FINANCIAL CREDIT AND PERFORMANCE OF SELECTED COFFEE PRODUCERS IN SOUTHERN PROVINCE OF RWANDA

A Thesis

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Master of Business Administration

By:

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DECLARATION A

"This thesis is my original work and has not been presented for a degree or any other academic award in any university or institution of learning".

UMURERWA Denyse

Name and Signature of Candidate

Date 21/09/2012

DECLARATION B

"I confirm that the work compiled in this thesis was carried out by the candidate under my supervision".

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Date 21st Sept, 2012

APPROVAL SHEET

This thesis entitled " **Financial Credit and Performance of Selected Coffee Producers in Southern Province of Rwanda**" prepared by Mrs UMURERWA Denyse fulfillment of the requirements for the degree of Master of Business Administration has been examined and approved by the panel on oral examination with a grade of ______________.

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Name and Sig. of Director, CHDR

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Name and Sig. of DVC, CHDR

DEDICATION

To my beloved husband

To my darling children

To my family and family-in-law

To all my friends and colleagues

I dedicate this work

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I wish to express my sincere gratitude to the following people and institutions for their contribution to this research:

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ABSTRACT

The purpose of this study was to explore the influence of financial credit to the performance of selected coffee producers of southern province of Rwanda. The objectives were to determine the profile of the respondents; to determine extent of financial credit to selected Coffee producers in the area under study; to determine the level of performance of selected coffee producers in the area under study; to establish the relationship between financial credit and performance of selected coffee producers in Southern Province of Rwanda. This study used correlation design. The target population involved a total of 150 people of KOTEKAYA, ABAHUZAMUGAMBI, KARABA and MUGOMBWA cooperatives where we have selected a sample size of 108. Purposive sampling was used to select respondents able to provide relevant information to the research. To meet our objectives, we have collected data using questionnaires. The data were presented, analyzed and interpreted using Statistical Package for Social Science (SPSS). The findings showed that the majority of the respondents are males, married with age between 20 and 40 years. Because of lack of collateral to present bank, high interest rate, problems in loan application and other factors, the majority of the respondents do not borrow money from banks. Thus, these factors influence negatively the performance of coffee producers where the findings revealed that the majority of people get output below 100kg per season. This is a very low quantity of output. It is due also to low level of technology used and small area cultivated with small number of labors used. By conclusion, the Pearson's correlation coefficient indicates that there is a significant and positive relationship between financial credit and performance of selected coffee producers. The null hypothesis was rejected. As recommendation, bankers should diversify geographically to reach rural areas with people of low income. With regard to low level of access to bank services and despite the high interest rates claimed by loan seekers, people and particularly entrepreneurs could formalize their business so that their increase access to bank services and enjoy finance opportunity included diversified products.

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LIST OF ABBREVIATIONS AND ACRONYMS

CAR: capital adequacy ratio

FAO: Food and Agricultural Organization

KIU: Kampala International University

MFIs: Microfinance Institutions

NPL: nonperforming loans

NSSF: National Social Security Fund

RSSB: Rwanda Social Security Board

Rwf: Rwandan francs

CHAPTER ONE

THE PROBLEM AND ITS SCOPE

Background to the Study

In most developing countries, coffee production provides an important option for income generation for resource poor households and is thus essential in socio-economic development of these countries. Coffee is remarkable for being produced in almost all non-arid countries in the tropics. Coffee is an important agent of development, generating cash returns in subsistence economies and, since coffee production and harvesting are labour-intensive, providing an important source of rural employment, for both men and women (Ayaya, 1997)

Poor conditions result from heavy rainfalls during the rainy seasons and lack of maintenance. The poor quality roads raise vehicle operating costs from increased wear and lengthen transport times as vehicles have to drive at walking speed, Fuel consumption is very high and contributes to 40% or more of the operating cost. Moving the coffee crop from the Rusizi District to Kigali (300 km) can take two days and costs 60 USD per ton. The freight rate of 20 cents per ton/km is more than twice the rate for international transportation. Vehicle operating costs are estimated to be about 50 per cent higher on poor quality roads compared to good quality roads. A very simple and crude calculation suggests that improving the poor quality roads in the country would lead to savings in vehicle operating costs of close to $50 million per year (Ntahontuye, 2008).

The challenges that Rwandan producers face include stringent quality standards, costly standards for certification and enforcement systems, increased variability in prices and limited opportunities to manage price risk, high production costs, pests and diseases, production and market risks, low international prices and the small landholdings among farmers (MINICOFIN Report, 2003).

Other challenges affecting Rwandan coffee producers include moving processed beans out of the country in a timely and cost effective way; the costs in the industry; Labor costs are higher than in neighboring countries; Rwandans farmers are also less productive than neighboring coffee farmers; poor agronomic practices, inadequate research and development linkages, processing methods, high cost of farm inputs, low international prices, inadequate infrastructure and lack of access to agricultural credits (FAO, 2008).

Statement of the Problem

The use of financial credit in Rwanda is low due to limited demand and constrained supply. On the demand side, knowledge of how financial credit work and their benefit is low, particularly amongst the poor. On the supply side, underdeveloped payment systems, poor risk sharing mechanisms, poor linkages between institutions and a lack of product innovation constrain access. As a result, financial credit is not available in places where the poor can easily access them at affordable costs (FAO, 2008).

The financial resources are simply not available to most households in rural areas. Currently, only 2.3 per cent of bank credit is used to finance activities in the agricultural Sector (which employs 90 per cent of the population and accounts for 40 percent of GDP). This reflects, but at the same time sustains, a rural sector based around subsistence and informal activities (Lobry & Nkurikiyinka, 2005).

Whilst important, microfinance schemes cannot provide a broad solution to this problem. Without an increase in the activities of formal financial institutions in rural areas there will be little success from raising incentives to commercial production and in stimulating monetization and the development of rural markets (Lobry & Nkurikiyinka, 2005).

Addressing these challenges in coffee production, this study intended to explore the relationship between Financial Credit and the Performance of Selected Coffee Producers in Southern Province of Rwanda.

Purpose of the Study

The purpose of this study was to:

1. test the hypothesis that there is there is no significant relationship between financial credit and the performance of selected coffee producers in southern province of Rwanda;
2. validate the existing theory to which the study was based;
3. to generate new information based on the findings of the study;
4. to bridge the gap tested on the previous studies.

Research Objectives

General: This study determined the correlation between financial credit and the performance of selected coffee producers in southern province of Rwanda.

Specific Objectives:

1. To identify the demographic characteristics of the respondents in terms of:

    1.1 Gender

    1.2 Age

    1.3. Marital Status

    1.4. Number of years working experience

    1.5. Level of education

2. To determine extent of financial credit to selected coffee producers in the area under study.

3. To determine the level of performance of selected coffee producers in the area under study.

4. To establish the relationship between financial credit and performance of selected coffee producers in Southern Province of Rwanda.

