IMPACT OF RURAL FINANCIAL INSTITUTIONS SERVICES ON AGRIBUSINESS SMEs PERFORMANCE IN TANZANIA: A CASE OF KAGERA REGION

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CERTIFICATION

The undersigned certifies that, he has read and hereby recommends for acceptance by Open University of Tanzania a Dissertation entitled: ñImpact of rural financial institutions services on agribusiness SMEs performance in Tanzania: A case of Kagera region ñin partial fulfillment of the requirements for the Degree of Master of Science in Economics of Open University of Tanzania.

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DECLARATION

I, Jackson Jasson Mwambungu, do hereby declare that this dissertation is my own original work, and that it has not been presented and will not be presented to any other university for a similar or any degree award.

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Signature

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Date

DEDICATION

To God Almighty and to my Lord who has been my strength and help in times of need and to my beloved father Jasson Francis Mwambungu

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ABSTRACT

Financial institutions services in Tanzania have great contribution to the growth of agriculture sector. The assessment of the contribution of the rural financial institutions services to agribusiness SMEs performance was very crucial. The study adopted cross section study done in Kagera region in Karagwe and Biharamulo districts. Quantitative data collected using 88 questionnaires. Data collected was processed using SPSS, and analyzed using correlation analysis, multiple linear regression, binary logistic regressions, Leme and Show test, and t test for comparison. The results of the study were; correlation coefficient of the credit was r= 0.908 and its P= 0.01, since P<0.05, this shows that, there was a strong relationship between credits lent by financial institutions and agribusiness SMEs performance. A similar finding obtained by Olutunla and Obamuyi (2008), significant increase in profit is contributed by additional amounts in credit. Credit access was found to be affected by business management, age of the owners, and collateral, business experience and business registration. The results are similar with Maghembe.Y, (2017), Age of the SMEs operator (Age) is statistically significant. t test results concluded that there is no significance difference on the performance of the agribusiness SMEs which are constrained in accessing credits from financial institutions and those which are not constrained, the results is similar to Dzanja J, at *el* (2016) on the study done on the Role of Microfinance on Growth of Small-Scale Agribusinesses in Malawi revealed that, t-value found to be 0.511 with significance level of 0.61, which was greater than 0.05.

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LIST OF ABBREVIATIONS

BOT	Bank of Tanzania
CBO	Community Based organization
CRDB	Cooperative Rural Development Bank
DAICO	District Agricultural, irrigation and Cooperative officer
GDP	Gross Domestic Product
NGO	Non-Government Organizations
IFC	International Finance Corporation
MFIs	Micro financial Institutions
NMB	National Micro finance Bank
NMP	National Micro finance Policy
NPS	National Panel Survey
NSRE	National Survey of Rural enterprise
ROSCAs	Rural organization Savings Cooperation authorities
SACCOS	Savings and Credit Cooperative Societies
SMEs	Small and Medium Enterprises
SPSS	Statistical Package for Social Science
TADB	Tanzania Agriculture Development Bank
TPB	Tanzania Postal Bank
USD	United States Dollar
VICOBA	Village Community Bank
VSLA	Village Savings and Loan association
IFC	International Finance Corporation
SPSS	Statistical Package for Social Science

CHAPTER ONE

INTRODUCTION

1.1 Back ground of the Study

Agribusiness can be defined in different ways by different scholars. ñOn 17 October 1955 the word ñagribusinessò was born in a speech of John H. Davis who gave before the Boston Conference on Distribution. The conference entitled óBusiness Responsibility and the Market for Farm Productsôò (Fusonie, 1995). In general agribusiness refers to all operations involved in the production and distribution of food and fiberò (Davis, 1955). Agribusiness refers to agriculturally related businesses including warehouses, wholesalers, processors, retailers and more (Chait, 2014).

The agribusiness sector, which comprises the business activities performed from the farm to the consumerôs dining table, is now considered a major generator of employment and income worldwide (Konig et al., 2013). It involves all stakeholders including micro, SMEs and large enterprises. Agribusiness sector worldwide has been a crucial sector to the growth of the countryôs economic performance. According to Mohsim. M (2015), Australian agribusiness sector accounts for approximately three percent of the global agribusiness food trade which is three times higher than the domestic demand.

Moreover in 2012-2013 the export value of Australian agribusiness products was $38 billion compared with imports valued at approximately $12 billion (Mohsim. M, 2015) as cited in (Australian Bureau of Agricultural and Resource Economics and Sciences, 2013) Agribusiness can play a significant role in Africaôs economic

transformation, providing jobs and income **(**World Bank, 2016). These investments stimulate agricultural productivity, and commercial agriculture. Development of upstream and downstream agribusiness activities, such as input supply, logistics, and trade have different stories. Consequently, agribusiness will provide an important pathway to job creation and economic transformation in Africa.

According to FAO (2007), agribusiness and agro-industry in Ghana is characterized by smallholder private investments. This is similar to what is found in primary agricultural production (Ibid). In Tanzania agribusiness sector is growing to the reasonable rate and contributing to the national GDP. The key actors in these sectors are small and medium enterprises which dominate in urban and rural areas. It includes agri-inputs supply, production, processing and storage.

The contribution of the agribusiness sector to the Tanzania economic performance and the development of Tanzanians have continued to increase. In 2015, the agricultural sector contributed 29% of the GDP, compared to 28.8% in 2014(NBS, 2016). In addition, agribusiness sector is the largest employer in the country (Ibid). Currently it provides employment to 65.5% of Tanzanians and in favorable seasons, covers more than 100% of the domestic food needs. In general agribusiness sector is one of the fundamental sectors for the performance of the nation since it has proved to contribute much to the GDP.

1.1.1 Historical Background of Rural Financial Institutions in Tanzania

Economic reforms in Tanzania took place in 1990s pave the way to liberalization of the financial sector in the country. One of the attempts was the establishment of the

Banking and Financial Institutions Act of 1991. This reintroduced the competitive banking that was abolished in 1967. According to (World Bank, 2007) liberalization included interest rates, and the elimination of administrative credit allocations. Also, privatization of state-owned banks and the strengthening of the Bank of Tanzaniaôs regulatory and supervisory role were inclusive. Since that time, privately-owned financial institutions have been allowed to enter the market.

This sector has been growing with the expansion of commercial banks, pension funds, and insurance companies. Also, financial intermediaries including microfinance institutions (MFIs) and savings and credit associations entered the market. These institutions jointly have increased the accessibility and availability of credit to the private sectors including agribusiness. In 2010, there were 47 commercial banks registered in Tanzania, this led to increased credit to the firms (IMF 2012). The government of Tanzania has been active in promoting the development of microfinance sector. This is important in expanding financial services into rural areas and improving accessibility financial services and products (Ibid). In May 2000, the National Microfinance Policy was approved and associated regulations were passed in 2005(Ibid). The implementation of National Micro finance Policy (NMP) 2000 has led to mushrooming of microfinance service providers. Models of microfinance service delivery, improvement in products and services now is observable (MoFP, 2017).

1.1.2 Rural Financial Institutions and Agribusiness SMEs in Tanzania

Agriculture is a back bone of Tanzania economy since independent of the nation in 1961. It employs many people in both rural and urban areas through different value

chains. Tanzaniaôs agriculture sector accounts to 28% of GDP and employs 80 % of labour force (World Bank, 2012). In general, the access to credit for agribusiness SMEs has been increasing remarkably. According to (World Bank, 2012) agriculture financing has been increasing since 2009 as 12.38% (2009); 14.97% (2010) and 15.4% (2011). This was the same to agribusiness operations financing which were 11 %(Ibid). Furthermore, AgFiMS survey revealed that, 4 % of agribusiness took loans from bank, 7 % received loans from SACCOS and MFIs (Ibid). Since liberalization of the financial sector efficiency in financial sector has been appeared to some of the financial institutions.

Despite the increased in efficiency of the sector supply of credit especially in rural areas is still limited. The coverage of Commercial bank in the rural areas where agribusiness SMEs are is poor. With a total of 503 branches all across the country out of which 36% of the branches are in Dar es Salaam (World Bank, 2012). According to (IMF 2010), Tanzania has less than 2 bank branches per 100,000 adult populations. While in South Africa, there are 10 bank branches providing services to the same number of people in rural areas. Only 2.4 % of rural households in Tanzania had access to credit (NAC, 2009).

While the National Panel Surveyôs (NPS) (2008) results were 6.5 % of rural SMEs had access to credit. For agribusiness SMEs to work efficiently it need more capital to final its daily operations. Processing, input supplies, and productions activities done by agribusiness SMEs need to be financed on time so the firm can get profit as planned. In kagera region like other regions in Tanzania agribusiness SMEs mostly have been engaged in processing of all subsectors like maize, sunflower seeds,

paddy, coffee and cassava. Aggregations of the grains like beans, coffee, cassava and maize also are the activities done by agribusiness SMEs in kagera region. These agribusiness SMEs have been depending border trade to sell their products, they sell to Uganda, Rwanda, Burundi, and Congo sometimes. Due to their market being specific in time they need capital to finance their business on time. Presence of market opportunities to agribusiness SMEs in the border countries also financial institutions saw an opportunity and they are financing agribusiness SMEs operating in the region for the number of years.

1.2 Research Problem Statement

Across developing countries, agribusiness accounts for a large and rising share of gross domestic product. Globally, agribusiness is about 78% of value added in the agricultural value chain, but this share varies widely across income levels (FAO, 2007). Agribusiness can play a significant role in Africaôs economic transformation, providing jobs and income opportunities through agro-processing and other agricultural businesses **(**World Bank, 2016). These investments stimulate agricultural productivity, commercial agriculture, and development of upstream and downstream agribusiness activities, such as input supply, logistics, and trade.

Consequently, agribusiness provides an important pathway to job creation and economic transformation in Africa. Contributions of agribusiness sector to the Tanzania economy are high since independence of the country in 1961 since it employs more than 75% of the population from rural and urban areas and has reasonable share to the national economic performance. To ensure good performance of agribusiness sector in Tanzania there is a continuous financial sector policy

reviews to attract supply of credits to agribusiness SMEs and hence improve their performance. Since 2005ǿs there have been credit services delivered to agribusiness SMEs sector by financial institutions for many years in the country including Kagera region, but yet there is no enough empirical evidence in the country related to rural financial institutions services contribution to the performance of agribusiness small and medium enterprises in Tanzania. Therefore, this study was carried out to explore the contribution of rural financial institution service to the performance of small and medium enterprises in Tanzania.

