge, Rwezamenyo
63	Buf business company Ltd	Nyarugenge, Kimisagara
64	Upward empire Ltd	Gasabo, Remera
65	Bulru investment corporation "BULRIC" Ltd	Gasabo, Remera
66	Business 2group Ltd	Kicukiro, Niboye
67	UNO Rwanda distributors Ltd	Nyarugenge , Muhima
68	Chakula fairfoods Ltd	Kicukiro, Niboye
69	Chemi-clean hygienic Ltd	Gasabo, Kacyiru
70	Cher uniforms Ltd	Nyarugenge, Kimisagara
71	Chez Venant Ltd	Gasabo, Remera
72	Cia catalyst investment agency Ltd.	Gasabo, Kacyiru
73	Cite eden Afrique Ltd	Nyarugenge, Nyamirambo
74	City bakery J.M.J & Sons Ltd	Kicukiro, Gatenga
75	Classie cakes Ltd	Kicukiro, Kagarama
76	Clean shine products Ltd	Nyarugenge, Muhima
77	Coffee processing company (C.P.C) Ltd	Nyarugenge, Muhima

78	Coldstone ice cream Ltd	Gasabo, Kinyinya
79	Cotiru Ltd	Gasabo, Kimironko
80	Dahiraan Rwanda Ltd	Kicukiro, Nyarugunga
81	Umugore Ukwiye Ltd	Gasabo, Gisozi
82	Delphine international Ltd	Gasabo, Kimihurura
83	Delta-power systems engineering Ltd	Gasabo, Remera
84	Destiny distillers Ltd	Gasabo, Ndera
85	DM Bricola Ltd	Kicukiro, Kigarama
86	Duhope Ltd	Gasabo, Remera
87	Dukunde Company Ltd	Gasabo, Gisozi
88	Easy price furniture Ltd	Gasabo, Gisozi
89	ECOT Ltd	Kicukiro, Niboye
90	El Jefe the Boss bar and restaurant Ltd	Kicukiro, Gatenga
91	Elacos Ltd	Nyarugenge, Muhima
92	Emerahde company ltd	Nyarugenge, Rwezamenyo
93	Empower real East Africa Rwanda Ltd	Gasabo, Remera
94	Engency.com Ltd	Gasabo, Gisozi
95	Entreprise Niy- Eph Ltd	Nyarugenge, Rwezamenyo
96	Enviroc. E.C.I Ltd	Nyarugenge, Nyakabanda
97	Equaliks Ltd	Nyarugenge, Kimisagara
98	Escada Ltd	Nyarugenge, Nyakabanda
99	Etablissement Munsad (Ets Munsad) Ltd	Gasabo, Kimihurura
100	Ubumwe Bwacu Ltd	Gasabo, Gisozi
101	Eza Ltd	Nyarugenge, Kimisagara
102	Eznot Ltd	Gasabo, Gisozi
103	Faith Group Entreprise Ltd	Nyarugenge, Nyamirambo
104	Faraja Products Ltd	Kicukiro, Niboye
105	Flamingo school chalk Rwanda Ltd	Kicukiro, Kanombe
106	U & A blessed company Ltd	Nyarugenge, Kimisagara
107	Fresh & delicious cakes Ltd	Gasabo, Kimironko
108	Freshco Macadamia Rwanda Ltd	Gasabo, Remera
109	Fro Luxury.Co Ltd	Kicukiro, Gatenga
110	Future Flow Ltd	Gasabo, Kacyiru
111	G.I.W.U Company Ltd	Gasabo, Kacyiru
112	T & H Group Ltd	Nyarugenge, Nyamirambo
113	Gariznard Ltd	Kicukiro, Nyarugunga
114	Gatama Investments Group Ltd	Gasabo, Kacyiru
115	Gatare Tea Company Ltd	Nyarugenge, Muhima
116	Tsutsu N.Bella Tailoring Ltd	Kicukiro, Nyarugunga
117	Geo textiles East Africa Limited	Gasabo, Kimihurura
118	Godman Ltd	Kicukiro, Nyarugunga

119	Golden Star Co. Ltd	Kicukiro, Kanombe
120	Good Food Supply Ltd	Kicukiro, Niboye
121	Green Cycle Ltd	Gasabo, Remera
122	The Stars Ltd	Gasabo, Gisozi
123	Grimun Limited	Gasabo, Kinyinya
124	Ha pest control solution	Nyarugenge, Kimisagara
125	Harvest business Group Ltd	Nyarugenge, Gitega
126	HCC LTD	Nyarugenge, Kigali
127	Herco Company Limited	Gasabo Kimironko
128	Higa Group Ltd	Nyarugenge, Gitega
129	High quality innovation(HQI) Ltd	Nyarugenge, Kimisagara
130	Hits Vision Company Ltd	Gasabo, Rutunga
131	Home Sweet Cakes Limited	Nyarugenge, Muhima
132	Hope For Families Ltd	Gasabo, Kinyinya
133	Humura Pure Peanut Butter	Gasabo, Kimironko
134	Ibrand Corporation Ltd	Nyarugenge, Kimisagara
135	Ibyiwacu Center Limited	Nyarugenge, Nyamirambo
136	Iglosecom Ltd	Nyarugenge, Muhima
137	Imena agro-processing Ltd	Nyarugenge, Rwezamenyo
138	Imperial Rwanda Ltd	Gasabo, Kacyiru
139	Imprimerie Heritage Ltd	Nyarugenge,Gitega
140	Inezamisango Company Ltd	Kicukiro, Masaka
141	Inforcocom Limited	Gasabo, Kimihurura
142	Inkamirwa Z' Iwacu Company Ltd	Gasabo, Kinyinya
143	Innovative Baking (IB) Limited	Kicukiro, Nyarugunga
144	Investing route Ltd	Gasabo, Kacyiru
145	Investor now Ltd	Gasabo, Rutunga
146	Irisa Innovative Ltd	Nyarugenge, Kimisagara
147	Irish P Diet	Kicukiro, Gatenga
148	Isange hospitality services Ltd	Gasabo, Remera
149	Isha creations Limited	Gasabo, Kimironko
150	Isonga boutique karungi Ltd	Kicukiro, Kanombe
151	Italia-Africa trade corporation Ltd	Gasabo, Kimironko
152	J&B Deco Ltd	Kicukiro, Gikondo
153	Jabana maize flour Ltd	Gasabo, Jabana
154	Jackno & sons company Ltd	Nyarugenge, Kimisagara
155	Jafii shine company Ltd	Kicukiro, Niboye
156	Josh innovation Ltd	Kicukiro, Niboye
157	Jowa service and supply Ltd	Gasabo, Kimironko
158	JURDA Limited	Nyarugenge, Nyamirambo
159	Just Friends Ltd	Nyarugenge, Kimisagara