Research Questions

This study seeks to answer the following research questions:

1. What are the demographic characteristics of the respondents as to:
   1.1 Gender?

   1.2 Age?

   1.3 Marital Status?

   1.4 Number of years working experience?

   1.5 Level of education?

2. What is the extent of financial credit to selected coffee producers in the area under study?

3. What is the level of performance of coffee producers in the selected area under study?

4. Is there a significant relationship between financial credit and the performance of selected coffee producers in Southern Province of Rwanda?

Null Hypothesis

There is no significant relationship between financial credit and the performance of selected coffee producers in Southern Province of Rwanda.

Scope of the Study

Geographical Scope

This study was carried out in Southern Province, which is the one of the five provinces found in Rwanda. Southern province is limited by Republic of Burundi in the south; Western province in West; Eastern province in the East and Northern Province in the North.

Content Scope

The study intended to examine the levels of access to financial credit and the level of selected coffee producers' performance; cause and effect relationship between the independent variables (financial credit) and dependent variable (selectedcoffee producers' performance).

Time scope

The study was done from December 2011 to September 2012.

Theoretical Scope

The A + B theorem on social credit by C.H. Douglas (1920).

In 1920, Douglas presented the A + B theorem in his book, *Credit-Power and Democracy*, in critique of accounting methodology pertinent to income and prices. In the fourth, Australian Edition of 1933, Douglas states: "A factory or other productive organization has, besides its economic function as a producer of goods, a financial aspect—it may be regarded on the one hand as a device for the distribution of purchasing-power to individuals through the media of wages, salaries, and dividends; and on the other hand as a manufactory of prices – financial values. From this standpoint, its payments may be divided into two groups: Group A: *All payments made to individuals (wages, salaries, and dividends);* Group B: *All payments made to other organizations (raw materials, bank charges, and other external costs).* Now the rate of flow of purchasing-power to individuals is represented by A, but since all payments go into prices, the rate of flow of prices cannot be less than A+B. The product of any factory may be considered as something which the public ought to be able to buy, although in many cases it is an intermediate product of no use to individuals but only to a subsequent manufacture; but since A will not purchase A+B; a proportion of the product at least equivalent to B must be distributed by a form of purchasing-power which is not comprised in the description grouped under A. It will be necessary at a later stage to show that this additional purchasing power is provided by loan credit (bank overdrafts) or export credit" (Douglas, 1933)

Significance of the Study

The following people will benefit from the findings of the study:

Rwandan producers: Rwandan producers will understand better the challenges they anticipate when engaging in the producing business.

Rwandan Ministry of trade and industry and policy makers: The findings of the study will shed light to the policy makers in improving the financial credit accessibility to match producing process.

The future researchers will utilize the findings of this study to embark on a related study.

Operational Definitions of Key Terms

Demographic characteristics of the respondents are attributes looked for in this study in terms of gender, age, number of years working experience and level of education.

Financial Credit: refers to the transactions involving the transfer of money on promise of repayment, usually at a fixed future date.

Performance: refers to act of doing something successfully or the completion of a given task to specified standards.

Production: This means the fact of availing the goods and services by using the means of production which in economics are called the factors of production such as land, capital, labor and entrepreneurship...

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Concepts, Opinions, Ideas from Authors/ Experts

Financial credit

According to Asiimwe H.M (2006), explained financial credit as the capacity to borrow money up to a specified limit under specified conditions or promise of future payment in exchange for money, goods, services, or anything else of value. According to Hubbard G (1997), a credit is an amount of money a lender makes available to the borrower to pay for goods and services. According to ISMAIL S. (1989), credit is a transfer of property on promise of future payment, a contract giving a property right to creditor against debtor.

Collateral

Assets pledged as security for a loan. Assets with monetary value, such as stock, bonds, or real estate, which are used to guarantee a loan, are considered collateral. Properties or assets that secure a loan or another debt. If the borrower defaults and fails to fulfill the terms of the loan agreement, the collateral, or some portion of it, may become the property of the lender. For example, if you borrow money to buy a car, the car is the collateral. If you default, the lender can repossess the car and sell it to recover the amount you borrowed (Brandl, W.M, 2000).

Sources of Credit

Sources of credit: refers to any place, any thing, any activity you get credit from. The main sources of credit can be friends and family where you can negotiate the interest rate and payment terms with them directly; Financial institutions are among the best sources of credit, especially when it comes to personal loans, student loans, mortgages, personal lines of credit; Retail stores: many stores offer their own credit cards, some also offer financing plans that allow you to pay for your purchases over time or even at a later date; Loan companies: some companies specialize in giving out loans, often to people are turned down by other lenders. Since the risk is higher for the lender, the interest rates paid by borrowers are also higher (Evans J.D, 2007).

Process of getting credit /loan

According to Brandl (2000), process refers to the series of action done in order to achieve desired result. The process of getting credit can be performed through the following stages. (1) client's loan application, (2) interview with potential client,(3) analysis of the client's creditworthiness, (4) revision of loan security (collateral, etc), (5) loan structuring, (6) loan contract, (7) carrying out the decision on loan, (8) loan disbursement, (9) loan service / loan monitoring, (10) loan repayment (MINECOFIN 2007).

Interest rate

The rate charged by lenders, expressed as a percentage of the principal, to borrowers for the use of assets. Interest rates typically are quoted on an annualized basis known as the annual percentage rate (APR). Interest is charged by lenders as compensation for the loss of an asset's use. In the case of lending money, the lender could have invested the funds instead of lending them out (Modigliani F, 1988).

Payment system

A payment system is a system used for transferring money. What makes it a "system" is that it employs cash-substitutes; traditional payment systems are negotiable instruments such as drafts (e.g., checks) and documentary credits such as letter of credits. With the advent of computers and electronic communications a large number of alternative electronic payment systems have emerged. These include debit cards, credit cards, electronic funds transfers, direct credits, direct debits, internet banking and e-commerce payment systems (Rwanda Development Gateway, 2007).

Land

In economics, the term "land" includes all kinds of natural resources given by nature free of cost to human beings like soils, mineral wealth, rivers, seas, forests and climate (

sunshine, rainfall). The main service of land is the provision of space where production can take place because human beings utilize it to make it useful (Saleemi, 2010).

Labour

Labour means any mental or physical efforts of human beings made for any material benefits. It is one of the factors of production comprising all human economic effort, i.e. mental and physical, skilled and unskilled and in receipt of a reward (wages) for the effort. Mental labour involves a lot of brain work and minimum physical effort e.g. the work of a doctor or an accountant is mental labour. Physical labour involves more physical effort and less mental work e.g. the work of a farm worker or a carpenter is physical labour. Any human effort which is not made for any material benefits cannot be regarded as labour e.g. a mother looks after her children without any reward so it cannot be labour. Labour is also an important factor of production. It is needed to use land and capital. Without labour, land and capital cannot produce anything. The price of labour is wage and salaries (Saleemi, 2010).

Technology

Dictionaries and scholars have offered a variety of definitions. The Merriam-Webster dictionary offers a definition of the term: "the practical application of knowledge especially in a particular area" and "a capability given by the practical application of knowledge". Ursula Franklin, in her 1989 "Real World of Technology" lecture, gave another definition of the concept; it is "practice, the way we do things around here". Technology can be most broadly defined as the entities, both material and immaterial, created by the application of mental and physical effort in order to achieve some value.