1.3 Objectives

1.3.1 General Objective

The general objective of the study is to determine the contribution of rural financial institutions services on agribusiness performance

1.3.2 Specific Objectives

i. To determine the relationship between quantity of credits lent by financial institutions and agribusiness SMEs profit
ii. To identify factors effecting on accessibility to credit from financial institutions for agribusiness SMEs
iii. To compare the performance of the agribusiness SMEs loaned by financial institutions and those which did not get access to loans from financial institutions

1.4 Hypothesis

i. There is no relationship between quantity of credits lent by financial institutions and agribusiness SMEs profits

ii. There is no any factor affecting agribusiness SMEs on accessibility of credit from financial institutions

iii. There is no significant difference between profits of agribusiness SMEs accessing loans from financial institutions and those which not borrow from financial institution

1.5 Significance of the Study

Academically, the study is expected to contribute to knowledge and information and stimulate other researchers. Also, the study will contribute to knowledge to the scholars and students in economics and agribusiness studies. The study will add up as one of the references for students and other academicians who are interested to undertake research in this area of study. The study also has the contributions to the empirical studies which can be used by different policy makers and decision makers. Private sectors like non-government organizations can also use it to come up with project which support performance of agribusiness SMEô and contribute to the nation GDP.

1.6 Organization of the Study

This study has been organized as follows: chapter one presents the introduction of the study. Chapter two provides and discusses the theoretical review of the SMEs and financing, and agribusiness in general. It also presents the review of previous empirical studies on SMEs financing in both developed countries and developing countries. Chapter three describes the methodology adopted for this study, chapter four present results, while chapter five presents discussions. And chapter six presents recommendations and conclusions based on the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Chapter Overview

This chapter discusses the theoretical and empirical literature reviews. It describes various theories / models for Agribusiness SMEs performance and rural financial institutions services. The empirical studies in the same field will be discussed in detailed to ensure that major areas of the study are discusses in detailed. Furthermore, the chapter will provide summary of the whole discussion on the theories and empirical studies.

2.2 Conceptual Definitions

2.2.1 Rural Financial Service

Rural financial services refer to the financial services offered and used in rural areas by community of all income levels. According to World Bank, 2003), Rural finance describes financial intermediation outside of urban areas. It includes deposits, loans, payment and money transfer systems, trade credit, and insurance, to rural households as well as to farm and non-farm enterprises (Ibid). Rural Finance refers to raising and accumulating funds and lending them to rural people (Banglapedia, 2015). It comprises formal and informal financial institutions, small and large financial institutions. Both provide small-size financial services to the rural poor, as well as larger size financial services to agro-processing and rural SMEs (Ibid).

2.2.2 Agribusiness

Agribusiness can be defined in different ways by different scholars. ñOn 17 October 1955 the word ñagribusinessò was born in a speech of John H. Davis who gave

before the Boston Conference on Distribution. The conference entitled óBusiness Responsibility and the Market for Farm Productsôò (Fusonie, 1995). In general agribusiness refers to all operations involved in the production and distribution of food and fiberò (Davis, 1955). Agribusiness refers to agriculturally related businesses including warehouses, wholesalers, processors, retailers and more (Chait, 2014).

2.2.3 SMEs

This refers to the small and micro enterprises which are operating either in rural or in urban areas. SMEs can be defined according to the number of the people employed and size of capital owning. And different countries over the world have different criteria of defining SMEs. According to Watson (2010), the definitions of SMEs can vary across countries, depending on the size of capital invested in the business, the number of people employed, annual sales turnover, annual profit, the level of technology and the form of the business. The commonly yardstick are total number of employees, total investment and sales turnover. (IFC, 2009). But both qualitative and quantitative methods can be used to define SMEs.

According to the quantitative criteria, SMEs can be defined based on the number of people employed, the amount of capital invested, production volume, assets value and annual average sales (Ibid). While, qualitative criteria definitions of SMEs are based on businessôs form, management pattern and annual profit (Abdul Rasoul, 1998), and (A.S. Ahmad, 2005). Small and medium-sized enterprises (SMEs) are independent firms which employ less than a given number of employees. This number varies across countries in the world. The most frequent upper limit

designating an SME is 250 employees as in the European Union. Generally different countries have their own classifications of SMEs (De Chiara and Minguzzi, 2002).

Table 1.1: SME Policy 2002 Categories of Tanzania

Type of Business (Category)	Employees	Capital Investment in Tshs
Micro business	1-4	Up to 5 million
Small business	5-49	Above 5 million to 200million
Medium business	50-99	Above 200 million to 800 million
Large business	100 and above	Above 800 million

Source: URT (2002)

2.2.4 Agribusiness SMEs Performance

According to Penrose (2006), performance is the product of an internal process in the development of an enterprise and an increase in quality. ñPerformance is defined as a change in size during a determined time spanò (Dobbs & Hamilton, 2007). According to Janssen (2009a), an agribusiness performance is essentially the result of expansion of demands for products or services. ñIt first results in a performance in sales and consequently in investments in additional production factors to adapt itself to new demandsò (Janssen, 2009c, p. 23). However, Achtenhagen et *al*. (2010) researched entrepreneurs´ ideas on performance. And he listed the following: increase in sales, increase in the number of employees, increase in profit, increase in assets, increase in the firm´s value and internal development.

2.3 Theoretical Literature Review

There is no specific theory which can explain clear small firmôs accessibility of the external funds to finance their business. According to Romano *at al* (2001), financial theories do not explain clearly financial behavior. Therefore, different theories can

be deployed to explain accessibility of the loans to SMEs from financial institutions and banks. Business and financial literatures describe the following theories or models: Human capital theory and SMEs financing, Banks in SMEs financing and information asymmetry problem. Theory of the firm and SME financing, Business plan and SME financing model, Financial Life Cycle Theory of the Firm, and Risk and Uncertainty Theory.

2.3.1 Human Capital Theory and SMEs financing

Human capital can trace its roots to the early 1960s, when Schultz (1961) proposed that human capital consisted of the knowledge, skills and abilities of the people employed in an organization. Human capital defined as all human abilities to be either innate or acquired (Schultz, 1981). Human capital is a collection of knowledge, skills, physical health, and experience which are useful to the organization achievements and sustainability. Human capital must be trained as time being in order to increase efficiency. By so doing it can gear to competitive advantage of the organization.

For the firms with human capital with knowledge, skills, and experience can guarantee efficiency and ensure higher performance of the organizations and sustainability of the organizations. There is a large and growing body of evidence that demonstrates a positive linkage between the development of human capital and performance at both the individual and organizational levels (Becker, 1993). Florin et *al*. (2003) finds that human capital is a significant source of success in entrepreneurial firms. The owner or manager experiences play an important role in explaining differences in external financing of the firm business (Gimeno et al.,

1997) and Weicheng (2011). Coleman (2000) examines education, years of experience in firm business, and access to external finance such as commercial banks and investment banks. He finds some evidence that education is positively related to access to external loans.

Efficiency human capital attracts external sources of finance like commercial banks, investment banks, and capital markets. However, most of the time efficient human capital can be found in large firms and not small and medium enterprises. They have human capital with no or poor knowledge, low or no experience and inefficiency which discourage external sources of the capital. Irwin and Scott (2010) explore some of the barriers that increase the commercial banks and investment banks finance problems faced by SMEs. Dabo (2006) and Al-kharusi (2003) use Spearmanôs correlation analysis fail to find any association between the level of education of owner-managers and application for financing of the firmôs business. Most of the SME owners and workers often have relatively low levels of education than employees in large firms (Nichter and Goldmark, 2009).

2.3.2 Banks and SMEs financing and Information Asymmetry Problem

The only previous sources of external finance for the SMEs are the banks. Commercial banks are primary provider of the external debts to firms (Longenecker *at al,* 2011). Commercial banks always need to funds those firms with proven records, and high-quality collateral to pledge for the finance asking for; such conditions cannot be met by small and medium enterprises. Lack of the accessibility to agriculture credit from commercial banks is geared by information asymmetry. In developing countries specific agribusiness SMEs are affected by asymmetry problem

between lenders and borrowers (Behr *at al*, 2011). Diamond (1988) argued that the key advantage of banks for investors is their access to private information, reducing information asymmetry among different groups operating in the market. The pecking order hypothesis (POH) of Myers (1988) and Myers and Majluf (1988) posits that due to information asymmetries between firms and providers of finance, internal sources are preferred over external, debt is the preferred source of outside finance, and equity is issued only as a last resort.

Small private firms are facing the problems of information asymmetry in debt markets. (Sahlman, 1990). Several studies have confirmed that adverse selection is a critical issue for SMEs (Binks and Ennew 1994). This makes very difficult for the small and medium enterprises to start business or expand business, then the only choices which are available are to borrow from friends and family or own saved. Asymmetric information is insufficient knowledge about the two parts involved in a transaction to make accurate decision. For example, managers of a corporation know whether they are honest or have better information about how well their business is doing than the stockholders do.

The presence of asymmetric information can lead to adverse selection and moral hazard problems. According to Verrecchia (2011) asymmetry information is the difference between the costs of capital in the presence or absence the adverse selection problem which rise as a result of information asymmetry. Always commercial banks need accurate information from SMEs before approving credit but unfortunate small and micro enterprises owners have more information about their performance than banks. SMEs have always well informed about business than

anyone easy like banks (Storey, 1994).

2.3.3 Theory of the Firm and Agribusiness SMEs financing

According to Coase (1937) transaction costs explain both the existence of firms and their optimal size. WhileYou (1995) cites that size theories on firm size can be classified into four approaches, namely, the conventional microeconomic approach or the technological approach, transaction cost approach or the institutional approach, industrial organization approach, and dynamic model of size distribution approach. Usually in doing business for the firms larger and well-established firms have an advantage than smaller and newer firms. These models correlate the size of the firm to its age and performance (Di Tommaso and Dubbini, 2000; You, 1995).

According to Tommaso and Dubbini (2000), firms enter the market as small firms and grow through learning from other firms in the same industry. Small and micro enterprises normally face greater risks and turbulence than big firms. Thus, the interactions between outside/inside financing and firm size are important and should be controlled when examining such financing relationships (Cassar, 2004). Firms that seek performance are more likely to apply for external equity and debt capital than firms that do not exhibit performance (Riding et *al*., 2010). While Romano et *al*. (2001) argued that firm size is significantly associated with debt. SMEs which are growing have a potential to look for external capital to expand their business. Zhang (2008) studies the choice of formal or informal financing in China and finds that firm size has a significant negative correlation with formal financing.

2.3.4 Business Plan and Agribusiness SMEs Financing Model

Business plan is a contextual and dynamic in nature and is deployed by owner-

managers as tools to achieve short and long-term objectives. Small businesses do not normally prepare plans to operate the business. However, small businesses tend to operate gearing ratios similar to or higher than large firms. This is normally with a proportion of short-term debt that is higher than large firms, once a business plan is established. Romano et al. (2001) show that SME owners do not usually use formal business plans as sales documents during the start-up stage to obtain debt or other external financing.

However, once SME owners start using a business plan, they tend to apply for and use more financing than large firms. A business plan is an important tool for applying for and obtaining external formal financing. The business plan should be clear and convincing. Romano et al. (2001) indicate the significance of business plans and its relation to debt. Small businesses and owners without established formal planning processes tend to rely on family loans as financing sources. They also find that business plans are less likely to be considered by older family owners who have control of the family. Al arusi (2003), Dabo (2006), and Abdul Wahab (1996) find that written business plans are significantly related to debt applications. But most of the agribusinessôs SMEs have no business plans, so external finance to them can be very difficult.