160	Kabizu Group Ltd	Gasabo, Rusororo
161	Kadafi202555 Ltd	Gasabo, Kimironko
162	Kaliza fashion and design Ltd	Gasabo, Kimihurura
163	Kan call	Nyarugenge, Nyamirambo
164	Kapitana Ltd	Nyarugenge, Kimisagara
165	Ken Base Ltd	Kicukiro, Kanombe
166	Khistar Group Ltd	Nyarugenge, Kimisagara
167	KIA Trinity suppliers Ltd	Gasabo, Kimironko
168	Kigali cakes empire Ltd	Nyarugenge, Rwezamenyo
169	Kigali cereals Ltd	Kicukiro, Kanombe
170	Kigali International mobile services Ltd	Gasabo, Ndera
171	Kigali quality bread Ltd	Gasabo, Kinyinya
172	Kigali rehab/care solutions Ltd	Nyarugenge, Kimisagara
173	Kiseki corporation Ltd	Gasabo, Kimihurura
174	Kubana Company Ltd	Kicukiro, Gatenga
175	Kudu Design Ltd	Gasabo, Kinyinya
176	Kuro Casanova Supply Ltd	Nyarugenge, Kanyinya
177	La Bonne Promesse Ltd	Nyarugenge, Gitega
178	La Felicidad Ltd	Gasabo, Kimihurura
179	La Nouvelle baguette Ltd	Nyarugenge, Kimisagara
180	La Providence bakery Ltd	Gasabo, Kimironko
181	Le Grenier Ltd	Nyarugenge, Huhima
182	Leo Investment Group Ltd	Gasabo, Gisozi
183	Licoco Ltd	Gasabo, Kimironko
184	Lignum & Energia Ltd	Kicukiro, Kagarama
185	Lion Soap Ltd	Gasabo, Gisozi
186	M & J Innovation Ltd	Nyarugenge, Kimisagara
187	M.R.B.K .Company Ltd	Nyarugenge, Muhima
188	M.V Detergents Company Ltd	Gasabo, Kinyinya
189	M.W.P Ltd	Gasabo, Gisozi
190	MAGDA Cafe & Bakery Ltd	Gasabo, Kacyiru
191	Magnum Holdings Ltd	Kicukiro, Niboye
192	Malayika Corporation Ltd	Nyarugenge, Kimisagara
193	Mamilka Ltd	Gasabo, Rusororo
194	Mana Foods Rwanda Ltd	Kicukiro, Niboye
195	Manitou Business Group Ltd	Gasabo, Kacyiru
196	Manne Ltd	Gasabo, Gisozi
197	Marcas Group Ltd	Kicukiro, Kanombe
198	Marino Manufacturing Ltd	Nyarugenge, Gitega
199	Maxima Printing And General Supply Ltd	Gasabo, Kacyiru
200	Maxima QS Ltd	Gasabo, Kacyiru

201	MCM Services Ltd	Kicukiro, Gikondo
202	Metal Tins Ltd	Gasabo, Gisozi
203	Mikoani edible oils & detergents Ltd	Gasabo, Kimironko
204	Milbridge holding Rwanda Ltd	Gasabo, Remera
205	Mura six Ltd	Kicukiro, Kanombe
206	Muti & KA Investments Ltd	Gasabo, Jabana
207	Muvipa-Rwanda Ltd	Nyarugenge, Nyamirambo
208	N W commerce general Ltd	Kicukiro, Kigarama
209	Natural stone business Ltd	Nyarugenge, Kimisagara
210	Navigant Ltd	Nyarugenge, Rwezamenyo
211	New strength business of agriculture Ltd	Nyarugenge, Kimisagara
212	Nicobridge boutique Ltd	Gasabo, Kimironko
213	Nikil & associates industrial consultancy services Ltd	Kicukiro, Kicukiro
214	NMJ 2050 Limited	Nyarugenge, Gitega
215	Noyau united Ltd	Nyarugenge, Muhima
216	Nutrition plus Ltd	Gasabo, Kacyiru
217	OEDI Ltd	Kicukiro, Kicukiro
218	Oil solution company(OSC) Ltd	Kicukiro, Gahanga
219	OM metals infra projects Ltd	Nyarugenge, Kimisagara
220	Orias Ltd	Kicukiro, Niboyi
221	Pabu's seafood restaurant & bar Ltd	Nyarugenge, Muhima
222	Passion's Ltd	Gasabo, Gisozi
223	Petno trust company Ltd	Nyarugenge, Kimisagara
224	TEES investments limited	Nyarugenge, Muhima
225	Pharmacie naturelle Ltd	Nyarugenge, Muhima
226	Piomo perfection is our motto Ltd	Kicukiro, Kagarama
227	POA Products Ltd	Kicukiro, Kanombe
228	Polyserv company Ltd	Gasabo, Gisozi
229	Preston enterprises Ltd	Kicukiro, Niboye
230	Pristine strategy Ltd	Gasabo, Kacyiru
231	PRO Water Rwanda Ltd	Nyarugenge, Kimisagara
232	Prosec Ltd	Nyarugenge, Muhima
233	Prosperity venture enterprise (PVE)Ltd	Kicukiro, Kigarama
234	Proud company Ltd	Nyarugenge, Muhima
235	Synalinq Ltd	Nyarugenge, Muhima
236	R.C.T Ltd	Gasabo, Kacyiru
237	R.R.M.S. Group Ltd	Gasabo, Gisozi
238	Rama bakeries Ltd	Nyarugenge, Nyamirambo
239	Ravi graphics Rwanda Ltd	Nyarugenge, Muhima
240	Real century company Ltd	Nyarugenge, Kimisagara