Output

Output in economics is the "quantity of goods or services produced in a given time period, by a firm, industry, or country (Nsabimana, 2005).

Access to Financial Credit

Access to financial credit is important for poor households to take advantage of new business opportunities, expand income-generating activities, and cope with life cycle events. Poor people, particularly those living in rural areas, need savings, credit, cash transfer, and insurance services in the same way as others who are not living in poverty do. In Rwanda, as is generally the case in developing countries, such services remain mostly a privilege of those living in cities and towns. The outreach of financial services in rural areas is still very low. As an example, less than 6 percent of rural dwellers hold a saving account in a formal finance institution (MINECOFIN 2007).

Lack of access to financial credit in Rwanda has been identified as a key constraint to economic growth and a barrier preventing people from moving out of poverty. International evidence shows that better financial services significantly increase the financial security of the poor by allowing them to better withstand economic shocks and take advantage of economic opportunities (MINECOFIN 2007).

Access to financial services in Rwanda is low: 52% of the population have no access to any kind of financial services and only 21% have access to formal services. The poor are particularly badly served by financial services leaving them vulnerable to emergencies and life-cycle events that require large sums of money (Murekezi & Loveridge, 2007).

The use of financial credit in Rwanda is low due to limited demand and constrained supply. On the demand side, knowledge of how financial credit work and their benefit is low, particularly amongst the poor. On the supply side, underdeveloped payment systems, poor risk sharing mechanisms, poor linkages between institutions and a lack of product innovation constrain access. As a result, financial credit is not available in places where the poor can easily access them at affordable costs (FAO, 2008).

Informal finance is so popular that 73 percent of total population reported using informal loans in 2005. The risk inherent in doing business in rural areas-be it in agriculture or off-farm activities-due to asymmetry of information, was identified as the most important factor that causes bankers to shy away from rural ventures (Habyalimana, 2005).

The few case studies written on value chain financing in Rwanda highlight that some experiences that tried to use value chains as conduits to channel money into the rural sector have been of limited impact on producers and small farmers' income, as they generally target marketers and traders involved in the chains (Nsabimana, 2005).

In rural areas- where nearly 92 percent of the poor live (Mugabo, et al. 2005) - only 25 percent of the population has access to formal credit (NISR, 2006), and only 3 percent accessed credit from traditional commercial banks (Habyalimana, 2005). The primary source of loans remains the informal sector: 73 percent of loan recipients claimed to resort to friends, traders and relatives to get credit (NISR, 2006). Such a high prevalence of informal finance is assumed to be a symptom of dysfunction in the formal financial system.

Performance of Coffee Producers of Rwanda

Rwanda has nearly 500,000 small farming coffee producers who have an average of 200 coffee trees each. Each small plantation is managed like a small garden, and is owned by a family. These farms produce the highest quality coffee bean, as the soil is a rich volcanic grade and the farmer is able to give a high standard in cultivation. As a farmer can not afford to buy a vehicle or an animal to transport their harvest, they are forced to carry their load and walk to a collection point, taking them up to 12 hours to do so. (Ntahontuye, 2008).

Farmers are producing less high-quality coffee than they might in order to meet continuing demand for Rwandan specialty coffee. A number of factors may be contributing to this. First, prices paid to farmers are not providing sufficient incentives to them to focus on quality. Second, farmers may lack knowledge of how best to manage their trees. Although there are over 100 coffee washing stations in the country, many farmers still do not have access to these processing facilities and so process cherries at home (ICO, 2005).

According to government reports, prices being paid to farmers by coffee washing stations are not currently providing sufficient incentives to focus on improving quality. As noted above, OCIR sets weekly minimum prices for the purchase of cherries at washing stations. It seems that in some areas prices washing stations are paying farmers are fluctuating modestly to reflect changes in supply (Rwanda Development Gateway, 2007).

Farmers need good quality inputs, such as seedlings and fertilizers, to increase their crop yields and quality, they also need knowledge. Farmers need to have better access to information about how they should handle seedlings, how to deal with pests and disease, and how to apply fertilizers (Murekezi & Loveridge, 2007).

The government reports also note that too few farmers are familiar with and able to implement good farming practices. Farmers need good quality inputs, such as seedlings and fertilizers, to increase their crop yields and quality, they also need knowledge. Farmers need to have better access to information about how they should handle seedlings, how to deal with pests and disease, and how to apply fertilizers (Rwanda Development Gateway, 2007).

A different challenge in Rwanda involved the use and control of land. Land is an extremely scarce and highly contested resource in the country. Approximately one half of the families working as farmers cultivate less than a half hectare of land; more than 60% cultivate less than 0.7 hectares and more than 25% cultivate less than 0.25 hectares (Report of National Bank of Rwanda, 2011).

A variety of management concerns have plagued the cooperatives that many coffee farmers join. One close observer of Rwanda's cooperatives has said: "After 5 years of extensive cooperative capacity building, Rwanda's coffee cooperatives remain surprisingly fragile, unorganized, and dysfunctional."Some cooperatives have mishandled loans. Others have not fulfilled contracts in a timely manner. Some have trouble marketing their products. Some of these problems are the result of a lack of training or financial management skills. (Rwanda Development Gateway, 2007).

Habyalimana (2005), reveals that Rwandan producers face many challenges include: producers who are not organized, fluctuating prices of value chain commodities, crop diseases, Lack of viable markets for value chain products, limited knowledge about value chain and value chain actors among financial services providers, over-indebtedness of those living in rural Rwanda, lack of internal capacity to assess loan applications and business plans among most of financial services providers, challenge to ensure that credit is used for production, and not for consumption , limited knowledge and capacity among formal finance providers to effectively serve value chain actors(knowledge about relationships between chain actors, tools for value chain analysis, capacity to develop appropriate products for value chain actors, capacity to assess credit risks and business plans related to value chains, and capacity to follow-up of loans distributed to chain actors), difficulties in enforcing contracts in the Rwandan context.

Financial Credit and Performance of Coffee Producers in Rwanda

Access to financial services will provide poor women and men with a mechanism to manage their day-to-day expenses, smoothing their consumption and improving their welfare (MINICOFIN Report, 2003).

Access to financial services permits a coping mechanism for lifecycle events and shocks. Poor households frequently require access to large sums of money to deal with regular life-cycle events (births, marriages, deaths) and to cope with unexpected shocks (crop failure, illness). Having access to savings products will reduce their vulnerability to these shocks (Moutinho, 1991).

Access to credit will also enable poor households to make small productive investments (such as purchasing agricultural inputs such as seeds or fertilizer) and to establish micro enterprises, thereby raising their incomes (MINICOFIN Report, 2003).

Access to Finance credit is an important pillar of Rwanda's Country Plan, in line with the renewed focus on economic growth and supports programmes of Agricultural Transformation and Land Reform (National Coffee Strategy Rwanda, 2009–2012)

Access to finance is important for poor households to take advantage of new business opportunities, expand income-generating activities, and cope with shocks and life cycle events (Moutinho, 1991).