2.3.5 Financial Life Cycle Theory of the Firm

The stage model or life cycle theory of the firm originates in economics literature (Penrose 1952, 1959; Rostow 1960). The model is commonly used to describe the progression of the successful firm through performance phases. A biological analogy is sometimes used to describe the cyclical quality of organizational existence

organizations are born, grow, and decline. The stage model or firm life cycle approach describes the development of the firm as a linear sequential process through a number of stages. Numerous stage models have been developed, particularly in the management and organizational studies literature. As evidenced by summaries presented in Dô Amboise and Muldowney (1988) and Poutziouris (2003), the number of stages is not standardised. For example, Steinmetz (1969) proposes a model based on three phases of performance.

Greiner (1972) proposes a five-stage ñevolution-revolutionò model, with each stage separated by ñrevolutionary changeò. In deriving taxonomy of performance stages for high-technology organisations, Hanks et *al* (1994) identify common developmental stages based on the comparison of a number of stage models, namely start-up, expansion, maturity, diversification, and decline stages. Specifying age categories for each developmental stage in a universal life cycle model is difficult because of intra industry differences. Attempts to assign specific age groups thus tend to be confined to particular sectors (Hanks et al. 1994).

Based on previous classifications of life cycle stages of the company, Dickinson (2011) establishes five stages of life as summarized in table 2.2. The first stage is called introduction at this stage firm produces an innovation. In the second stage called growth stage, the firm rises rapidly, as a lot of figures, such as assets, equity, or sales, indicate. During the third stage, maturity, the company reaches its maximum number of producers. In the fourth stage, shake-out, the firm loses part of its producers. And, finally, during the fifth stage, decline, the company shows virtually no entries.

Table 2.2: Life Stages of the Firm

Stage	Sources of finance	Potential problems
Inception	Ownersô resources	Under capitalization
Growth I	As above plus: Retained profits, trade credit, bank loans and overdrafts, hire purchase, leasing	Overtrading, liquidity crises
Growth II	As above plus: Longer term finance from financial institutions	Finance gap
Growth III	As above plus: New market issue	Loss of control
Maturity	All sources available	Maintaining Return on Investment (ROI)
Decline	Withdrawal of finance: Firm taken over, share repurchase (US), liquidation	Falling ROI

Source: Weston and Brigham (1970, p. 157)

2.3.6 Risk and Uncertainty Theory

Risk and uncertainty concepts in agriculture are subjects internationally discussed by theoretical economists and empirical analysts. Agribusiness enterprise specifically in production level is not as protected as in the case of processing, and industrial enterprises. Forecasting farm income is a difficult task. Agriculture operations suffer from various risks and uncertainties. It includes Risks drought, inversion of the insects in the farm, risks of loss of property by fire, thefts, loss due to abrupt and wide fluctuations in prices of farm products. Credit risk is faced by both lenders and borrowers. According to Jugale (1991), an increase in farm investment will take place only when the risks and uncertainties in the minds of farmers are removed.

Agribusiness SMEs which are in downstream are much associated with higher risks than upward stream like storage, value addition. Most of the financial institutions which are interested in serving agriculture market face myriad risks and challenges. These challenges are always associated with agricultural production and lending,

including seasonality and the associated irregular cash flows. Higher transaction costs; and systemic risks, such as floods, droughts, and plant diseases are uncertainty which agribusiness SMEs are facing in their business (IFC, 2014).

2.3.7 Theories of Credit Rationing

Credit rationing theories are based on informational asymmetries between lenders and borrowers and transaction costs of information search and monitoring (Binks et al., 2002). The availability of information in the decision to lend is important because it enables the financial institution to evaluate the risk-return profile of the loan application and hence set the level and terms of credit to be extended to the borrower.

2.3.7.1 Information Asymmetry and Credit Rationing

Information is a key input that goes into the credit decision of financial institutions (Martha, 2012). Also, one of the challenges for financial institutions is to acquire information about the credit risk of the borrower, as borrowers have more information than the lender about the projects (Martha, 2012). Furthermore, according to Ongori (2009), full information about the borrowerôs project may not always be available. This leads to a situation of information asymmetry, which occurs when one party to the lending transaction has more and/or better information than the other. Information asymmetry between borrowers and the financial institutions is reflected in inability of the majority borrowers to provide up to date reliable financial information and realistic business plans which then increases the cost of lending that financial institutions incur while dealing with the borrowerôs enterprise (Ongori, 2009). Under asymmetric information conditions, financial

2.3.7.2 Transaction Costs and Credit Rationing

Transaction cost is the risk that financial institutions face when they miss mandatory information to distinguish between good and bad borrowers (Martha, 2012). Existing contract theory argues that financial institutions are not interested in offering agriculture credit to agribusiness Small and Medium Enterprises because it is particularly difficult to overcome information asymmetries and resulting in high transaction cost associated with screening, monitoring, and enforcement problems (Berger *et al*., 2001). Financial institutions could use interest rate to equilibrate the market and allocate credit.

However, institutions cannot increase interest rate above certain level because an increase in the interest rate above certain level may worsen the quality of credit in a way that is unacceptable to the financial institution (Zambaldi *et al*., 2011). The impossibility to use interest rates as screening technology attracts lenders to use non-interest screening devices based on the characteristics of the borrower and attribute of enterprises (Lehmans and Neurberger, 2001). As long as borrowersô demographic characteristics are correlated with their creditworthiness, lenders may use the borrower characteristics as a proxy for the risk factor associated with loans (Adesua, 2011). Normally this happen when lenders cannot observe the risk factors or do not collect relevant information due to the cost associated with such information acquisition.

2.3.7.3 Collateral and Credit Rationing

The lack of collateral is often viewed as a bottleneck to agribusiness SMEs to access credit (Diana, 2008). Collateral of poor quality or low value than what is being

applied implies that the borrower is likely to become credit constrained. Collateral can signal the quality of borrower (Duarte, 2011) and the availability of collateral may decrease moral hazard problem (Guirkinger *et al*., 2008). Most of the financial institutions are more likely to provide credit if the borrowers can pay back the loan by pledging collateral. As indicated by Duarte (2011), an increase in the availability of land owned by the household should reduce the probability of being rationed.

Diana (2008) pointed out that households or agribusiness SMEs that have more wealth are expected to have high returns and show higher demand for credit. They are likely to have better access to credit as they may appear to lenders as less risky borrowers. Lenders often demand collateral in order to evaluate the borrowerôs credit worthiness and to increase the risk- adjusted return to the loan. In previous research, collateral requirement has been regarded as important in the lenderôs decision to ration credit (Duarte, 2011).

Furthermore, Bougheas *et al.* (2005) contend that collateral reduces the riskiness of a loan by giving the financial institution a claim on a tangible asset without diminishing its claim on the outstanding debt. Coco (2000) point out that collateral is the lenderôs second line of defense to lenders. Collateral can solve problems derived from asymmetries in valuation of projects, uncertainty about the quality of projects and the riskiness of borrowers, and problems related to the cost of monitoring or supervising borrowersô behaviour. As postulated by Menkhoff *et al.*, (2006) that, if the financial institutions cannot determine borrowersôriskiness (hidden information), then collateral may serve as a screening device to differentiate between good and bad borrowers and to mitigate the adverse selection problem.

2.4 Empirical Literature Review

This part presents the empirical review of the firm characteristics to be used in this study. It introduces the variable, frameworks arising from the literature and discusses how it impacts debt financing by SMEs. It elaborates how financial institutions have been contributing to the performance of the SMEs globally. It constructs relevant hypotheses to be tested in the study and other immediate literature of relevance to the study.

2.4.1 Industry of the Firm

Hall et *al* (2000) argued that, the industry in which a firm operates does not influence the firmôs capital structure directly. But it can influence indirectly through the composition and nature of the firmôs assets (Ibid). Industry classification is a substitute for business risk (Barbosa & Moraes, 2004). The concept of this theory indicates the firms operating in the same business sector, and environment to suffer the same impact. But this might influence earnings and performance of the firm. The financial strategy variables posse very important influences over industrial specific effects on the firmôs operations (Michaelas at *al,* 2000). Abor (2007) evidenced those SMEs operating in the agricultural industry has strongest capital structure and asset structure.

2.4.2 Firm Size

The firmôs size has a crucial weight on the debt proportion in the capital structure since real assets tend to influence the accessibility to long debt (Burkart & Ellingsen, 2004). Large firms tend to be well diversified in their operations which influence their stability; thereby size can be substituted for insolvency (Honhyan, 2009).

Cassar (2004) stipulated that small firms find more expensive in solving problems associated information asymmetry with lenders. Most of firms in Tanzania operate in SME sector featured with difficulties in start-up and performance barriers associated with a shortage of finance. Fatoki and Asah (2011) find out that firm size impacts SMEs access to debt finance from commercial banks whereby small enterprises are less favoured to large firms.

2.4.3 Firm's Business Information

The financial information prepared and presented by firms to their users aiming to inform them on different status of the firmôs operations. It is issued by a firm state firmôs performance at a particular point and changes in financial position in the firmôs operations. The firmôs business information is useful by stakeholders in making different economic and social decisions. According to Kitindi et *al*, (2007), lenders use firmôs business information to assess current and future performance of the firmôs business. Financial institutions are much interested to know the status of their loan interest and principal by evaluating the firmôs capital structure. When sufficient information is missing leads to information asymmetry and may endanger access to credit finance (Sarapaivanich at *al*, 2006).

2.4.4 Legal Status of the Firm

Firm with limited liability (incorporated) possess development attributes than firm with unlimited liability Dietmar et *al*., (1998). There are numerous aspects that clarify the relationship that exist between incorporation and access of debt financing. Separation of ownerôs affairs and business affairs increase the commitment of managers to the firm goals. Publication of their financial statements as one of legal

requirement makes corporationôs openness for users to know the firmôs status. Cassar (2004) found out that lenders observe incorporation as a good indicator for firmôs trustworthiness and commitment to operational laws. Abor (2008) stated that the form of business organization has an effect on equity ï debt decisions on SMEs operations.

The owners of limited firm have limitations to answer against losses generated by the corporation. The owners of unlimited forms of organization are liable up to their personal assets to cover for business losses. Therefore, limited companies prefer to use the equity to finance their projects than debt financing. While unlimited form of business organizations the only option available to finance their projects is debt financing. Asah (2011) evidenced presence of a positive association between debt financing and legal formation of business organization. Consequently, we proposed the existence positive relationship between incorporation and access of debt financing by SMEs.

2.4.5 Firm's Collaterals

SMEs sector faces difficulties to access external finances for their investment because of lack of assets to pledge when accessing finance. In that perspective SMEs fail to grow quick due to lack of collateral to pledge to access external sources of finance. Bougheas at *al*, (2005) argued that, collateral is a crucial aspect for SMEs to succeed in access external financing from lenders. According to Coco (2000), collateral is the lenderôs protection. Owners of the SMEs have to own more tangible assets that can create higher value on their firm to accelerate borrowing security (Moraes, 2004). The higher the value of assets the lower the interest rates of the debt

to be secured by those assets.