241	Recto-Verso Ltd	Nyarugenge, Muhima
242	Rehoboth welding company Ltd	Gasabo, Kacyiru
243	Rena Ltd	Gasabo, Kimironko
244	Rift African coffee origins Ltd	Gasabo, Remera
245	Rocket products Ltd	Nyarugenge, Kimisagara
246	Ronasel company Ltd	Nyarugenge, Gitega
247	RR Business relax resort Ltd	Nyarugenge, Muhima
248	Rugari meat processing Ltd	Kicukiro, Nyarugunga
249	Rural economic development &mgt co. Ltd	Nyarugenge, Kimisagara
250	Rwagasabo General Ltd	Gasabo, Kacyiru
251	Rwanda bamboo society Ltd	Kicukiro, Niboye
252	Rwanda Nitrogen Ltd	Gasabo, Remera
253	S.A.F Bois Ltd	Gasabo, Gisozi
254	Safa Bakeries Ltd	Gasabo, Kinyinya
255	SAFICO Group Ltd	Kicukiro, Gikondo
256	Sawa Citi Ltd	Nyarugenge, Kimisagara
257	Sederera Ltd	Gasabo, Gisozi
258	T & H. Group Ltd	Nyarugenge, Nyamirambo
259	Silverland Ltd	Nyarugenge, Kimisagara
260	Smart products Rwanda Ltd	Gasabo, Remera
261	Sobribu Ltd	Kicukiro, Kanombe
262	Soimex plastic Ltd	Gasabo, Remera
263	The cakery kgl ltd	Gasabo, Remera
264	Spark industry ltd	Kicukiro, Kicukiro
265	Supersize engineering & general supply Ltd	Kicukiro, Gatenga
266	Speed investment company Ltd	Kicukiro, Nyarugunga
267	Spring integrated company Ltd	Gasabo, Bumbogo
268	Squato Ltd	Nyarugenge, Muhima
269	Strong welfare group company (SWGC) Ltd	Nyarugenge, Kimisagara
270	TellaVista Group Ltd	Kicukiro, Gatenga
271	Technology and business activity Ltd	Nyarugenge, Muhima
272	Tedmer Int. Trade .Co. Ltd	Nyarugenge, Muhima
273	Thegrn Ltd	Gasabo, Kinyinya

Appendix IV: Secondary data collection schedule

Company Name	**Medium firms' category annual turnover (000)**

	2014	2015	2016	2017	2018
Africa Sewing club	25000	27200	24300	24900	23789
African Buffalo Gin	50000	52780	45880	42507	40290
Alliance Industries	17000	22089	20780	21590	19780
Alyvo Rwanda Ltd	25500	28970	25789	24790	22700
Atlas Windows	51000	55900	50230	49900	48707
Best Hardware Stores Ltd	50000	52700	49927	51000	48900
CAFERWA	24500	25000	24300	24000	22400
DOKMAI Rwanda	53000	54490	50178	49820	48850
Imena Dairy	16000	17800	14780	15270	14990
Kasese distilleries Ltd	47000	53500	49200	40200	38400
Kigali plastics Ltd	26000	31900	28500	27070	24350
AGGREKO Rwanda	37000	43900	40049	37780	35730
ALB Investment Group	15000	20070	18200	23080	15900
AMEGERWA Ltd	21000	25810	22090	27078	23391
1BANDAG SA	50000	54730	47704	52380	47100
Bonus industries Ltd	43000	48930	42419	45589	40000
CEJA Suppliers	24000	30300	25700	28740	22500
Chillington Rwanda Ltd	15200	18780	14780	16780	13440
COFATOLE Ltd	45000	58793	52000	54700	50187
East African foods and beverages Ltd.	20000	27800	23300	25800	21028
Flexifoam Ltd	47000	52780	44900	51000	47010
Global trading impex Ltd	14000	19300	15570	17421	13840
Alpine	35000	39750	33300	35890	31900
Branded fine foods (Rwanda) Ltd	18000	24580	20018	23380	20100
Manumetal Ltd	33000	40000	35478	37990	34200
Metafoam	14800	19780	15200	18870	13900
Freshco Macadamia Rwanda Ltd	41000	48903	43800	47390	44070
Rift African coffee origins Ltd	22000	28900	23304	26780	21780
Rwanda bamboo society Ltd	32000	39912	34070	37600	30800
Ufaco&Vlisco	49000	52600	45700	48200	44300
AAVS Company Ltd	29000	17800	14098	13170	12300
ABC working Ltd	13000	13980	14890	12740	12340
Totals	**1003000**	**1149727**	**1010434**	**1053405**	**948972**
Means	**60787.87879**	**69680.42424**	**61238.42424**	**63842.72727**	**57513.45455**
Small Enterprises category annual turnover					
Wood Pecker Ltd	4700	5200	5000	4470	4170