Poor people, particularly those living in rural areas, need savings, credit, cash transfer, and insurance services in the same way as others who are not living in poverty do. Financial services play a catalytic role in poverty reduction. In Rwanda, access to finance remains, to some extent, a privilege of those living in urban and semi-urban areas (USAID/Chemonics, 2006)

Financial services provide short term, medium term and long term credits which have an indirect impact on poverty. There is strong evidence that it is relatively credits which play a greater role in longer term sustainability of poverty reduction (MINICOFIN Report (2003).

Financial credit access for coffee producers will generate employment opportunities for semi-skilled and unskilled labour, generally provided by the poor. Lack of access to financial credit has been identified a key constraint to economic growth, particularly for coffee producers and a barrier preventing people from moving out of poverty (National Coffee Strategy Rwanda, 2009–2012).

The objective of any business entity (an individual or an organization) is to maximize profit and satisfaction of its needs. Producing is therefore the main activity that interconnects the producer and the consumer and it requires each person to forego an opportunity cost. Then, application of the credit policy is very necessary in order to reach the economic development of a country as it induces the continuation of the production function. There is a need for the agricultural producers to maintain the cash funds in order to meet all requirements encountered in the production system. Thus, the agricultural cycle involves the satisfaction the costs related to the acquisition and preparation of the arable soil, the planting of the plants, the cultivation of the land, and then the harvesting of the agricultural crops at the end of a specific period. The state's role is to invest in programs that support small farms productivity, and enable an environment that encourages private investment in local commodities. This will enable smallholders to commercialize and link into markets (Ngugi, 1990).

In case there is no access to the credit by the farmers from the financial institutions of a given country, this is a heavy burden for them to hold constantly a minimum level of liquidity as a reserve from the first harvesting period in order to serve for the next period of production. In other words, this implies that the availability of the credit induces a high purchase of agricultural inputs, an expensive cost of the labor or machinery services for transformation of these inputs into outputs with good quality for being consumed may users. The users of the agricultural outputs may be numerous at the extent that the individual households, civil societies, local agro industries or even foreign markets may come to purchase and get replenished in order to survive. The inaccessibility of the agricultural credit provokes less personal saving accounts in commercial banks by the farmers for future concerns. That is, providing credit to the farmers allows a high level of consuming agricultural products at the commodity markets and this improves the welfare of the citizens, the prosperity of the country, etc. One can say that individual production, economic investment by the private sector, government expenditures all depend on the consumption tends. In this context, the financial institutions could also be key players in improving the trade atmosphere for famers. By striking a balance between the central bank's interest rates and the treasury bills, commercial banks in rural area might be inclined to use more money to offer credit to the agricultural sector rather than investing in treasury bills (Johnston, 2003).

The Food and Agricultural Organization (FAO, 1999) reported that the financial sector reforms during the late 1980 have caused a decline in the flow of credit to agricultural sector of most developing countries. The government intervention in the form of interest ceiling rate or subsidized interest rate is common in many countries in order to defend the purchasing power of the farmers. But, even if the credit is offered the production function may be caused by inadequate management of the land due to ignorance of the farmer, the technological constraints, the climate changes, or any other supernatural factor that the farmer cannot control (FAO, 1999).

Theoretical perspective

This study is based on the A + B theorem begins with C.H. Douglas (1920). In 1920, Douglas presented the A + B theorem in his book, *Credit-Power and Democracy*, in critique of accounting methodology pertinent to income and prices. In the fourth, Australian Edition of 1933, Douglas states: "A factory or other productive organization has, besides its economic function as a producer of goods, a financial aspect—it may be regarded on the one hand as a device for the distribution of purchasing-power to individuals through the media of wages, salaries, and dividends; and on the other hand as a manufactory of prices – financial values. From this standpoint, its payments may be divided into two groups: Group A: *All payments made to individuals (wages, salaries, and dividends);* Group B: *All payments made to other organizations (raw materials, bank charges, and other external costs).*

Now the rate of flow of purchasing-power to individuals is represented by A, but since all payments go into prices, the rate of flow of prices cannot be less than A+B. The product of any factory may be considered as something which the public ought to be able to buy, although in many cases it is an intermediate product of no use to individuals but only to a subsequent manufacture; but since A will not purchase A+B; a proportion of the product at least equivalent to B must be distributed by a form of purchasing-power which is not comprised in the description grouped under A. It will be necessary at a later stage to show that this additional purchasing power is provided by loan credit (bank overdrafts) or export credit"(Douglas, 1933)

Beyond empirical evidence, Douglas claims this deductive theorem demonstrates that total prices rise faster than total incomes when regarded as a flow. In his pamphlet entitled, "The New and the Old Economics", Douglas describes the cause of "B" payments:"I think that a little consideration will make it clear that in this sense an overhead charge is any charge in respect of which the actual distributed purchasing power does not still exist, and that practically this means any charge created at a further distance in the past than the period of cyclic rate of circulation of money. There is no fundamental difference between tools and intermediate products, and the latter may therefore be included" (Douglas, 1933).

In 1932, Douglas estimated the cyclic rate of circulation of money to be approximately three weeks. The cyclic rate of circulation of money measures the amount of time required for a loan to pass through the productive system and return to the bank. This can be calculated by determining the amount of clearings through the bank in a year divided by the average amount of deposits held at the banks (which varies very little). The result is the number of times money must turnover in order to produce these clearing house figures. In a testimony before the Alberta Agricultural Committee of the Alberta Legislature in 1934, Douglas said: "Now we know there are an increasing number of charges which originated from a period much anterior to three weeks, and included in those charges, as a matter of fact, are most of the charges made in, respect of purchases from one organization to another, but all such charges as capital charges (for instance, on a railway which was constructed a year, two years, three years, five or ten years ago, where charges are still extant), cannot be liquidated by a stream of purchasing power which does not increase in volume and which has a period of three weeks. The consequence is, you have a piling up of debt, and you have in many cases a diminution of purchasing power being equivalent to the price of the goods for sale."(Douglas, 1934).

According to Douglas, the major consequence of the problem he identified in his A+B theorem is exponentially increasing debt. Further, he believed that society is forced to produce goods that consumers either do not want or cannot afford to purchase. The latter represents a favorable balance of trade, meaning a country exports more than it imports. But not every country can pursue this objective at the same time, as one country must import more than it exports when another country exports more than it imports. Douglas proposed that the long-term consequence of this policy is a trade war, typically resulting in real war – hence, the Social Credit admonition, "He who calls for Full-Employment calls for War!", expressed by the Social Credit Party of Great Britain and Northern Ireland, led by John Hargrave. The former represents excessive capital production and/or military build-up. Military buildup necessitates either the violent use of weapons or a superfluous accumulation of them. Douglas believed that excessive capital production is only a temporary correction, because the cost of the capital appears in the cost of consumer goods, or taxes, which will further exacerbate future gaps between income and prices.