2.4.6 Tanzania Financial Institution Legal and Regulatory Framework

According to the Banking and Financial Institutions Act of 1991, powers on licensing, supervision and regulation of banks and financial institution, and revocations of the licenses bestowed to BOT. Furthermore, these powers are consolidated under the 1995 BOT Act. BOT is responsible for regulation and supervision of formal financial institutions, including community and cooperative banks. The legal and regulatory framework has now been extended to cover micro-finance activities.

2.4.7 Rural Financial Institutions Policy Framework

The transformation of the Tanzania economy from a predominantly agricultural one to a semi industrial economy has great emphasize to the nation through national vision of the 2025. The emphasis is placed on the role of the private sector and government sectors in stimulating economic performance and developing the rural areas. The government has to improve infrastructures in the rural areas to enable private sectors to operate profitably while satisfying their customers. Thus, the promotion of income generating activities is inevitable. Development of strong small and medium enterprise sector and diversifying the skill base through vocational training is an integral part of the strategy for achieving the vision.

The Rural Development Policy and Strategy and the Agricultural Sector Development Strategy are fundamental parts of the overall policy framework for

rural finance services in facilitating rural development. The National Micro-Finance Policy covers all policy aspects related to the financial instruments and institutions relevant to rural financial services. The policy is a framework that lays out the principles guiding the operations of the microfinance systems in Tanzania. It includes the provision of financial services to the households, small scale farmer and micro enterprises in urban and rural areas.

Cooperatives are important institutions for facilitating rural financial services. This means getting back to the Cooperative Development Policy (2002) is a core business for the development of the rural financial services. Cooperative Development Policy (2002) supports the establishment of viable cooperative financial institutions which in the rural areas and urban areas. According to the policy, the government has to encourage the formation of cooperative financial institutions in order to reactivate thrift and saving habits among members. The policy states clearly that the government is responsible in encouraging formation of SACCOs. According to the government is committed to encourage and provide technical assistance in the establishment of cooperative banks.

2.5 Summary of the Study

Generally, it has been revealed that, though agribusiness sector is taking large part of the economic activities in most of the developing countries by contributing much in the GDP yet it is being constrained by many factors including difficult in financing its business specifically for the agribusiness SMEs, lack of good management and technical knowhow.

2.6 Research Gap

The discussion from literature review it has been observed that, most SMEs are facing difficulties in accessing external finance from banks. And most of them they have to rely on other sources like friends, relatives, and own savings. Agriculture sector has been discussed in general since most of the agribusiness activities are found in SMEs located in both urban and rural areas. However, the impact of the financial institutions to agribusiness SMEs performance is not well known, if any very little, therefore this study filled the gap using the case study of the Kagera region and contributing to the body of the knowledge, and can assist to the policy makers for the decisions making for the betterment of the nation.

2.7 Conceptual Framework

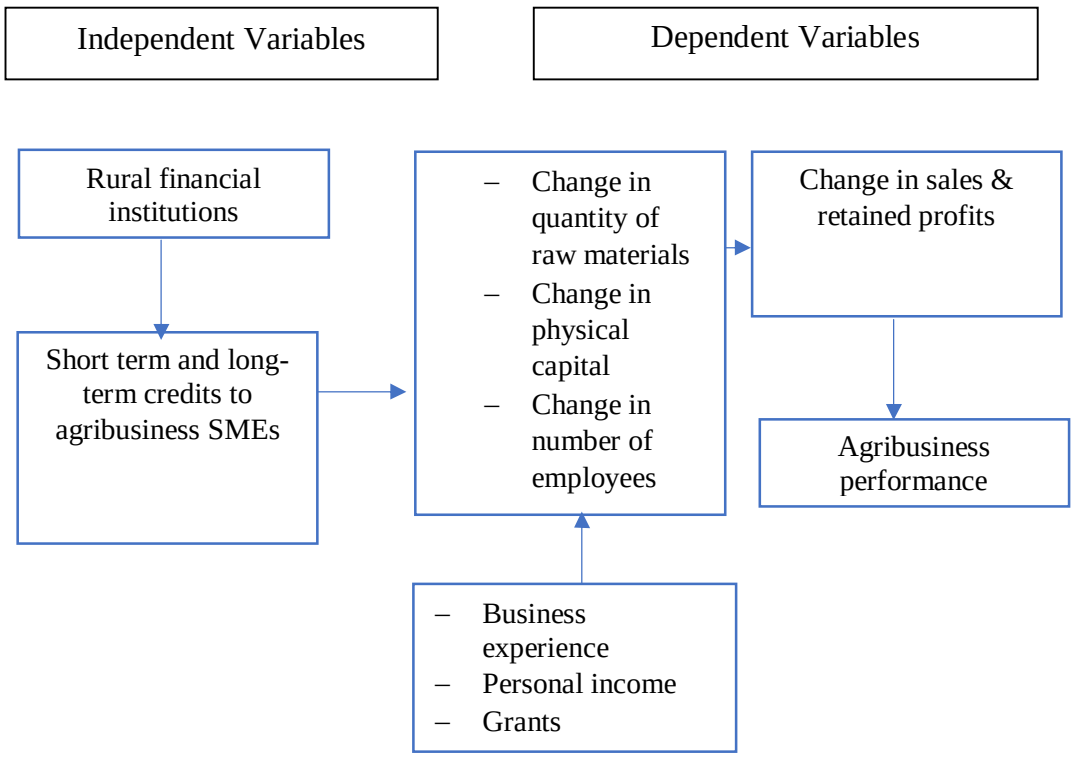


Figure 2.1: Conceptual Framework

As Figure 2.1 shows, agribusiness SMEs performances are affected by the rural financial institution services. Financial services are like short term and long term provided to agribusiness SMEs which in turn can be used in increasing raw materials, increased physical capital investment, improved management, and increase business efficiency of which in turn leads to increased business sales, and profits which can be used to expand business infrastructures, and hence agribusiness SMEs performance.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Chapter Overview

This chapter presents the methodology that used in this study. The chapter has included six parts which are crucial to the study. Research philosophy, approach and design, the sample or data types are presented under this chapter. Furthermore, data sources, sample size and statistical methods which were useful in analysing collected data are clearly presented.

3.2 Research Philosophy

Saunders et *al* (2009) mentioned four research philosophies namely: Positivism, Realism, Interpretive and Pragmatism. This study adopted the positivism research philosophy since it has adopted the philosophical stance of natural scientist using a highly structured methodology which facilitates replication. The element of positivism is that the research is conducted in a value-free way. According to Remeny et al (1998 cited in Saunders et al 2008), implies that the ósearcher is independent and neither affects nor affected by the subject of the researchò. In this study, the data collection process was done using various statistical methods like questionnaires, and interviews. The researcher neither influence no influenced by the data collection process, therefore for these arguments it is clear that the study has adopted the positivism research philosophy.

3.3 Research Approach

Research approaches have been categorized into two main groups: the deduction approach and induction approach. Saunders et al (2008) described the differences

and emphasis of these two approaches. Deduction approach emphasizes scientific principles and the collection of quantitative data as well as the use of highly structured approach. But the induction approach on the other hand, emphasis the gaining and understanding of the meaningôs humans attach to events, the collection of qualitative data and a more flexible structure to allow changes of research emphasis as the research progress. Based on these differences and emphasizes of the two approaches, it is obvious clear that this study has adopted the deduction research approach.

3.4 Research Design

Kothari (2004) defines, research design as the arrangement of conditions for collection and analysis of data in a manner that aims at combining relevance to the research purpose with economy in the procedure. Research design can be broadly classified as exploratory research and Conclusive research. The exploratory research has been explained in the literature as a valuable means of finding out what are happening, seeking new insight, asking questions and assessing phenomena in a new light (Gimbi 2010).

According to Nargundkar (2008) óconclusive research is more likely to use statistical tests, advanced analytical techniques and lager sample sizes compared to exploratory studies. Conclusive research is more likely to use quantitative rather than qualitative techniques. Since this study involves the testing of specific hypothesis and examination of relationships and data analysis is quantitative and the research process is formal, the research designed adopted is conclusive research design.

3.5 Areas of the Research

In research study selection of the research sites is very important for the researcher since it increase awareness of the areas and hence focused on the study. In research selection of research site is very essential to the researchers (Orodho and Kombo, 2002). It influences the usefulness of the information produced. The research was carried out in Karagwe and Biharamulo districts which are among of the Kagera districts in Tanzania. Purposively selected because the districts awash with large number of SMEs engaged in several business activities of which Agribusiness SMEs are well represented.

3.6 Population of the Study

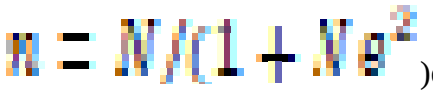
The population of the study refers to a complete set of individuals, objects or things having common observable features in which the researcher is interested. While the target population of a study constitutes the group of persons, objects or institutions that define the objects of the investigation in specified geographical location. The target population of the study is all financial institutions, agribusiness SMEs found in Karagwe and Biharamulo districts which found in Kagera region. This is because agribusiness SMEs are mostly found in this district.

3.6.1 Sample and Data Sources

Both primary and secondary data were used in the study. Primary data were collected direct from agribusiness SMEs. Primary data gathered from agribusiness SMEs representatives who either manager or business owner. Secondary data were obtained from financial institutions. The data collected were from SMEs clients of the financial institutions for more than ten years.

3.6.2 Sample Size

The target population of the study comprised 107 agribusiness SMEs operating for more than ten years in the same business (Karagwe & Biharamulo DAICO, 2018). The population has been divided into 35 agro inputs SMEs, 47 agro processing SMEs, and 25 services agribusiness in operation of more than ten years. Furthermore, there are two main financial institutions which have been operating in the study area for more than ten years; these are CRDB bank plc and NMB which found in the rural areas (Ibid). The sample size was determined using Yamane formula (1967). The formula used to calculate the sample size from a sampling frame of 107Agribusiness SMEs. This formula was used because it is essential in calculating the sample sizes in a population whose behaviour and attitudes are not known, the formula is shown below.


)é é é é é é é é é é é é é é é é é ..é .1

Where N is a population which is number of agribusiness SMEs =107, n is a sample size, and e is a level of precision at confidence level 95% is equal to 5% = 0.05

n = 107/ (1+107(0.01)2)

n = 107/ (1+ (107(0.0025))

n = 107/ (1+0.225)

n = 107/1.225=87.3469

n= 88, the number agribusiness SMEs representatives interviewed was 88.

Furthermore, agribusiness SMEs to be interviewed was taken using purposive sampling method; this is to ensure that only agribusiness SMEs which are clients of the financial institutions and non-clients of the financial institutions in equal number

were obtained. Purposive sampling was employed to determine agribusiness SMEs which have been operating for more than ten years in the study area. Stratified sampling methods used to get representation of agro-inputs SMEs, processing SMEs, and services-based SMEs. Within each stratum random sampling method employed to get representative of the SMEs. Research randomizer used in random selection of the agribusiness SMEs representatives.