Company Name	Medium firms' category annual turnover (000)				
	2014	2015	2016	2017	2018
Africa improved foods Rwanda Ltd	6800	7202	6770	5278	4207
Agroganic forest Ltd	9200	9302	9100	8823	7890
Akariba general supplies Ltd	4400	5720	4880	3330	2782
AL Halal boucher Ltd	3780	5278	4781	3881	3700
AL Najmu furniture Ltd	5700	6421	6280	5230	4890
ALB Investments group Ltd	8500	9278	9548	8312	7190
Viva products Ltd	7900	7820	6570	4978	4701
VICMEM Investments services Ltd	3800	5000	4519	3170	2998
Vibrant 2020 Rwanda Ltd	6700	6900	6050	4780	3589
Alpha solutions company Ltd	7120	7490	7200	6720	6220
Amizero y'ubuzima bushya Ltd	2800	4210	3920	3190	2808
Anima Ltd	2390	3980	2930	2689	2410
Aquaculture & business solutions Ltd	4510	5100	4507	3120	2980
Asalaam Rwanda Ltd	5700	6110	5120	4780	3512
Asjebatectane (A.T.E.C) Ltd	3298	6200	4008	3700	3500
Atelier de transformation de bois Ltd	7250	8192	7378	5230	4980
Atepo plus Ltd	4710	5989	4810	3420	3198
Aurex Ltd	3289	4180	3770	3100	2990
B.E.S & Supply Ltd	5720	6109	5872	5471	5200
Banana promotions company Ltd	6570	7290	6100	4701	3310
Bangel co. &Partners Ltd	9700	9109	10290	9400	8120
BENICO Ltd	4823	7020	7630	4430	3370
Bergo green world company Ltd	4280	5780	3420	3189	2909
Veropera Ltd	2330	4200	3780	3420	3189
Vaishali enterprises Ltd	4789	6280	5300	4807	4312
Birashoboka mining Ltd	6440	5789	5212	4987	4438
Blessed vision company Ltd	7201	7589	7201	6590	6270
Bom dia coffee &Resto Ltd	3799	4380	3910	3209	2997
Urugero Rab Ltd	4780	5120	4570	4139	3770
Braimpire Ltd	6220	6523	6120	5890	4890
Bridgestone company Ltd	9080	9407	9390	7190	6987
Brighter future Ltd	3337	6370	6210	4870	3589
Buf business company Ltd	2609	3100	2891	2589	2217

Company Name	Medium firms' category annual turnover (000)				
	2014	2015	2016	2017	2018
Upward empire Ltd	4678	5289	4987	4598	4209
Bulru investment corporation ''BULRIC'' Ltd	4490	6189	5891	4390	4100
Business 2group Ltd	6417	7301	5781	4879	3923
UNO Rwanda distributors Ltd	7660	9321	9092	7320	6780
Chakula fairfoods Ltd	3720	6102	4340	3780	3510
Chemi-clean hygienic Ltd	7900	9400	7210	6707	4400
Cher uniforms Ltd	6640	9904	9401	8892	7344
Chez Venant Ltd	2000	4570	3309	2003	1987
Cia catalyst investment agency Ltd.	7830	8258	8010	7708	7213
Cite eden Afrique Ltd	3890	5092	4330	2970	2280
City bakery J.M.J & Sons Ltd	2210	4301	3720	3290	4880
Classie cakes Ltd	3481	4582	4490	4190	3879
Clean shine products Ltd	8670	6580	4109	3490	2810
Coffee processing company (C.P.C) Ltd	9899	9001	8920	7120	6400
Coldstone ice cream Ltd	3600	6790	4300	4100	4904
Cotiru Ltd	8700	7880	6987	4680	4214
Dahiraan Rwanda Ltd	2671	7190	6380	6110	4890
Umugore Ukwiye Ltd	3270	6099	4107	3841	3478
Delphine international Ltd	7882	8718	7209	7000	6732
Delta-power systems engineering Ltd	6802	9470	9210	7170	4431
Destiny distillers Ltd	4222	9789	8233	4090	3700
DM Bricola Ltd	7242	8190	6235	5913	5491
Duhope Ltd	6890	7890	6173	5880	5470
Dukunde Company Ltd	4266	6780	6109	6000	4700
Easy price furniture Ltd	4700	5208	4239	5721	4378
ECOT Ltd	6400	7219	6610	6400	5850
El Jefe the Boss bar and restaurant Ltd	8700	9100	8301	7802	5320
Elacos Ltd	4720	7891	6890	4670	4189
Emerahde company ltd	3809	4900	4100	3890	3512
Empower real East Africa Rwanda Ltd	8790	8919	7020	6836	6329
Engency.com Ltd	7280	8128	7420	4078	3871
Entreprise Niy- Eph Ltd	4907	7200	6770	4780	3990

Company Name	**Medium firms' category annual turnover (000)**				
	2014	2015	2016	2017	2018
Enviroc. E.C.I Ltd	3770	4805	3559	3300	3280
Equaliks Ltd	6890	7730	6134	5802	5278
Escada Ltd	7229	7901	7439	5721	3249
Etablissement Munsad (Ets Munsad) Ltd	3226	5449	3789	2983	2600
Ubumwe Bwacu Ltd	7780	8598	7984	6172	4390
Eza Ltd	2339	5998	3289	2189	1878
Eznot Ltd	6779	8210	7490	7000	5743
Faith Group Entreprise Ltd	3447	5229	3148	4239	3289
Faraja Products Ltd	3100	5999	4219	3782	3308
Flamingo school chalk Rwanda Ltd	3210	6778	4798	3421	3200
U & A blessed company Ltd	2866	6239	4278	4778	3908
Fresh & delicious cakes Ltd	7890	8338	6211	3879	3480
Fro Luxury.Co Ltd	6770	7202	6891	5238	5245
Future Flow Ltd	4229	6789	4339	4184	3442
G.I.W.U Company Ltd	3710	5489	4222	4987	2888
T & H Group Ltd	6229	6980	5222	3489	3288
Gariznard Ltd	4390	5770	3229	2978	2490
Gatama Investments Group Ltd	6661	7212	4220	3890	3723
Gatare Tea Company Ltd	5120	7781	6000	4320	3200
Tsutsu N.Bella Tailoring Ltd	6132	7871	7249	6472	4809
Geo textiles East Africa Limited	8770	9083	8378	7668	6999
Godman Ltd	4781	6908	3201	3998	3468
Golden Star Co. Ltd	7229	8010	7464	7234	6421
Good Food Supply Ltd	3289	5289	3222	3873	3997
Green Cycle Ltd	7340	9125	9789	7890	4890
The Stars Ltd	3279	4870	3189	2830	2418
Grimun Limited	5290	7191	6000	4389	3980
Ha pest control solution	3780	5891	3894	3610	3263
Harvest business Group Ltd	7221	7434	6789	4689	4100
HCC LTD	5879	6019	4219	4331	3788
Herco Company Limited	7298	7423	6872	4229	3789
Higa Group Ltd	7909	8287	7349	5897	4732
High quality innovation(HQI) Ltd	4790	5890	4998	4198	3981
Hits Vision Company Ltd	9314	9181	10778	9833	7784
Home Sweet Cakes Limited	3489	6590	4440	3900	3480
Hope For Families Ltd	4290	5398	6878	5998	4298