"In the first place, these capital goods have to be sold to someone. They form a reservoir of forced exports. They must, as intermediate products, enter somehow into the price of subsequent ultimate products and they produce a position of most unstable equilibrium, since the life of capital goods is in general longer than that of consumable goods, or ultimate products, and yet in order to meet the requirements for money to buy the consumable goods, the rate of production of capital goods must be continuously increased" (Douglas, 1925).

The replacement of labour by capital in the productive process implies that overhead charges (B) increase in relation to income (A), because "'B' is the financial representation of the lever of capital". As Douglas stated in his first article, "The Delusion of Super production": "The factory cost--not the selling price--of any article under our present industrial and financial system is made up of three main divisions-direct labor cost, material cost and overhead charges, the ratio of which varies widely, with the "modernity" of the method of production. For instance, a sculptor producing a work of art with the aid of simple tools and a block of marble has next to no overhead charges, but a very low rate of production, while a modern screw-making plant using automatic machines may have very high overhead charges and very low direct labour cost, or high rates of production. Since increased industrial output per individual depends mainly on tools and method, it may almost be stated as a law that intensified production means a progressively higher ratio of overhead charges to direct labour cost, and, apart from artificial reasons, this is simply an indication of the extent to which machinery replaces manual labour, as it should." If overhead charges are constantly increasing relative to income, any attempt to stabilize or increase income is met with rising prices. If income is constant or increasing, and overhead charges are continuously increasing due to technological advancement, then prices, which equal income plus overhead charges, must also increase. Further, any attempt to stabilize or decrease prices must be met by falling incomes according to this analysis. As the Phillips Curve demonstrates, inflation and unemployment are trade-offs, unless prices are reduced from monies derived from outside the productive system.

According to Douglas' A+B theorem, the systemic problem of rising prices, or inflation, is not "too much money chasing too few goods", but is the increasing rate of overhead charges in production due to the replacement of labour by capital in industry. Douglas did not suggest that inflation cannot be caused by too much money chasing too few consumer goods, but according to his analysis this is not the only cause of inflation, and inflation is systemic according to the rules of cost accountancy given overhead charges are constantly increasing relative to income. In other words inflation can exist even if consumers have insufficient purchasing power to buy back all of production. Douglas claimed that there were two limits which governed prices, a lower limit governed by the cost of production, and an upper limit governed by what an article will fetch on the open market. Douglas suggested that this is the reason why deflation is regarded as a problem in orthodox economics because bankers and businessmen were very apt to forget the lower limit of prices.

Related Studies

In their studies on Land Distribution, Technological Changes And Productivity In Pakistan's Agriculture: Some Explanations And Policy Options, Khan ,M,& ZHANG,J and Saim ,M (2011) found that farm credit is a major source of acquiring new technology for an efficient and profitable agriculture, and the key determinant of the level of production (Khan, 1997; Zuberi, 1989).

Farmers need credit in ever-increasing amounts to finance timely purchases of modern inputs and farm implements. Credit helps not only in removing financial constraints but also provides incentives to growers for adopting new technology and practices with new aspirations and horizons, provided it is properly delivered (Rao & Khan, 1991; Malik, 1991).

Lending to small-scale farmers has been an important policy measure to stimulate agricultural development in Nigeria. In Adamawa state, Small-scale farmers constitute the larger percentage of farmers groups. This study examined the relationship between credit supply and farm revenue among members of farmers group liked to banks for credit delivery in Mubi region. Findings revealed that the result of correlation analysis shows that there is a weak relationship (0.350) between credit supply and farm revenue (Boni & Zira, 2010).

For the case Agricultural Cooperatives in Rwanda, these cooperative are established for multiple purposes. They involved in the provision of services to growers including accessing and managing inputs and monitoring their use the lack of human, material and financial resources and low level of participation of members in the cooperative organization and management were the constraints (Gaudiose, 2007).

Credit influence the efficient resource distribution by overcoming constraints to purchase inputs and use the optimally which shifts the farmer along a given production surface to a more intensive input use secondly, credit may help to purchase a new technological package (including high yielding hybrid seeds, drip or slinkier irrigation system etc.) That will shift the production surface; and thirdly it may help to use more intensively the use of fixed inputs (Muhammad, 2010).

Research Gap

There have been a number of valuable studies of financial credit and poverty reduction; relationship between financial credit and profitability using cross-section data (Mbaraga,2001; Kayitare,1998), all of which present evidence on relationship between financial credit and poverty reduction or relationship between financial credit and profitability. However, none of these studies attempt to explore of relationship between financial credit and performance of coffee producers.

CHAPTER THREE

METHODOLOGY

Research Design

This study employed descriptive and correlation design. A correlation study describes in quantitative terms the degree to which variables are related.

Research Population

The target population included a total of 150 members of coffee producers associations of the selected coffee producers in Southern province of Rwanda.

Sample Size

In view of the nature of the target population where the numbers for member producers association were many, a sample was taken from each association. Table 1 below shows the respondents of the study with the following categories: coffee producers, target population and sample size. The Sloven's formula was used to determine the minimum sample size.

Table 1

Respondents of the Study

Coffee producers Association	Population	Sample size
KOTEKAYA	55	48
ABAHUZAMUGAMBI (Maraba),	40	36
KARABA Cooperative	30	28
MUGOMBWA Cooperative	25	24
Total	**150**	**108**

Sampling Procedures

The purposive sampling and stratified sampling were used to select the respondents. In this type of sampling the research uses his/her own judgment or common sense regarding the participant from whom information will be collected. The researcher usually selects sample based on his or her experience of knowledge of the group to be sampled and has in mind that these respondents have the information he/she requires, that will enable him/her to answer the research questions and to meet his/her objectives. In this context the purpose was based on these criteria:

1. Male or female respondents in any producers association included in the study.

2. Members of coffee association producers with working experience ranging from six months and above.

From the list of qualified respondents chosen based on the inclusion criteria, the systematic random sampling was used to finally select the respondents with consideration to the computed minimum sample size. This sampling technique was used to give each producer an equal chance of being selected to participate in the study.

The names of producers were written on the pieces of paper and collected in container. They were then shuffled and reshuffled a number of times. After each shuffle a piece of paper was picked from the container without replacement. The producers whose name appeared on the piece of paper will be selected to take part in this study.

Research Instruments

The research tools utilized in this study include the following:

(a) Face sheet to gather data on the respondents' profile (gender, age, marital status,experience and education level).

(b) Researcher devised questionnaires to determine the extent of financial credit. The response modes of the questionnaire on financial credit are indicated as: strongly agree (4); agree (3); disagree (2); strongly disagree (1).

(c) Researcher suggested also questionnaire to determine the level of performance of coffee producers. The scoring system of this instrument is as follows: strongly agree (4); agree (3); disagree (2); strongly disagree (1).

Validity and Reliability of the Instruments

The validity refers the appropriateness of the instrument while reliability refers to its consistency in measuring whatever it is intended to measure (Amin, 2005).