3.7 Methods of Data Collection

3.7.1 Primary Data

The study used structured questionnaires and interview methods to collect primary data from agribusiness SMEs. Data were gathered from key staff of the organization specifically manager and owner of the business for the accuracy of the data. Both questionnaire and interview methods structured in order to be focused on the information needed for the study. Closed questionnaires were deployed to the study in order to get more information with less time consuming.

3.7.2 Secondary DATA

Moreover, secondary data collected from NMB Bank and CRDB banks published online. The data include, quarterly and annually reports, and from their daily, weekly, monthly reports. Furthermore, unpublished data were collected since weêre very useful to the study. Other data were obtained from brochures developed by the banks and distributed to the customers.

3.8 Data Processing and Analysis

Data processing was done using statistical package for science (SPSS), and Excel.

Data was analyzed using different statistical tools based on the objective and the hypothesis intended to test. Statistical tools used for data analysis were descriptive statistics, correlation, multiple regressions, logistic regression, and t test for group comparisons. The models formulated were correlation, multiple regression, logistic regression, Leme and show test and t test.

3.8.1 Model Formulation

The models formulated based on the conceptual framework on figure 1 above. Four models formulated based on the objectives and hypothesis to be tested. Correlation, multiple regression model, logistic regression model, and t test model formulated. It includes variables which are; credits from financial institutions, personal income, age of the business or experience of the firm in the same business and business grants for the firm. Models formulated are as in equation 1, 2, 3, 4 and equation 5 below.

4.8.1.1 Correlation Model

The Pearson product-moment correlation coefficient is a measure of strength and direction of the linear association between two variables. It assesses to what extent the two variables covary. Pearson (1895) developed the mathematical formula that is still most commonly used today, the theory behind the coefficient was developed by Galton (1885) who published the first bivariate scatter plot. For correlation there is no distinction between Y and X in terms of which is an explanatory variable and which a response variable. The coefficient is obtained by dividing the sample covariance between the two variables by the product of their sample standard deviations as shown in equation 2:

Assumptions;

i. Pairs of observations are independent. In other words, each observation of X should be independent of other observations of X and each observation of Y should be independent of other observations of Y. If observations are serially correlated, either spatially or temporally, the significance test of the correlation will be misleading.

ii. Both variables are measurement variables - in other words at the interval/ratio scale. It is true that the correlation coefficient is often used where one or other (or both) scores are on ordinal scale, especially in the case of visual analogue scales. But for such data it is better to use non-parametric correlation coefficients. Note that the equivalent correlation coefficient for dichotomous variables is the phi coefficient.

iii. Measurements on Y are linearly related to X. The correlation coefficient is not appropriate for curvilinear relationships, and may fail to detect any relationship at all for 'humped' relationships.

iv. The above assumptions must be met whether the significance is tested by randomization or by parametric methods. Parametric tests of significance make two further assumptions:

v. X and Y have a bivariate normal distribution.

vi. Measurements on Y have similar variance across all levels of X and vice versa.

Correlation applied to determine the relationship between credit which agribusiness SMEs received, and agribusiness SMEs profits. The correlation (r) equation used to determine the relationship was in the form of;

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2] - [n\sum y^2 - (\sum y)^2]}}$$ é é é é é é é é é é é é é é é é é é . 2

Where

r is defined as correlation coefficient which measures the strength and direction of a linear relationship between two variables, it can be positive or negative

N is the number of the sample of the agribusiness SMEs

X is the credit which SMEs received from financial institution and measured in terms of TSH

Y is the profits SMEs received in the year which credit was received which is measured in terms of TSH

3.8.1.2 Multiple Regression Model

linear regression model is a linear approach to modeling the relationship between a scalar response (or dependent variable) and one or more explanatory variables (or independent variables). The case of one explanatory variable is called simple linear regression. For more than one explanatory variable, the process is called multiple linear regressions.

Assumptions;

i. Weak Exogeneity: This essentially means that the predictor variables *x* can be treated as fixed values, rather than random variables. This means, for example, that the predictor variables are assumed to be error-freeð that is, not contaminated with measurement errors.

ii. Linearity: This means that the mean of the response variable is a linear combination of the parameters (regression coefficients) and the predictor

variables. Note that this assumption is much less restrictive than it may at first seem. Because the predictor variables are treated as fixed values (see above), linearity is really only a restriction on the parameters.

iii. Constant variance: (a.k.a. homoscedasticity). This means that different values of the response variable have the same variance in their errors, regardless of the values of the predictor variables.

iv. Independence of errors: This assumes that the errors of the response variables are uncorrelated with each other.

v. Lack of perfect multicollinearity: in the predictors. It assumes no perfect multicollinearity.

A fixed-effect regression model used to examine the credit determinant factors effecting SMEsôprofitability. The model is as follows;

$$Pr = \beta_0 + \mathrm{LN}\beta_1 + \beta_2 \mathrm{BE} + \beta_3 \mathrm{BG} + \beta_4 \mathrm{PI} + \varepsilon$$ é é é é é é é é é é é é é é ..3

Where by

Pr is defined as the net profit the business is earning per annum and is measured in terms of TSH

LN is defined as the credit received by the firm and is measured in terms of TSH

BE is defined as the number of years the business has since its establishment

BG is defined as the grants which the business received to support its performance and is measured in terms of TSH

PI is defined as other personal income from other sources the respondent has and it is measured in terms of TSH

3.8.1.3 Logistic Regression Analysis

The **logistic model** (or **logit model**) is used to model the probability of a certain class such as pass or fail. It is used when the dependent variable has binary response.

Assumptions;

i. Assumption of Appropriate Outcome Structure

To begin, one of the main assumptions of logistic regression is the appropriate structure of the outcome variable. Binary logistic regression requires the dependent variable to be binary and ordinal logistic regression requires the dependent variable to be ordinal.

ii. Assumption of Observation Independence

Logistic regression requires the observations to be independent of each other. In other words, the observations should not come from repeated measurements or matched data.

iii. Assumption of the Absence of Multicollinearity

Logistic regression requires there to be little or no multicollinearity among the independent variables. This means that the independent variables should not be too highly correlated with each other.

iv. Assumption of Linearity of Independent Variables and log Odds

Logistic regression assumes linearity of independent variables and log odds. Although this analysis does not require the dependent and independent variables to be related linearly, it requires that the independent variables are linearly related to the log odds.

v. Assumption of a Large Sample Size

Finally, logistic regression typically requires a large sample size. A general guideline is that you need at minimum of 10 cases with the least frequent outcome for each independent variable in your model. Logit and the probit models are the most frequently used models when the dependent variable happens to be dichotomous because of the benefits they have. In this study, the logistic regression model was selected because it has been used by many researchers and most importantly because of its comparative simplicity, convenience, flexibility and also a powerful estimator of models.

Central to the use of logistic regression is the Logit transformation of given by Z. That is, to obtain linearity, the natural logarithms of odds ratio equation (3) is taken, which results in the Logit model as given by:

The cumulative logistic probability model is econometrically specified as:

$$Z_i = In\left(\frac{P_i}{1-P_i}\right) = \alpha + \beta_i X_i + \cdots \beta_n X_n$$ é é é é é é é ..é é é é é é .é é é 4

Where Z_i is the indicator of the agribusiness firmsô access to credit or not, while P is the probability of the eventôs occurrence, $1 - p_i$ is the probability of the event not occur or failure, Ŭ is the constant, and X_i is a vector of firmsô characteristics, financial characteristics, and ownersô characteristics which affecting the accessibility to finance.

3.8.2 Specification of Empirical Model

Under this study, óaccess to creditô refers to those respondents who received credit from financial institutions. This takes a dichotomous response variable of óyesô for

those had credit, and ónoô for those who did not respectively. Access to credit by agribusiness SMEs can be formulated as:

$$Agribusifirm\ credit\ access = f\begin{pmatrix}\text{firms' characteristics, financial characteristics}\\ \text{owners' characteristics}\end{pmatrix}$$

é ..5

The logit model can therefore be formulated as;

$$Credit\ access = Credit\ access\ -$$

$$\beta_0 + \beta_1 Age + \beta_3 Firm\ size + \beta_4 Collat + \beta_5 Bexper + \beta_6 Regst + \beta_{12} Bmt$$ é é ..6

Where

Credit access is é é é é ..measured in terms of binary variable ie Credit access 1 if the borrowed from financial institutions and Credit access = 0 if not borrowed from financial institutions

Age is defined as the number of years which the business manager has since his or her birth

Collat-this refers to collateral which affecting credit access, yes=1, no=0.

Bexper is defined as the number of years the business has since its establishment

Regstr this is defined as the registration status of the business and is measured in terms of binary variable i.e yes=1, no=0

Bmt is defined as the business management skills which respondent has and it is measured in terms of binary variables i.e yes=1, no=0

Firm size is defined as the number of staffs the firm has, and it is measured in terms of the total number of skilled and non-skilled paid salary by the firm

3.8.2.1 T-Test Method

In statistics, t-tests are a type of hypothesis test that allows you to compare means of the independence groups. They are called t-tests because each t-test boils your sample data down to one number, the t-value.

Two-Sample T-Test Assumptions

i. The data are continuous (not discrete).
ii. The data follow the normal probability distribution.
iii. The variances of the two populations are equal. (If not, the Aspin-Welch Unequal-Variance test is used.)
iv. The two samples are independent. There is no relationship between the individuals in one sample as compared to the other (as there is in the paired t-test).
v. Both samples are simple random samples from their respective populations. Each individual in the population has an equal probability of being selected in the sample.

In comparison performance of the agribusiness SMEs which accessed credits from financial institutions and those which not, it was mandate to use t test as this tool very strong and useful with quantitative data. The method is as formulated below.

$$t = \frac{(\overline{X}_1 - \overline{X}_2)}{S_{\overline{X_1} - \overline{X_2}}}$$ é 7

Where

t is defined as statistical test which measures the difference in means (averages) of two population distributions

$\overline{x_1}$ Is defined as the average profit of the SMEs financial institutionôs clients and is measured in term of TSH

$\overline{x_2}$ Is defined as the average profit of the SMEs financial institutionôs clients and is measured in term of TSH

$S_{\overline{x_1}-\overline{x_2}}$ Is defined as the standard deviation of the two populations

CHAPTER FOUR

STUDY FINDINGS AND DISCUSSIONS

4.1 Chapter Overview

This chapter presents the results obtained from various statistical tests used under this study. It discusses the findings obtained with reference to other empirical evidence obtained from previous studies worldwide. The chapter divided into four parts, the first part presents sample description, and the second part presents the correlation between credits lent to agribusiness SMEs and the performance of the agribusiness SMEs. The third part presents factors affecting agribusiness SMEs on accessing credits from financial institutions. And fourth part presents the comparisons between agribusiness which access credits from financial institutions and those which not accessing credits from financial institutions.