Company Name	Medium firms' category annual turnover (000)				
	2014	2015	2016	2017	2018
Humura Pure Peanut Butter	6228	7000	6421	5843	4823
Ibrand Corporation Ltd	5590	6217	5888	4210	4782
Ibyiwacu Center Limited	6590	6891	6500	5982	4780
Iglosecom Ltd	4450	5213	4000	3939	3789
Imena agro-processing Ltd	5550	6200	4020	3890	3901
Imperial Rwanda Ltd	4390	5890	4210	3981	3781
Imprimerie Heritage Ltd	4232	6192	4478	3842	3342
Inezamisango Company Ltd	5389	6490	4980	3802	3280
Inforcocom Limited	4500	6280	5700	4600	3620
Inkamirwa Z' Iwacu Company Ltd	8431	9097	9780	8472	5340
Innovative Baking (IB) Limited	4790	6400	6389	4100	3600
Investing route Ltd	3729	4700	5572	4390	3970
Investor now Ltd	8512	9100	6720	6000	4780
Irisa Innovative Ltd	8428	8712	6412	4231	3290
Irish P Diet	5257	6770	4390	4090	3980
Isange hospitality services Ltd	6527	8702	7084	6210	4129
Isha creations Limited	6457	7320	6780	4339	4019
Isonga boutique karungi Ltd	6379	6780	4778	3879	3000
Italia-Africa trade corporation Ltd	8590	9004	8788	7219	6890
J&B Deco Ltd	6470	7326	5578	4389	3890
Jabana maize flour Ltd	4470	6423	4228	3891	3200
Jackno & sons company Ltd	8328	8900	8812	6433	6000
Jafii shine company Ltd	9521	9200	8980	7000	6499
Josh innovation Ltd	6421	6782	4980	4000	3980
Jowa service and supply Ltd	7429	7870	5200	4783	4000
JURDA Limited	8522	8710	7500	6100	5744
Just Friends Ltd	8110	8790	9090	7421	5444
Kabizu Group Ltd	6577	6910	6480	4178	4000
Kadafi202555 Ltd	6389	6349	5478	4533	3890
Kaliza fashion and design Ltd	5713	6920	5983	5100	4300
Kan call	7348	7891	7341	4830	4689
Kapitana Ltd	9239	9200	8332	8240	7499
Ken Base Ltd	9190	9170	9210	9710	9000
Khistar Group Ltd	6350	7823	6728	5920	5000
KIA Trinity suppliers Ltd	7401	8234	6432	5800	4700
Kigali cakes empire Ltd	6280	7232	4899	5920	5100
Kigali cereals Ltd	6758	7200	4988	4430	4300

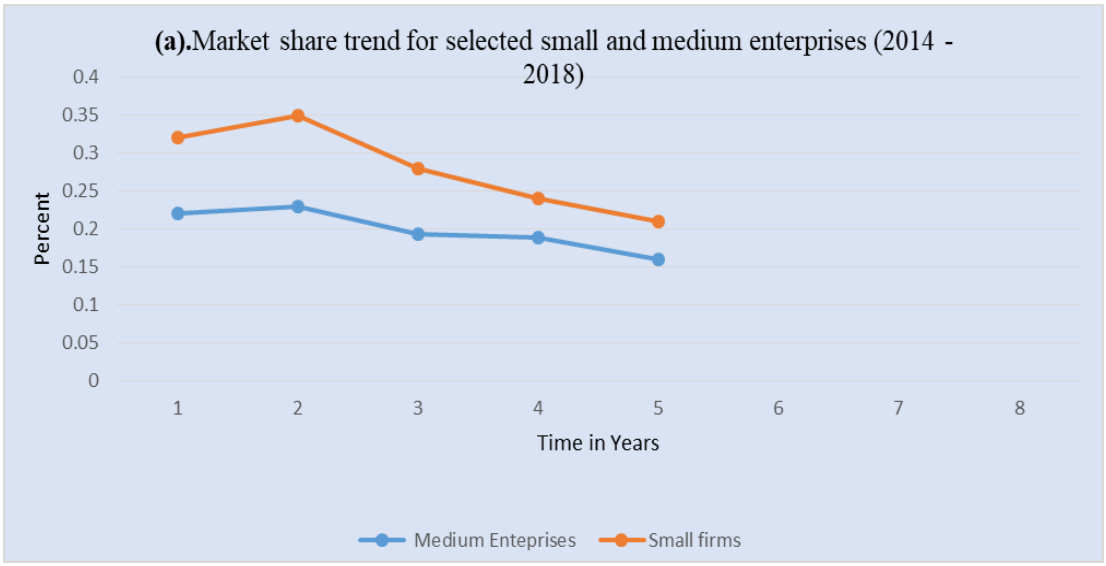
Company Name	Medium firms' category annual turnover (000)				
	2014	2015	2016	2017	2018
Kigali International mobile services Ltd	8580	9890	9100	7780	6900
Kigali quality bread Ltd	7290	8872	7772	7320	7400
Kigali rehab/care solutions Ltd	9297	9090	8283	8000	7800
Kiseki corporation Ltd	7529	8210	7100	6890	6782
Kubana Company Ltd	8733	9100	9019	8840	8410
Kudu Design Ltd	9478	9102	10100	9470	8900
Kuro Casanova Supply Ltd	4320	4999	4000	3970	4000
La Bonne Promesse Ltd	7410	9123	8100	7730	7600
La Felicidad Ltd	6280	7324	6721	6389	6100
La Nouvelle baguette Ltd	9218	9000	7710	7200	6890
La Providence bakery Ltd	5221	6831	7129	6732	6200
Le Grenier Ltd	6770	7234	6211	6000	6200
Leo Investment Group Ltd	5255	6523	6381	6010	5670
Licoco Ltd	6210	6241	6182	6000	5790
Lignum & Energia Ltd	7780	8123	7341	7000	6930
Lion Soap Ltd	5440	7231	6402	6200	5721
M & J Innovation Ltd	4982	5789	4123	3960	3890
M.R.B.K .Company Ltd	7421	8781	7981	7200	6834
M.V Detergents Company Ltd	6618	6823	6219	6000	5782
M.W.P Ltd	3890	4892	3998	3720	3490
MAGDA Cafe & Bakery Ltd	7780	8238	8120	7888	7423
Magnum Holdings Ltd	9389	9111	9120	8792	6213
Malayika Corporation Ltd	4240	6121	5378	5000	4892
Mamilka Ltd	5278	6237	3940	3400	3200
Mana Foods Rwanda Ltd	7278	8271	7720	7200	7100
Manitou Business Group Ltd	6620	7234	7090	6789	6603
Manne Ltd	5670	6078	4401	4200	3600
Marcas Group Ltd	8420	9110	8810	8000	7820
Marino Manufacturing Ltd	3301	4890	3991	3480	3300
Maxima Printing And General Supply Ltd	6290	7241	7172	7000	6780
Maxima QS Ltd	5789	7349	7000	6780	6340
MCM Services Ltd	5780	7490	7100	6488	6280
Metal Tins Ltd	4920	5239	4870	4420	4300
Mikoani edible oils & detergents Ltd	8910	9010	9880	7300	5800