The content validity method was used. To investigate the validity of all the questionnaires five experts (who shall estimate the validity on the basis of their experience) such lecturers knowledgeable about the theme of the study were asked to judge each item in each questionnaire either relevant (R) or irrelevant (IR). There after the Content validity Index (CVI) was computed for each instrument by using the following formula:

$$CVI=\frac{R}{R+IR}$$

Where CVI: Content Validity Index

R: Relevant questions

IR: Irrelevant questions

The indices were computed as shown in the table below

Table 2

Content Validity Index

Instruments	Judgment/ Assessment questions			Computation
	Relevant (R)	Irrelevant (IR)	Total (R+IR)	R/R+IR
Questions of Respondents	62	6	68	62/68=0.91

Researcher's calculations, 2012

The instruments were be certified valid as he stipulated the minimum Content Validity Index to be at least 0.7. Thus, the table above indicates that CVIs were considerably than 0.7. This implies that the questions were valid and therefore ready for data collection.

The test-retest technique is used to determine the reliability. The researcher devised instruments to twenty respondents from KOTEKAYA, ABAHUZAMUGAMBI, KARABA and MUGOMBWA cooperatives. These respondents are not included in the actual study. In this test- retest technique, the questionnaires is administered twice to the same subjects. Thus, because our results were consistent and essentially the same in both times, we can say that our instrument is reliable.

Data Gathering Procedures

Before the administration of the questionnaires

1. An introduction letter was obtained from the College of Higher Degrees and Research for the researcher to solicit approval to conduct the study from respective people of KOTEKAYA, ABAHUZAMUGAMBI, KARABA and MUGOMBWA cooperatives.
2. The respondents were explained about the study.
3. Reproduce more than enough questionnaires for distribution.
4. Select research assistants who would assist in the data collection; brief and orient them in order to be consistent in administering the questionnaires.

During the administration of the questionnaires

1. The respondents were requested to answer completely and not to leave any part of the questionnaires unanswered.
2. The researcher and assistants emphasized retrieval of the questionnaires within five days from the date of distribution.
3. On retrieval, all returned questionnaires were checked if all are answered.

After the administration of the questionnaires

The data were collected, encoded into the computer and statistically treated using the Statistical Package for Social Sciences (SPSS).

Data Analysis

The following statistical tools were used:

The frequency and percentage distribution were used to determine the profile of the respondents.

The mean were applied for the levels of financial credit and performance of coffee producers. To interpret the obtained data, the following numerical values and interpretations were used:

Mean Range	Response Mode	Interpretation
3.26-4.00	Strongly agree	Very High
2.51-3.25	Agree	High
1.76-2.50	Disagree	Low
1.00-1.75	Strongly disagree	Very Low

The Pearson coefficient correlation to determine the correlation between the levels of financial credit and performance of coffee producers is used. The coefficient of determination r^2 was computed to determine the percentage of influence of the dependent variable on independent variable in the model.

Ethical considerations

To ensure confidentiality of the information provided by the respondents and to ascertain the practice of ethics in this study, the following activities were implemented by the researcher:

1. The respondents and associations were coded instead of reflecting the names.
2. Solicit permission through a written request to the concerned officials of association producers of coffee included in the study.
3. Present the findings in a generalized manner.

4. Finally, we endeavored to be very respectful to all respondents and to all participants who were part of this study.

Limitations

Potential sources of bias in the proposed study occur due to different factors. Sources may be lack of:

Testing: The use of research assistants can bring about inconsistency in the administration of the questionnaires in terms of time of administration, understanding of the items in the questionnaires and explanations given to the respondents. To minimize this threat, the research assistants are oriented and briefed on the procedures to be done in data collection.

Attrition/Mortality: Not all questionnaires maybe returned neither completely answered nor even retrieved back due to circumstances on the part of the respondents such as travels, sickness, hospitalization and refusal/withdrawal to participate. In anticipation to this, the researcher reserved more respondents by not exceeding the minimum sample size. The respondents are also reminded not to leave any item in the questionnaires unanswered and are closely followed up as to the date of retrieval.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

The chapter four presents analyzes and discusses the results obtained from the research. The percentages and frequencies distributions tables were used. The data were presented in the line with the objectives of the research and the set study questions. This was done with the use of Statistical Package for Social Sciences (SPSS). A total of 108 questionnaires were given out in our area of study, KOTEKAYA, ABAHUZAMUGAMBI, KARABA and MUGOMBWA cooperatives. Thus, the analysis of the data was based on those questionnaires.

Profile of the respondents

The tables below show the profile of the respondents KOTEKAYA, ABAHUZAMUGAMBI, KARABA and MUGOMBWA cooperatives. This was in terms of age, marital status, sex, working experience, and level of education.

Table 3

Profile of the respondents

Characteristics	Frequency	Percentage%
Age		
Below 20	15	13.9
20-39	45	41.6
40-59	35	32.4
Above 60	13	12.1
Total	108	100
Marital status		
Single	10	9.2
Married	54	50
Divorced	11	10.2
Widowed	33	30.6
Total	108	100
Gender Male	68	63
Female	40	37
Total	108	100
Education level		
No primary level	22	20.4
Primary School	60	55.6
Secondary School	18	16.6
Higher education	8	7.4
Total	108	100
Working experience		
Below 5years	34	31.5
5-10	30	27.8
10-15	26	24.1
15 and above	18	16.6
Total	**108**	**100**

Source: Primary data, September 2012

In terms of age, 13.9% of the respondents are under 20 years, 41.6% are between 20 and 39 years, 32.5% are between 40 and 59 years whereas 12.1% are above 60 years. It is clear that the majority of the respondents have ages between 20 and 40 years. The research shown that people from that interval of age are likely to cultivate for the development of their families.

According to the marital status of the respondents, the majority of the respondents are married 50% followed by 30.6% of widowed, 10.2% of divorced and 9.2% of single. This may be attributed to the fact that married people are active, hard work and thinkers for the achievement of families' goals and development.

In terms of the gender of respondents, the male constituted 63% of the respondents while the female constituted 37% of the respondents. This may be attributed to the fact that the males are responsible to feed the family and to fight against poverty at home while females are more concerned with household activities such as preparing food and taking care to the children.

Based on education level, we find that the majority of the respondents (55.6%) have a primary level. The others have not primary level (20.4%), secondary level (16.6%) and high education (7.4%). This has a negative effect on production of coffee because people do not have a high knowledge on production process.

As highlighted in table 3 above, the majority of the respondents have working experience below 5 years (31.5.8%) in coffee production, followed by 27.8% of working experience between 5 and 10 years, 24.1% of age comprise between 10 and 15 and 16.6% of respondents have working experience of 15 years and above. Because the majority of the respondents are not experienced in coffee production, this impacts negatively on production of coffee.

The Extent of Financial Credit to Selected Coffee Producers

The second objective of this study was to determine the extent of financial credit to selected coffee producers in the area under study.

This component was conceptualized into 48 questions. All questions were rated using a four rate, where 1= Very low, 2 = low, 3= High , 4 = Very high.