4.2 Sample Description

4.2.1 Gender of the Representatives

Table 4.3: Agribusiness SMEs Representatives

Gender	Frequency	Percent%
Female	21	23.9
Male	67	76.1
Total	88	100.0

Source: Field Data,2018

During the study the sample collected involved representatives of the agribusiness SMEs who were managers or owners. The study reached 88 agribusiness SMEs in two districts which are Karagwe district and Biharamulo district. From 88 interviewees 67(76.1%) were men and 21(23.9%) were women. Table 4.1 shows the

sample by gender but the percentage of women was 23.9% which was less than men which was 76.1%.

4.2.2 Age of the Respondents

The age of the respondents is distributed as in figure 4.1. Majority of the respondents who were managers had the age between 20 and 30 and between 40-50. The age between 50 and 60 years most of them were owners of the business, and there was no the age above sixty who were in the business.

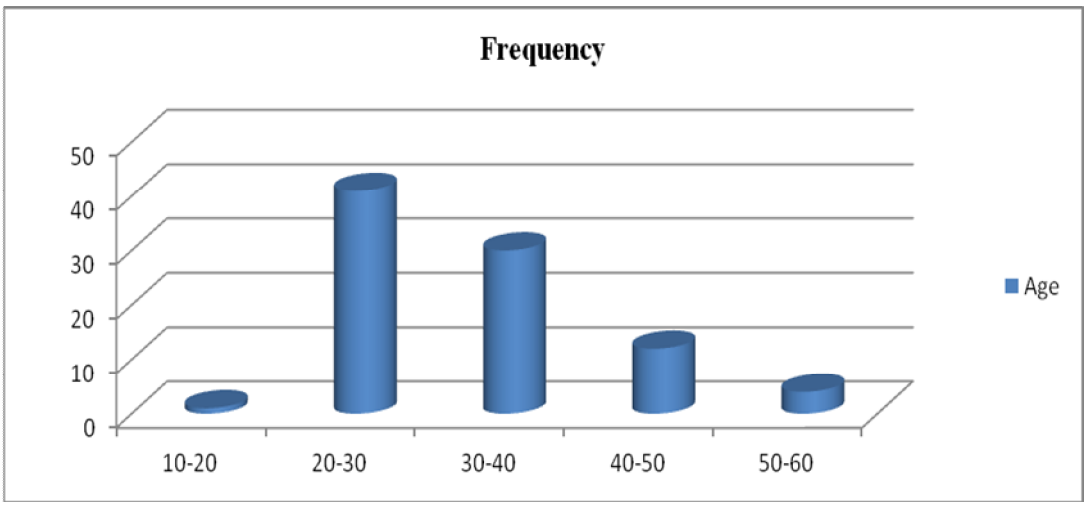


Figure 4.2: Age of the Respondents

Source: Field Data, 2018

4.2.3 Education Level of the Respondents

The study intended to reach 88 interviews in two districts which are Karagwe district and Biharamulo district. From 88 interviewees 67(76.1%) were men and 21(23.9%) were women. The study found that, all of the respondents attended school at different levels. 12(13.6%) reached primary school, 18(20.5%) reached ordinary level secondary school, advanced level was 22(25%), 16(18.2%) reached certificate level, 18(20.5%) reached diploma and 2(2.3) reached degree level. There was no any

respondent with higher degree in any academic area. Table 4.2 shows clearly education of the respondents in the study area.

Table 4.4: Education Level of the Respond

Education level	Frequency	Percent	Valid Percent	Cumulative Percent
Primary school	12	13.6	13.6	13.6
O level	18	20.5	20.5	34.1
A level	22	25.0	25.0	59.1
Certificate	16	18.2	18.2	77.3
Diploma	18	20.5	20.5	97.7
Degree	2	2.3	2.3	100.0
Total	88	100.0	100.0	

Source: Field Data, 2018

4.2.4 Agribusiness SMEs Industry

The SMEs interviewed were distributed in various nodes of the value chain. Out of 88 samples of the agribusiness SMEs representatives interviewed, 39(44%) were representing processing firms, while 29(33 %) were representing agri input supply firms. And 20(23%) were representing agri services providers. There was no any agribusiness SMEs which were dealing with production in the study areas. Figure 4.2 shows in detail the distribution of the agribusiness SMEs in the study areas.

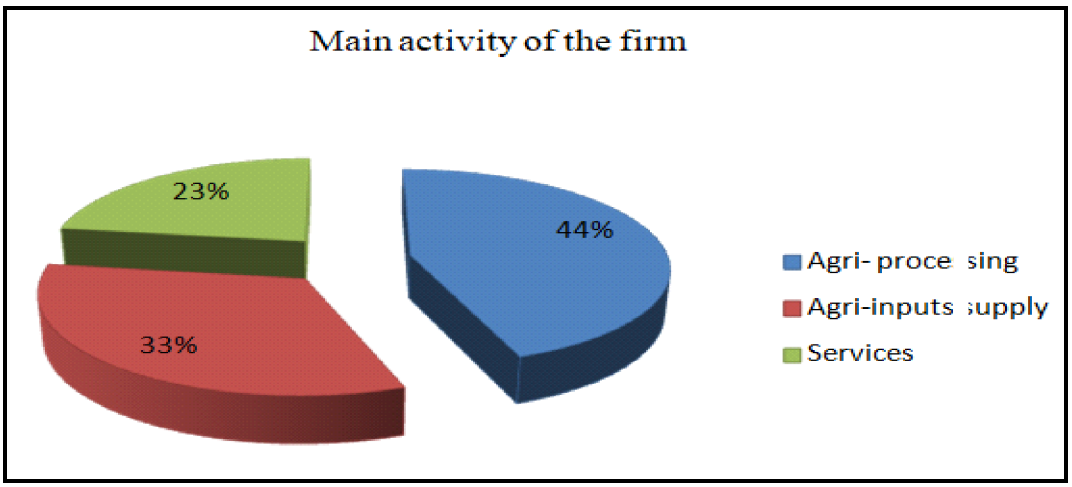


Figure 4.3: Agribusiness SMEs by Sector

4.2.5 Status of the Firms

Business activities registration of the government of Tanzania of 2007, part 4, 11.-(1), state that, ñIt shall be necessary to obtain a certificate of registration from the Business Registration Centre in respect of every businessò. By understanding the need of the act, 87 of the agribusiness SMEs represented during the study were registered to the relevant authorities. The registered firms agreed ñyesò and unregistered disagreed ñnoò. Only one agribusiness SMEs was not registered at that time. This is as shown in figure 4.3.

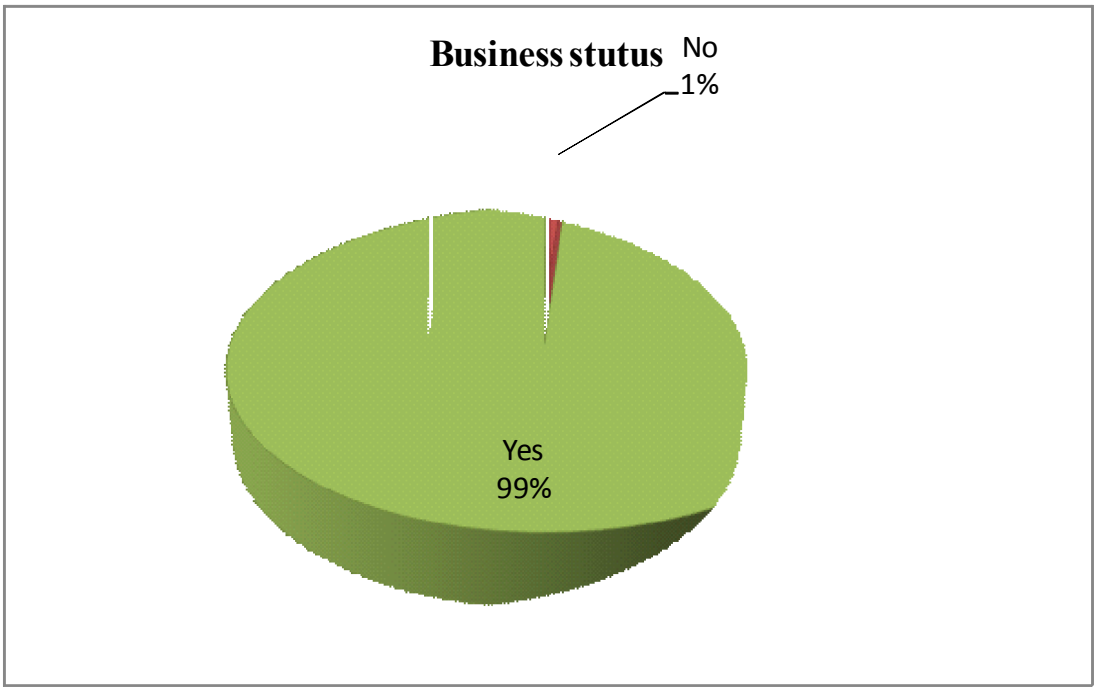


Figure 4.4: Business Status of the Firm

Source: Field Data, 2018

4.3 Correlation between Quantity of Credits Loaned by Financial Institutions and Agribusiness SMEs Performance

Correlation analysis was done to test hypothesis under objective one which was to test if there was a correlation between quantity of credits loaned by financial

institutions to agribusiness SMEs and its performance. And the results of the correlation analysis are as in table 4.3.

Table 4.5: Inter Correlation of Credit and Profit

	The profit after tax in the year which loan was taken	Amount of credit took	Grants the business receive per annum	Number of years the organization has	Personal income per annum
The profit after tax in the year which loan was taken	1				
	83				
Amount of credit took	.908**	1			
	.000				
	33	33			
Grants the business receive per annum	.635**	.841**	1		
	.000	.000			
	83	33	88		
Number of years the organization has	.136	.153	.042	1	
	.222	.397	.700		
	83	33	88	88	
Personal income per annum	.013	.120	.134	.010	1
	.904	.505	.213	.925	
	83	33	88	88	88

Note: Correlation is significant at the 0.01 level (2-tailed).
Source: Field Data,2018

From Table 4.5 correlation was done based on five variables which are net profit, number of years in the business or business experience, credit, personal income, and business grants. Net profit had positive correlation with credit, grants, business

experience, and personal income with values (0.908, P<0.05, .635, P<0.05, 136, P<0.05, and .013, P<0.05). Since correlation coefficient of the credit accessed by agribusiness SMEs and its performance is 0.908, and P<0.05, then the null hypothesis which states that there is no correlation between quantity of credits lent by financial institutions and agribusiness SMEs performance is rejected and conclude that, there is strong and positive relationship between quantity of credits lent by financial institutions and agribusiness SMEs performance. This means that, the agribusiness SMEs profit is positive affected with increases with credit access from financial institutions.

4.3.1 Effects of Credits to Agribusiness SMEs Performance

Moreover, multiple regression analysis was used to analyze the effects of credits to the performance of the agribusiness SMEs. The variables business grants, personal income, business experience, credit, and business profit were crossed to test if there correlated each other. According to the table 5 above, explanatory variables credit and business grants found to be strong and positive r=.841 and P=.01 which is significant at P= 0.05.