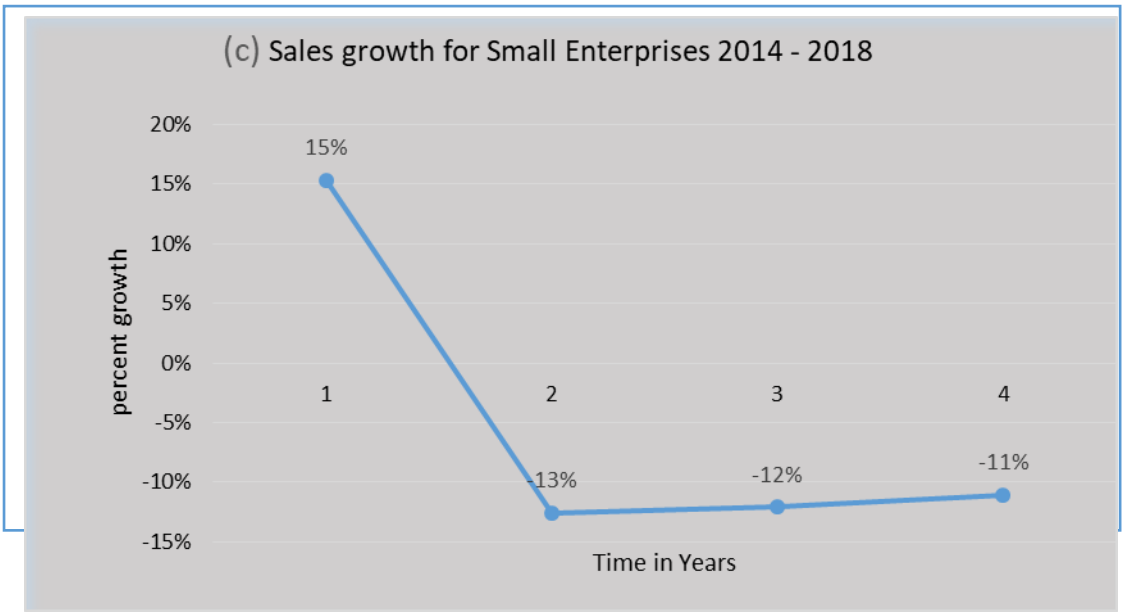
Company Name	Medium firms' category annual turnover (000)				
	2014	2015	2016	2017	2018
Milbridge holding Rwanda Ltd	7690	8213	7821	7200	6910
Mura six Ltd	8870	9109	8000	7490	7200
Muti & KA Investments Ltd	3400	4491	4200	4000	3819
Muvipa-Rwanda Ltd	5780	6128	5782	4990	4483
N W commerce general Ltd	6278	7318	7200	7000	6882
Natural stone business Ltd	9780	9303	9900	8300	7930
Navigant Ltd	6709	7030	8000	7490	7200
New strength business of agriculture Ltd	4680	6832	5100	4789	4489
Nicobridge boutique Ltd	5782	7342	7020	6748	5430
Nikil & associates industrial consultancy services Ltd	9290	9230	9010	8880	8600
NMJ 2050 Limited	8190	8294	7288	7000	6380
Noyau united Ltd	5270	7239	6389	6050	5790
Nutrition plus Ltd	5780	6278	4720	4500	3930
OEDI Ltd	9780	9990	9910	9470	9200
Oil solution company(OSC) Ltd	6990	7240	6778	5889	4600
OM metals infra projects Ltd	4998	5828	4782	4390	3949
Orias Ltd	6780	8304	8390	8200	7489
Pabu's seafood restaurant & bar Ltd	6789	7201	7000	6400	5940
Passion's Ltd	4180	5734	4902	4820	4420
Petno trust company Ltd	6189	7234	7211	6892	6482
TEES investments limited	9000	8880	9017	7430	6721
Pharmacie Naturelle Ltd	4492	5449	4008	3970	3734
Piomo perfection is our motto Ltd	5487	7319	7029	6830	6429
POA Products Ltd	4770	5999	4810	4670	4300
Polyserv company Ltd	6228	7822	7100	6720	6210
Preston enterprises Ltd	6370	6123	6231	6139	5499
Pristine strategy Ltd	6890	7230	6882	6228	5982
PRO Water Rwanda Ltd	9779	9991	8431	8200	7789
Prosec Ltd	4220	5192	4123	3940	3689
Prosperity venture enterprise (PVE)Ltd	5890	7210	6239	6400	5790
Proud company Ltd	3999	7001	6770	6630	5834
Synalinq Ltd	6290	7400	7319	7000	6682
R.C.T Ltd	5950	7229	7000	6789	6690
R.R.M.S. Group Ltd	7801	9122	10000	9700	8678