Their responses were analyzed using SPSS through the means and for their interpretation, the following numerical values and descriptions were followed:

Mean Range	Response Mode	Interpretation
3.26-4.00	Strongly agree	Very High
2.51-3.25	Agree	High
1.76-2.50	Disagree	Low
1.00-1.75	Strongly disagree	Very Low

Table 4

Extent of Financial Credit (n=108)

Items	Mean	Interpretation	Rank
you get credit from other resources	3.53	Very high	1
You use cash to pay bank	3.5	Very high	2
You do not have any collateral to present bank	3.45	Very high	3
You have difficulties in loan application when you want to get credit	3.01	High	4
The credit you get is from UBPR	2.98	High	5
You do not borrow any types of credit from bank	2.91	High	6
The interest rate fixed by bank affects your output at high intensity.	2.84	High	7
The interest rate you pay bank is between 10 and 20%	2.83	High	8
You do not use credit because of lacking collateral to present bank	2.82	High	9
You use above 10 km to join bank	2.77	High	10
The interest rate fixed by bank is too high	2.73	High	11
You have difficulties in loan contract when you want to get credit	2.71	High	12
The interest rate you pay bank is between 20 and 30%	2.7	High	13
The long terms credits extent by the bank can contributes more to your output	2.65	High	14
You present land as collateral when you want to get credit	2.61	High	15
The problem you have in getting credit result from in carrying out the decision on credit	2.61	High	15
You use the short term credit for coffee production	2.61	High	16
The medium term credit extent by the bank can contribute more to your output	2.58	High	17
You fail to pay bank when you get credit.	2.58	High	17
The short term credit extent by the bank can contribute more to your output.	2.57	High	18
You have never paid bank in time.	2.56	High	19

you get information through coffee producers meetings	2.46	Low	20
You use between 1and 5 km to join bank	2.45	Low	21
Your collateral is livestock	2.43	Low	22
You borrow the medium term credit	2.39	Low	23
You use between 1and 5 km to join bank	2.38	Low	24
You do not get credit because of unavailability of lending facility	2.31	Low	25
you get credit from ECOBANK	2.29	Low	26
You have difficulties in loan repayment	2.27	Low	27
You use cheque to pay bank	2.19	Low	28
You get information concerning financial credit through news media (e.g., newspapers, TV, Radio)	2.18	Low	29
Your collateral to present bank is house	2.15	Low	30
You get information concerning financial credit through trainings	2.15	Low	30
You have sometimes repaid bank in time	2.12	Low	31
The interest rate fixed by banks affects your output at moderate intensity.	2.07	Low	32
You borrow the long term credit for coffee production	1.96	Low	33
You use less than 1km to join your bank	1.95	Low	34
You get information concerning financial credit by face-to-face with your supervisors or manager	1.91	Low	35
The credit you get is from Bank of Kigali	1.89	Low	36
The interest rate fixed by banks affects your output at low intensity.	1.85	Low	37
Interest rate fixed by bank is above 30% of interest rate.	1.82	Low	38
You use credit transfer to pay bank	1.78	Low	39
You have often paid bank in time.	1.77	Low	40
You use mobile banking to pay bank	1.75	Very low	41
Interest rate fixed by bank is below 10%	1.72	Very low	42
Any type of credit extent by the bank can not contribute to your output	1.58	Very low	43
Any interest rate fixed by bank does not affect your output.	1.58	Very low	44
You do not need credit for coffee production	1.46	Very low	45
Average mean	**2.38**	**Low**	

The table 4 presents the means of the Likert scores from the questionnaire on the extent of financial credit. They were ranked from top to bottom from 1st to 45th based on the mean score for each index. Based on the Likert analysis, the top three (from 1 to 3) ranked indices proved to be very high. Their means range between 3.53 and 3.45 on the Likert scale. Twenty indices (from 4 to 19) proved to be high. Their means range between 3.01 and 2.56 on the Likert scale. Concerning the table above, the twenty two indices (from 20 to 40) proved to be low. Their means range between 2.46 and 1.77 while the last fives indices (from 40 to 45) proved to be very low with the means ranging between 1.75 and 1.46 on the Likert scale. To get a summary picture on the extent of financial credit, an average index was computed for all the 48 items in table 4 above, which turned to have a mean index of 2.38 confirming that the extent of financial credit in selected area is low.

The means from table 4 show that respondents strongly agreed that they borrow money from informal sources (mean=3.53) such as traders, gift and offers from well-wishers, friends and relatives, rotating saving (Ibimina). Based on the level of collateral we find that in our area of study, majority of the respondent do not have collateral to present at the bank to get credit (mean = 3.45). In the table 4 above the findings revealed that the majority of the respondents have many difficulties in loan application (mean=3.01). Since many people lack collateral to present in order to get credit, people will not borrow money from bank to improve their live. Thus, such factors are responsible to poor performance in coffee production.

These findings are supported by Habyarimana, 2005 revealed that informal finance is so popular that 73 percent of total population reported using informal loans in 2005. The risk inherent in doing business in rural areas-be it in agriculture or off-farm activities-due to asymmetry of information, was identified as the most important factor that causes bankers to shy away from rural ventures.

Level of Performance of Selected Coffee Producers in Southern Province of Rwanda

The third objective was to determine the level of performance of selected coffee producers in the area under study. This was measured by 20 questions asked to respondents where they were required to rate them using a four rate where 1= strongly disagree, 2= disagree, 3= agree, 4= strongly agree.

Responses were analyzed using means and for their interpretation, the following numerical values and descriptions were followed:

Mean Range	Response Mode	Interpretation
3.26-4.00	Strongly agree	Very High
2.51-3.25	Agree	High
1.76-2.50	Disagree	Low
1.00-1.75	Strongly disagree	Very Low

Table 5

Level of Performance of Selected Coffee Producers (n=108)

Items	Mean	Interpretation	Rank
Your output per season is below 100kg.	2.94	High	1
You cultivate below 1 acre of land for coffee.	2.79	High	2
In your activities of coffee production you do not use any labour.	2.76	High	3
You always use none improved seeds.	2.51	High	4
Your output per season is between 100 and 200kg.	2.38	Low	5
You can use below 3 labours in coffe production	2.34	Low	6
You do not save any amount of money monthly.	2.25	Low	7
You always use improved seeds.	2.13	Low	8
Your output season is between 200 and 300kg	2.1	Low	9
You always use fertilizers.	2.1	Low	9
You save below 10,000 monthly.	2.09	Low	10
You cultivate between 1 and 3 acres of land for coffee	2.07	Low	11
You output is above 300kg.	2.06	Low	12
You save between 10,000 and 20,000 monthly.	2.06	Low	13
You can use between 3 and 5 labours in coffee production.	1.98	Low	14
You always use pesticides.	1.97	Low	15
You cultivate area between 3 and 5 acres of land for coffee.	1.97	Low	15
You can save above 20,000Rwf.	1.87	Low	16
You can use 5 labours and above in coffee production	1.84	Low	18
You cultivate above 5 acres of land for coffee.	1.68	Low	19
Average mean	**2.19**	**Low**	

The table 5 presents the means of the Likert scores from the questionnaire on the level of performance of selected coffee producers. They were ranked from top to bottom from 1st to 19 th. Based on the Likert analysis, the top four (from 1 to 4) ranked determinants in descending order were high with the means ranging between 2.94 and 2.51 on the Likert scale. The next nine sixteen in the above table (from 5 to 19) are low on the Likert scale. Their means range between 2.38 and 1.68. To get the summary picture on how producers in southern province of Rwanda rated the level of performance, an average index was computed for all the above twenty items in table 5 above, which turned to have a mean index of 2.19 , confirming that performance of selected coffee producers in southern province of Rwanda was rated as low.