Table 4.6: Multiple Regression Model Results

Model Summary										
					Change Statistics					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin - Watson
1	.917[a]	.844	.822	6.33518.E7	.842	37.982	4	28	.000	1.834

Source: Field Data, 2018

Multiple regression analysis was run to determine the effect of credits to the performance of the agribusiness SMEs. Explanatory variables entered in the model were; number of years in the business the firm has, grant business received per annum, personal income, and credits business received. The dependent variable entered was net profit firm getting per annum. The results were as in the tables 4.4, 4.5, and 4.6. From table 6, R square was .844, and adjusted R square was .822, this means that linear regression explains 82.2% of the variances in the data. The Durbin-Watson d = 1.834, which is between the two critical values of $1.5 < d < 2.5$. Therefore, we can assume that there is no first order linear auto-correlation in our multiple linear regression data.

The study further tested the significance of the model by the use of Analysis of Variance (ANOVA) technique. The findings are tabulated in table 7. From the ANOVA statics, F test was 37.982 and significant at P= 0.05, this means jointly explanatory variables which including credits, personal income, and grants can explain the changes on dependent variable by 37.982% while 62.018% can be explained by other factors. The results can be concluding that, grants, personal income and credits from financial institutions jointly affecting agribusiness SMEs performance.

Table 4.7: Summary of One-way ANOVA Results

ANOVA[b]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6.097E17	4	1.524E17	37.982	.000[a]
	Residual	1.124E17	28	4.013E15		
	Total	7.221E17	32			

Source: Field Data,2018

4.3.1.1 Model Estimations

From table 8, the coefficients of the multiple regression variables which were business profit, credit or loan, business experience, business grant, and personal income were fitted in the model as shown in equation 8.

$$Pr - 1.123LN - .054BE - .031PI - .241BG\text{é é é é é é é é é é é é é ..8}$$

The coefficient of the loan was 1.123 with P value .0001, at Ŭ= 5%, the coefficient was significant affecting profit positively. It can be concluded that, as one Tanzania shilling of credit increase, profit increase by 1.123 shillings. The coefficient of the business experience was -0.54 with P value =.484. Since P>0.05, then the coefficient is statistically insignificant to the profit contributions and it is negative affecting business profit. Personal income coefficient was -0.31 with P value=.692. Since P>0.05, then coefficient is statistically insignificant to the profit contributions and it is negative affecting business profit. Business grant coefficient was -.241 with P value=.099. Since P>0.05, then coefficient is statistically insignificant to the profit contributions and it is negative affecting business profit.

Table 4.8: Multiple Regression Analysis

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.592E7	2.058E7		.773	.446
	Credit received	.575	.072	1.123	7.982	.000
	Number of years the organization has	-1.407E6	1.983E6	-.054	-.710	.484
	Personal income per annum	-1.793	4.482	-.031	-.400	.692
	Grants the business receive per annum	-1.041	.610	-.241	-1.707	.099

Source: Field Data, 2018

4.4 Factors affecting Agribusiness SMEs on Accessibility to Credit from Financial Institutions

The objective two under this study was to determine the factors that affecting agribusiness SMEs on accessibility to credit from financial institution in Kagera region by using Logistic regression model. Access to credit in this study refers to actual receipt of credit from a given source. The findings are as presented in the tables 9, 10, and 11.

The findings of the factors affecting agribusiness SMEs access to financial institutions in the study areas using logistic regression analysis are presented here. As in table 4.7, Cox & Snell R square was .592; this means that, the variations in the model can be explained by predictors or explanatory variables by 59.2% and 41.8% variation in the model can be explained by other factors. While Hosmer and Lemeshow Test was .747 which is greater than p-value =5%, this means that the model is good to predict dependent variable.

Table 4.9: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	42.941a	.592	.790

Table 4.10: Hosmer and Lemeshow

Step	Chi-square	Df	Sig.
1	5.095	8	.747

Source: Field Data, 2018

Moreover, from the results in table 4.8, logistic regression model was estimated and interpreted as shown below.

4.4.1 Model Estimation

The variables that were perceived to affect access to credit from financial services by agribusiness SMEs in Kagera region were estimated using a binary logistic regression model.

$$Credit\ access = 24.537 + .180Age + .065Firm\ size + 18.996Collat + .200Bexper + 2.355Regst + 2.980Bmt$$

……………………………………………………………………………………..…..9

From equation 4.9, it can be interpreted as; Business experience had positive coefficient with P value= .016. P<0.05. This means business experience is significant affecting credit access positively. With odd ratio of .819, agribusiness SMEs with business experience were .819times more likely to affect credit access. Business registration had positive coefficient with P value= 1, P>0.05. This means that business registration was insignificant affecting credit access. With odd ratio of 10.54, this means registered agribusiness SMEs were 10.54times more likely to access credit than unregistered firms.

Firm size had positive coefficient with P value= .065, P>0.05. This means that firm size insignificant affecting credit access. With odd ratio .171, means large firms were .171times more likely to access credit than small firms. Age had positive coefficient with P value=.002 with odd ratio of 1.197. With odd ratio of 1.197, agribusiness SMEs representatives with higher age were 1.197more likely to access credit than those with less age. While business management had positive coefficient with P value= .002, and P<0.05, this means that, business management was significant affecting credit access. With odd ratio of 19.695, agribusiness SMEs with effective

business management were 19.695times likely to access credit .Collateral had positive coefficient with P value=1.000 and P>0.05, then collateral is insignificant affecting credit access. But with odd ratio of 1.777, agribusiness SMEs with collateral were 1.777times more likely to access credit than those with no collateral.

Table 4.11: Logistic Regression Analysis Results

Variables in the Equation									
								95.0% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Bexpr	.200	.083	5.798	1	.016	.819	.696	.963
	Bstatus(1)	2.355	4.076E4	.000	1	1.000	10.540	.000	.
	Current staff	.065	.048	1.876	1	.171	1.068	.972	1.173
	Age	.180	.059	9.319	1	.002	1.197	1.067	1.344
	Bmgt (1)	2.980	.977	9.308	1	.002	19.695	2.903	133.624
	Collateral			.000	2	1.000			
	Collateral (1)	18.996	4.019E4	.000	1	1.000	1.777E8	.000	.
	Collateral (2)	-5.380	4.076E4	.000	1	1.000	.005	.000	.
	Constant	-24.537	4.019E4	.000	1	1.000	.000		

Source: Field Data, 2018

4.5 Comparison in Performance of Agribusiness SMEs between Borrowers and non-Borrowers from MFIs

The third objective of the study was to make comparison on the firm performance between agribusiness SMEs which have an access to credit from financial institutions and those which they do not have an access to credit from financial institutions. 46(52.3%) of the firms had access to credit while 42(47.7%) had not. T test is the tool which used to test there was significant different between the performance of the agribusiness SMEs which are constrained in accessing credits from financial institutions and those which are not constrained. The results are

displayed in table 4.10. F test had P value= .062, but P>0.05, this means that, the assumption that there is equal variance between the two population is not rejected.

Furthermore, more T test in the same row it has P value=.297. Since P>0.05, then null hypothesis which states that, there is no significant difference between the performance of the agribusiness SMEs loaned by financial institutions and those which not from financial institutions cannot be rejected, and conclude that, that there is no significant difference on the performance of the agribusiness SMEs which are constrained on credit accessibility and those which are not constrained on credit accessibility from financial institutions.

Table 4.12: Estimates of the t Test

		Levene's Test for Equality of Variances	t-test for Equality of Means						
								95% Confidence Interval of the Difference	
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Average profit per annum	Equal variances assumed	3.563	.062	1.009	86	.316	2.20915E8	2.18939E8	-2.14321E8	6.56151E8
	Equal variances not assumed			1.056	45.599	.297	2.20915E8	2.09214E8	-2.00310E8	6.42141E8

Source: Field Data, 2018

4.6 Discussion of the Findings

As the findings shows, there is a strong relationship between agri-business SMEs credit and profits. This means that there is high possibility of the firm to get high profit when using credit in business. This goes hand to hand with good business

management skills to ensure well supervision of the activities. Based on life cycle stages external capital is useful when the business is at performance stage and not initial stages of the business.

Generally, credit is useful when business is expanding and it can lead to high profits. Similar findings obtained by Olutunla and Obamuyi (2008), significant increase in profit are contributed by additional amounts in credit. Keasey and Watson (1991) argued that, increase in loan, impacts the profitability of an enterprise, and that, the use of banksô financing is associated with higher business performance. The results are the same to the study done by Asante. J at *el* (2013) which revealed that, 66.7% of sampled firms have so far been successful in accessing various types of finance from the different banks.

As cited in Delberg (2011), ñThe World Bank and the International Finance Cooperation (IFC), rank economies according to their ease of doing business; in this framework, the ability for business to get credit is an important criterion to the business performanceò. The findings above conform to findings by Olutunla and Obamuyi (2008) support the study that, significant increase in profit is contributed by additional amounts in credit from financial institutions. Objective two which was to determine the factors which affecting agribusiness SMEs on credit access. The study revealed that, some of the factors like age and business management were positive affecting credit access significantly. This means that as the age of the firm representative increase it means management has enough experience in management of the business and has high chance of getting credit from financial institutions.

According to Maghembe, (2017), Age of the SMEs operator (Age) is statistically significant. The odd ratio for age found to be less than one, this implying that for SMEs operators aged 18-35 are less likely to get loan for about 78% compared to the other category that aged 36 and above years (Ibid). This may be attributed to the fact that youths are new in business, hence they lack enough experience and tangible assets that can be pledged to financial institutions as collateral. The argument is supported by Alexander who in his study found that, age of business owner or representative always render positive and statistically significant to influence credit access.

The ownerôs age coefficient is negative which supports Coleman (2004b) and Vos et al. (2007)ôs studies that younger owners are less risk averse so they are more willing to borrow. Business management also had positive influence and significant on credit access. This is in line with Maghembe.Y(2017) who finds that, marginal effects of the Logit model showed that the probability of credit access by Agri-SME operators increases by about 11%, 17% and 30% for a percent increase in the credit experience, business management skill and collateral respectively (Ibid). Collateral as one of the crucial things in credit access, under this study it was observed with positive coefficient which affecting credit access positively but insignificant.

Bougheas at *al.* (2005:214) contend that collateral is an important factor for SMEs in order to access debt finance; it is positive influencing credit access by the firms. This is because collateral reduces the riskiness of a loan by giving the financial institution a claim on a tangible asset without diminishing its claim on the outstanding debt. Collateral is the lenderôs second line of defense (Coco, 2000). Thus, collateral can

solve problems derived from asymmetries in valuation of projects, uncertainty about the quality of projects and the riskiness of borrowers. Barbosa and Moraes (2004) argue that SMEs owners/entrepreneur that invest heavily in tangible assets tend to have higher financial leverage since they can easily access credit from financial institutions at lower interest rates if their debt is secured with such assets.