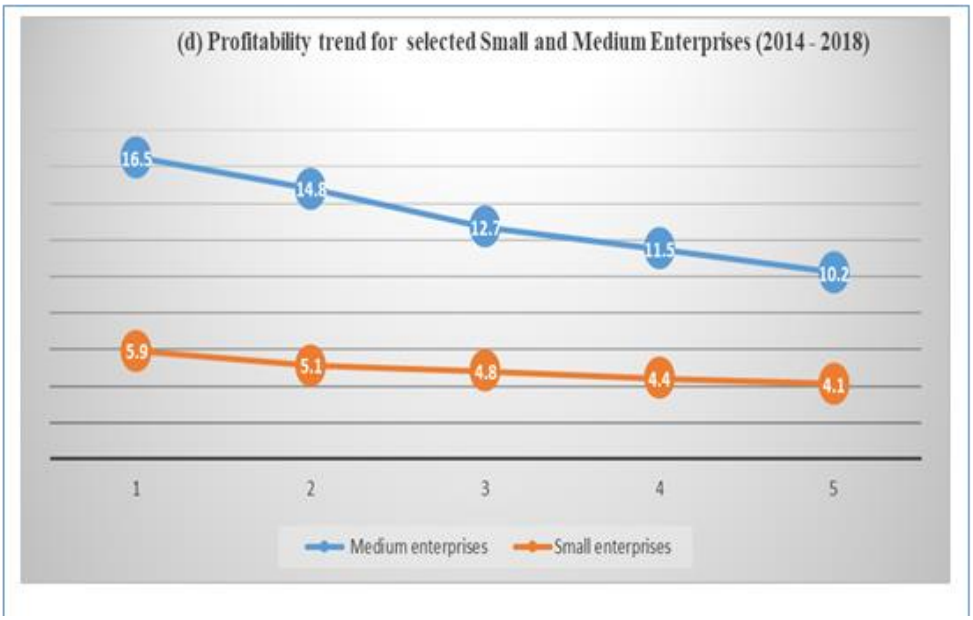
Company Name	Medium firms' category annual turnover (000)				
	2014	2015	2016	2017	2018
Rama bakeries Ltd	5220	7230	6882	6689	6100
Ravi graphics Rwanda Ltd	4999	5782	5000	4989	4400
Real century company Ltd	7000	7200	7210	7000	6670
Recto-Verso Ltd	6779	7141	7000	6888	6400
244 Rehoboth welding company Ltd	4970	8121	8000	7490	6807
Rena Ltd	3890	5389	4700	4680	4600
Rocket products Ltd	5458	6892	7100	6487	6200
Ronasel company Ltd	7389	8300	8000	7740	7290
RR Business relax resort Ltd	4290	6210	5782	5329	6408
Rugari meat processing Ltd	5987	6149	5992	5739	5430
Rural economic development & mgt co. Ltd	4787	7131	6220	5830	5620
Rwagasabo General Ltd	7500	8120	7720	7389	7200
Rwanda Nitrogen Ltd	4552	7233	6729	6423	5900
S.A.F Bois Ltd	7750	7220	7094	6939	6640
Safa Bakeries Ltd	4789	6349	6020	5989	5480
SAFICO Group Ltd	4789	6214	6902	6623	6299
Sawa Citi Ltd	4290	6234	8119	8000	7700
Sederera Ltd	5259	6231	6100	5791	5590
T & H. Group Ltd	5789	6921	6000	5888	5520
Silverland Ltd	4590	8021	7480	6998	6570
Smart products Rwanda Ltd	5907	6709	5229	5449	4890
Sobribu Ltd	4400	5321	4278	4300	3978
Soimex plastic Ltd	5440	6321	5882	5439	5300
The cakery kgl ltd	7990	8291	7798	7429	7330
Spark industry ltd	7229	7801	8100	7934	7540
Supersize engineering & general supply Ltd	4790	6330	5848	5718	5330
Speed investment company Ltd	4789	6923	5782	5690	5120
Spring integrated company Ltd	6789	7123	5990	5789	5672
Squato Ltd	4590	5870	4320	4200	3742
Strong welfare group company (SWGC) Ltd	5500	6441	7100	6980	6279
TellaVista Group Ltd	4000	6232	5889	5340	4998
Technology and business activity Ltd	4720	5994	4890	4620	4200
Tedmer Int. Trade .Co. Ltd	5389	6881	5821	5602	4990

Company Name	**Medium firms' category annual turnover (000)**				
	2014	2015	2016	2017	2018
Thegrn Ltd	5890	6227	6202	5983	5400
Totals	1444069	1705388	1515224	1352135	1217537
Average		14094.1157	12522.5124	11174.66942	10062.28926

Appendix V: Trend Curves from Secondary Data






(d) Profitability trend for selected Small and Medium Enterprises (2014 - 2018)
16.5
14.8
12.7
11.5
10.2
5.9
5.1
4.8
4.4
4.1
1
2
3
4
5
Medium enterprises
Small enterprises

Appendix VI: Government of Rwanda Research Permit

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY (NCST)
Grand Pension Plaza, 13th Floor, KN 2 Roundabout, Kigali
PO Box: 2285 Kigali – Rwanda
E-MAIL: info@ncst.gov.rw ,WEBSITE: www.ncst.gov.rw

PERMISSION TO CONDUCT RESEARCH IN RWANDA

N° NCST/482/ 71/2018

I, the undersigned, hereby grant the researcher (s) in Section I permission to conduct research in Rwanda. This permission only covers research activities related to the provided research title, during the specified period and at specified location (s) in Section II of this form.