The coefficient of the firm size was positive and insignificant affecting credit access; this is in line with the study done by Thi Nhung Nguyen and Christopher Gan (2015) who found that, the firm size coefficient is positively related to the probability to borrow. The estimation of the study suggests that an additional employee added to the firm increases the probability of the firm to borrow a loan by 0.8 %(Ibid). Burkart and Ellingsen (2004) argued that, the size of a firm has an important influence on the debt ratios. Firms with more real assets tend to have greater access to long-term debt (Ibid). While Honhyan (2009) finds that larger firms tend to be more diversified and fail less often, this means the -size of the firm has the influence on credit access. Cassar (2004) argues that it may be relatively more cost for smaller firms to resolve information asymmetries with debt providers; this may mean access to credit to young firm may be very difficult and consequently, smaller firms may be offered less debt capital.

Firm registration is among of the criteria in credit access regarded by the firm, the study finds high positive coefficient of firm registration which affecting credit access by 54%. According to Cassar (2004), banks may perceive incorporation as a good signal that portrays credibility and formality of operations. Abor (2008) finds that the form of business and registration could affect the debt-equity decisions of SMEs.

While Coleman and Cohn (2000) find evidence suggesting a positive relationship between firm incorporation and external credit access.

Business experience of the firms revealed to be affecting credit access negatively and significant at P value=5% by 81%. This vice versa with Saurina at el (2007) found that, there is a positive relationship between firmôs experience and the access to credit. This is line with Druk at el, (2001) who found business experience to be positive related to the access of the credit from commercial banks. The third objective was to compare the performance of the agribusiness SMEs which loaned by financial institutions and those which not. The findings show that, there was no significant difference between the groups in the performance. This is in line with Dzanja J, at *el* (2016) on the study done on the Role of Microfinance on performance of Small-Scale Agribusinesses in Malawi revealed that, t-value found to be 0.511 with significance level of 0.61, which was greater than 0.05. This meant that there was no significant difference in the performance level of clients and non-clients. This might cause by other challenges like delay on loan processing, high loan processing charges, and monthly repayment schedules, and business management of the SMEs.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Overview

This chapter presents four components based on the study findings and discussions made. This includes recommendations to the agribusiness SMEs, financial institutions, policy recommendations, recommendations for further studies, and conclusion. The recommendations are made in detailed so that relevant stakeholders can understand what to do base on the findings above. All recommendations are based on the results of the study and discussion made in chapter four.

5.2 Summary of the Study

The study was done kagera region, through random sampling 88 agribusiness SMEs were selected. Data was collected through interview and questionnaires methods. The study revealed there is a positive relationship between credit and profit since r was equal to 90.8%. Moreover, it was found that effective business management, age, business registration, collateral were the factors affecting credit accessibility from rural financial institutions. And finally, t test results showed that there was no significant difference in business performance between agribusiness SMEs which the clients of the financial institutions and agribusiness SMEs which were not the clients of the financial institutions.

From these results the null hypothesis which states that ñThere is no significant difference between performance of agribusiness SMEs accessing loans from financial institutions and those which not borrow from financial institutionò. The result implies that, the existing financial institutions policies specifically on credits

to agribusiness is not so attractive to the performance of the agribusiness SMEs, this provide more room for the review.

5.2.1 Areas for Further Research

As it has been observed from the study, the study has tried to find out the contribution of rural financial institutions services to the agribusiness SMEs performance. In assessing the performance of the agribusiness SMEs many factors can be regarded. The study focused only on the contributions of the financial institutionôs services to the performance of agribusiness SMEs only and found that rural financial institutions contributing to the performance of the agribusiness SMEs. Other researchers can study the contributions of other factors like policy environment to the performance of the agribusiness SMEs or the same study can be done in other areas for comparison.

5.3 Conclusion

From the study it can be concluded that, rural financial institutions services have satisfactory contribution to the agribusiness SMEs performance. By supplying credit to the agribusiness SMEs with effective management agribusiness, rural financial institutions contribute to the good performance of agribusiness SMEs. But since access to the credit was found to be affected by several factors, the following factors have to be considered much for the agribusiness SMEs and financial institutions and policy makers in order to increase access to credit for all agribusiness SMEs in the country.

5.3.1 Effective Business Management

Management of agribusiness SMEs is an acknowledged challenge that is difficult to

overcome since most of the agribusiness SMEs owners are the managers of their enterprises and most of them the study revealed that they have no formal qualifications in management and leadership. They have no vision on where the business is supposed to go for the specified time. Because of these financial institutions found very challenge to lend money to agribusiness SMEs. Stakeholders like NGos, local government, financial institutions have to assist to train agribusiness SMEs managers on business management so that they can improve their business performance.

5.3.2 Collateral of High Quality

Collateral refers to an asset that a borrower uses to secure a loan from the lender. A lender gets back in case of default where they can dispose the asset to recover their money. Most agribusiness SMEsô do not have tangible assets that they can use to secure their loans hence their borrowing is limited. Therefore, policy makers have to think on it since most of the agribusiness SMEs have no or have low quality collateral it makes them difficult to access credit from financial institutions.

5.3.3 Business Experience

Business experience matters in performance especially if there are effective business managers. The study revealed that, business management affecting agribusiness SMEs on credit access from rural financial institutions. The one with many years in business is the one who had high probability of access credits, and the one with fewer years in the business is the one who had high probability of not accessing credit from financial institutions. To ensure good performance of these organizationsô stakeholders have to come up and help them on how to do business

well though they have few years in the business. Moreover, financial institutions have to look on potentiality on business performance and growth together with effective management of the organization rather than concentrating much on experience which gives small window for new agribusiness SMEs to access credit.

5.4 Policy Recommendation

From the findings of the study it has been observed that, financial institution services particularly credit has positive contribution to the performance of the agribusiness SMEs. Since credit has crucial effects to the performance of the agribusiness SMEs, policy makers have to create financial policies which are favourable for the financial institutions to operate so that they can manage to provide more credit to the agribusiness SMEs on time with affordable price. Policy environment include reviewing current policies in to make some improvements for the betterment of increasing financial services access to the rural areas were most of the agribusiness SMEs are found.

Moreover, SMEs policies should be reviewed in order to support the performance of the agribusiness SMEs to the rural areas and hence creates more employment opportunities, and hence increase the growth of the nation economy. Credit accessibility to the agribusiness SMEs is affected by different factors as revealed by the study. These factors are not limited to business registration, efficiency of the organization management, interest rate, experience of the business, age of the applicant, and the quality assets to be pledged to the financial institution in case of the failure to pay back the loan. There is a need for the policy to take into considerations and come up with policies which will be friendly to the agribusiness

SMEs and hence support its performance.

The study has revealed that, there is no statistical difference in the performance between agribusiness SMEs which are clients of the financial institutions and those which not. This means that agribusiness SMEs which are clients of the financial institutions have failed to show high performance of the business compared to non-clients. This can be interpreted as there is no need for agribusiness SMEs to rely to the external capital particularly financial institutions. If that is the case the performance of the agribusiness sector will be retarded. To rescue the situation policy makers, have to come up with favourable policies to the clients of the financial institutions like building capacity to the agribusiness SMEs on business management, coaching and mentoring, exchange visits to other agribusiness SMEs which are doing well. And follow ups on the use of the credits received from financial institutions.

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APPENDICES

Appendix: Questionnaires

IMPACT OF RURAL FINANCIAL INSTITUTIONS SERVICES ON AGRIBUSINESS SMEs PERFORMANCE IN TANZANIA: A CASE OF KAGERA

Part A: Personal information

Name of the intervieweeé .

Gender/Sexé .

Business nameé ...

Positioné é

Experience in the same organizationé é é é é é é é é é é é é é é é ...

Part B: Business activities

1. For how long your organization has been in this business?.....
2. Have you registered your business? (a) Yes, (b) No
3. How much was your initial investment cost?.....
4. In which industry your business operates?.....
    a. Agriculture
    b. Manufacturing
    c. Services
    d. Others
5. How much was your initial operating cost?.....
6. What were your sources of starting capital in your business?.....

7. What was your initial sales three years ago
8. What were your average sales per year for the three years passed?.....

Part C: Financing

1. Have you ever taken loan?.....(a) Yes, (b) No
2. If yes which institution gave you credit?.....
3. What are the requirements of getting loan?
    a. Collateral
    b. Business plan
    c. Bank account
    d. Business experience of not less than three years consecutive
    e. Effective business management
    f. Well-kept records
    g. Timing in credit accessibility
    h. Othersé .
4. Was it a short term or long-term loan?.....
5. What was the purpose of the loan?.....
6. What did you use credit you get?
    a. Purchasing raw materials
    b. Purchasing physical capital equipment
    c. Employing skilled staff
    d. Increased new machines
    e. Others

7. Fill the following table below according

Year	Credit in TSH	Interest rate	Financial institution	Sales	Net profit
2017					
2016					
2015					
2014					
2013					
2012					
2011					
2010					
2009					
2008					
2007					
2008					
2007					
2006					
2005					
2004					

9. What are the factors which affecting you in credit access?

10. What are the challenges which you are facing in credit accessibility?

    a. Delay in loan processing

    b. High interest rate

    c. Low grace period

    d. Insurance costs

    e. Monthly or weekly loan repayment

    f. High application costs

    g. Lack of business plan

    h. Lack of well-kept records

    i. Financial institutions ignore agribusiness sector

11. Mention other challenges which you are facing on credit accessibility

    é

    é

Part D: Non-credit applicants

1. What is the primary reason your business not seeking for credit for more than three years now?
   a) Not needed; had sufficient funding
   b) Did not think application would be approved
   c) Did not want to accrue debt
   d) Credit cost was too high
2. If the reason was the credit may not be approved, what were the likely reasons your business would not be approved? Select all that apply
   a) Low credit score
   b) Insufficient credit history
   c) Insufficient collateral
   d) Inadequate documentation
   e) Weak business performance (for example, uneven cash flow, poor revenue)
   f) Unsure
   g) Other. Please specifyé é é é é é é é é é é é é
3. Fill the following table below according

Year	Revenue	Net profit
2017		
2016		
2015		
2014		
2013		
2012		
2011		
2010		
2009		
2008		
2007		
2008		
2007		
2006		
2005		
2004		

Part E: Financial institutions

1. Name of the financial institutioné é é é é é é é é é é é
2. Name of the respondent if necessaryé é é é é é é é é é é é é é ...
3. Position of the respondenté é é é é é é é é é é é é é é ...
4. Years in businessé é é é é é é é é é é é é é é é
5. Mention portfolios you haveé é é é é é é é é é é é é é
6. Interest rate for agribusiness sectoré é é é é é é é é é é é é é
7. For how long have you been working with agribusiness SMEsé é é é é é
8. What are the products available for agribusiness SMEsé é é é é é é
9. How many SMEs have been working with up to dateé é é é é é é é
10. What is the range of the credit available for agribusiness SMEé é é é é é
11. Mention criteria you are using for providing loans to agribusiness SMEs;

é é

é é

Please fill the table below according

Year	Credit lent to Agribusiness SMEs	Total Credit lent	Interest rate
2017			
2016			
2015			
2014			
2013			
2012			
2011			
2010			
2009			
2008			
2007			
2008			
2007			
2006			
2005			
2004			

12. What are factors which affecting credit accessibility to agribusiness SMEs from your financial institution?

a. é

b. é

c. é