Section I: Personal Information

1. Family Name: **RUBUNDA** Other Names: **Emmaboles**
2. Academic Qualification (Highest degree): **MS, MA**
3. Home Institution: **Jomo Kenyatta University** Occupation: **PhD Student**
4. Phone Number (in Rwanda): **0788301628**
5. Email: **erubunda@yahoo.co.uk**
6. Primary Research Supervisor:
   a. Names: **G S NAMUSONGE**
   b. Institution: **JKUAT** Occupation: **Professo**
   c. Phone Number: **+254722896092**
   d. Email: **gsnamusonge@yahoo.co.uk**
7. Research Collaborators:

	Names	Institution
1		
2		
3		
4		

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Government of Rwanda Research Permit

Section II: Research Information

1. Research Area: **Finance**
2. Research Title: **Influence of finance structure on the growth of small and medium manufacturing enterprises in Rwanda**
3. Affiliating Rwandan Institution: **JKUAT**
4. Rwandan Supervisor:
   a. Names: **Prof.Cherulyot**
   b. Occupation: **Director**
   c. Phone Number: **+254716355344** d. Email: **director@bps.jkuat.ac.ke**
5. Fieldwork Location:
   NISR
   MINICOM
   PSF
   RDB
6. Research Period:
   a. From: **January 1, 2019**
   b. To: **December 31, 2019**

Section III: Other Important Notes

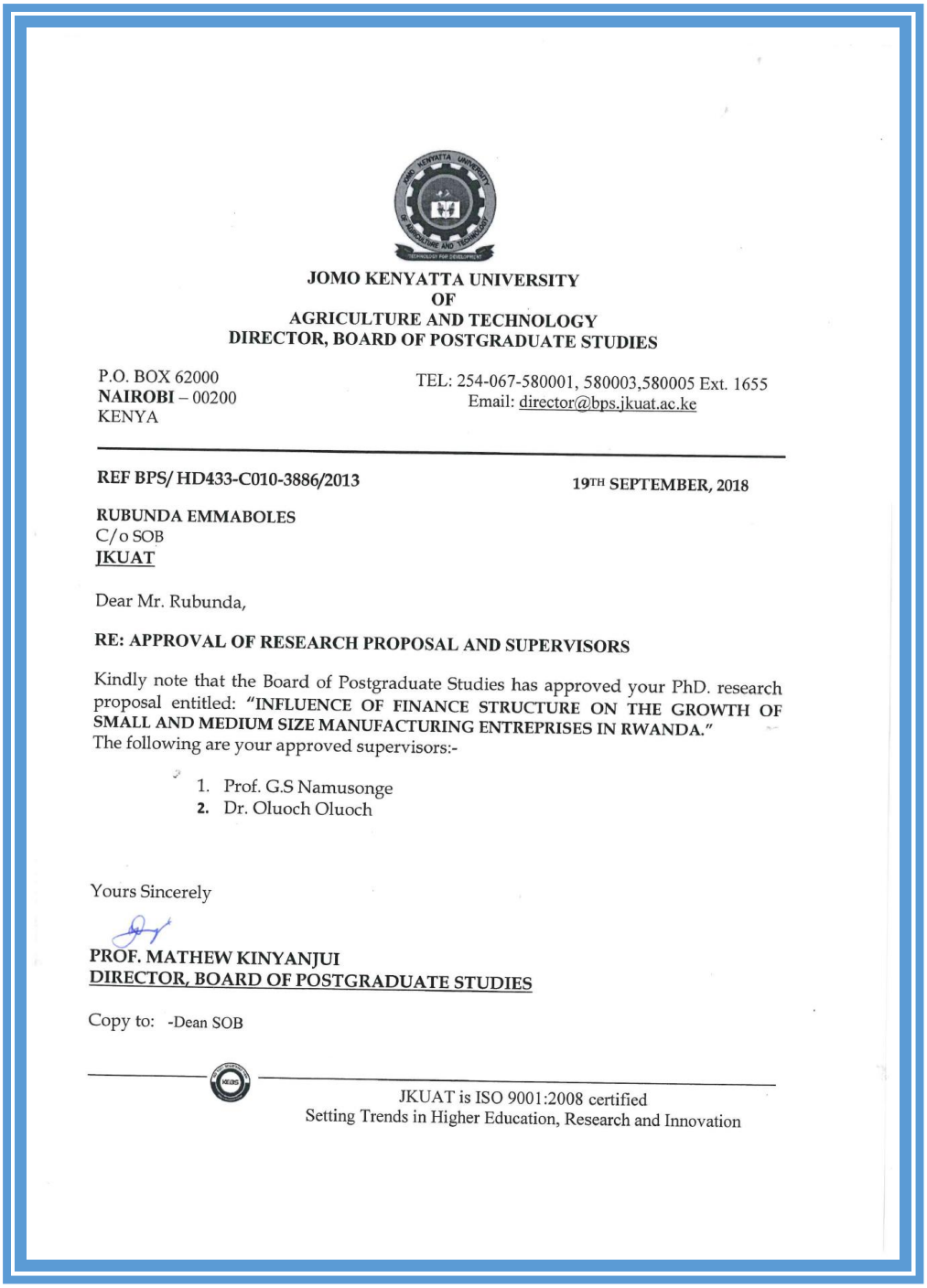
Section IV: Signature

This permission to conduct research in Rwanda is issued in accordance with Ministerial Instructions 003/2010 of 09/12/2010 regulating research activities in Rwanda.

Kigali, on 8/7/2019 NCST Ref: .. ../NCST.2018

KALISA M. Felly
Ag. Executive Secretary

Appendix. VII: Approval of Research Proposal and Supervisors



JOMO KENYATTA UNIVERSITY
OF
AGRICULTURE AND TECHNOLOGY
DIRECTOR, BOARD OF POSTGRADUATE STUDIES

P.O. BOX 62000
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Email: director@bps.jkuat.ac.ke

REF BPS/ HD433-C010-3886/2013 **19TH SEPTEMBER, 2018**

RUBUNDA EMMABOLES
C/o SOB
JKUAT

Dear Mr. Rubunda,

RE: APPROVAL OF RESEARCH PROPOSAL AND SUPERVISORS

Kindly note that the Board of Postgraduate Studies has approved your PhD. research proposal entitled: **"INFLUENCE OF FINANCE STRUCTURE ON THE GROWTH OF SMALL AND MEDIUM SIZE MANUFACTURING ENTREPRISES IN RWANDA."**
The following are your approved supervisors:-

1. Prof. G.S Namusonge
2. Dr. Oluoch Oluoch

Yours Sincerely

PROF. MATHEW KINYANJUI
DIRECTOR, BOARD OF POSTGRADUATE STUDIES

Copy to: -Dean SOB

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