Table 5 shows that majority of people get output below 100kg per season (mean=2.94). The low output is due to low access to credit; lack of collateral; high level of interest rate and lack of technology are main factors of poor performance in coffee production. Table 5 indicates that majority of people cultivate below one acre of land (mean=2.79). This low area cultivated leads to low output of coffee production. In support these findings, the Report of National Bank of Rwanda, 2011 revealed that a different challenge in Rwanda involved the use and control of land. Land is an extremely scarce and highly contested resource in the country. Approximately one half of the families working as farmers cultivate less than a half hectare of land; more than 60% cultivate less than 0.7 hectares and more than 25% cultivate less than 0.25 hectares.

As highlighted in table 5 above, the majority of people use any labors for coffee production (mean=2.76). According to the result, the majority of respondent agree that they do not save any amount of money at the end of month (mean=2.25).Others can save the amount below 10.000frw (mean=2.09);the amount between 10.000frw and 20.000frw (mean=2.06 and the amount above 20.000frw with the mean of 1.8. The low level of savings and using a few numbers of labours is due to many factors such as low output of coffee, low access to financial credit because of lack of collateral, high interest rate etc. Thus, this affects negatively the performance of coffee producers.

Relationship between Financial Credit and Performance of Selected Coffee Producers

The fourth objective was to establish the relationship between financial credit and performance of selected coffee producers in Southern Province of Rwanda. It was hypothesized that there was no significant relationship between financial credit and performance of selected coffee producers in southern province of Rwanda. In order to test this hypothesis, the Pearson's Linear Correlation Coefficient (PLCC) was used.

Table 6

Relationship between Financial Credit and Performance of Selected Coffee Producers

Variables Correlated	Mean	Computed value	Sig-value	Interpretation of Correlation	Decision on Ho
Financial credit	2.3835	0.270	0.251	Positive Significant	Rejected
Performance of Selected Coffee Producers	2.1935				

From the above table, the computed value is 0.270 when compared with the sig value 0.251. It is greater than the sig value hence a positive significance. The null hypothesis of no significant relationship between financial credit and the performance of selected coffee producers of southern province of Rwanda was rejected. This indicates that there is a significant relationship between the IV (The financial credit) and the DV (The performance of selected coffee producers of southern province of Rwanda).

Table 7

Regression Analysis between Financial Credit and Performance of Selected Coffee Producers

Variables regressed	Adjusted r^2	F-Value	Sig.	Interpretation	Decision on H_o
Financial Credit vs Performance of Coffee Producers	0.21	1.41	0.251	Significant effect	Rejected

According to the table 7, we find that the independent variable significantly affects the dependant variable (F=1.41, sig =0,251). This therefore confirms that there is a relationship between financial credit and performance of selected coffee producers in southern province of Rwanda.

CHAPTER FIVE

FINDINGS, CONCLUSIONS, RECOMMENDATIONS

This chapter gives a brief summary of findings of the present research. A conclusion and recommendations accordingly to the results are given and a set of topics for further researches is proposed at the end of the study.

Findings

The underlying objective of this study was to identify the demographic characteristics of the respondents in terms of gender, age, marital status, number of years working experience and level of education; to determine extent of financial credit to Coffee producers in the selected area under study; to determine the level of performance of coffee producers in the selected area under study and to establish the relationship between financial credit and performance of coffee producers in Southern Province of Rwanda.

Under objective 1: To determine the profile of the respondents in terms of age, gender, marital status, working experience and education level:

The researcher found the majority of the respondents are males (68%), married (54%) with age between 20 and 40 years (45%). They have lower level of education, primary level (60%) and the majority of the respondent was not experienced in coffee production (31.5% have below five years in coffee production).

Under objective 2: To determine extent of financial credit to coffee producers in the selected area under study: The findings shown that the majority of the respondent do not borrow money from banks (mean=3.53) because of lack of collateral to present bank mean=2.84), high interest rate mean=2.83, problems in loan application (mean=3.01) and other factors. This finding is relevant to FAO, 2008 which indicate that the use of credit in Rwanda is low due to limited demand and constrained supply. On the demand side, knowledge of how financial credit work and their benefit is low, particularly amongst the poor. On the supply side, underdeveloped payment systems, poor risk sharing mechanisms, poor linkages between institutions and a lack of product innovation constrain access. As a result, financial credit is not available in places where the poor can easily access them at affordable costs.

Under objective 3: To determine the level of performance of coffee producers in the selected area under study:The results discovered that the majority of people get output below 100kg per season (mean=2.94), many respondents do not use improved seeds (mean=2.51). The others use improved seeds (mean=2.13), fertilizers from industry pesticides (mean=2.10), the majority of people use any labors for coffee production (mean=2.76), the majority of the respondents agree that they do not save any amount of money at the end of month (mean=2.25). These results concurs with the government report in Rwanda Development Gateway, 2007 stated that too few farmers are familiar with and able to implement good farming practices. Farmers need good quality inputs, such as seedlings and fertilizers, to increase their crop yields and quality, they also need knowledge. Farmers need to have better access to information about how they should handle seedlings, how to deal with pests and disease, and how to apply fertilizers.

Under objective 4: To establish the relationship between financial credit and performance of coffee producers: The Pearson's correlation coefficient indicates that there is a significant relationship between financial credit and performance of coffee producers. Where (F=1.41, sig =0,251).

Conclusions

Based on the findings from this study, the researcher made the following conclusions:

The findings showed that indicates that there is a significant relationship between financial credit and performance of selected coffee producers in the area under study. The null hypothesis was rejected. Also, the A + B theorem on social credit by C.H. Douglas (1920) is proved in this study in the sense that the extent of financial credit influence coffee producers to increase or decrease the performance of coffee production in southern province of Rwanda.

The study was able to bridge the gaps identified in the previous studies. In this regard, financial credit can predict the performance of coffee producers. This can undoubtedly help producers ensure that financial credit affects their activities of production.

Recommendations

This section deals with recommendations arising from the pertinent findings and conclusions of this study, following the study objectives and questions.

Bank branches are limited almost entirely to Kigali and a few secondary cities. There is basically no rural banking system and the rural population outside Kigali and secondary cities has no access to banking services beyond the minimal services offered by UBPR and some MFIs. Bankers could diversify geographically to reach rural areas with people of low income.

With regard to low level of access to bank services and despite the high interest rates claimed by loan seekers, people and particularly entrepreneurs could formalize their business so that their increase access to bank services and enjoy finance opportunity included diversified products.

BNR could create a good exit mechanism and an incentive to extend loans beyond the current 10 years. Also BNR could provide banks with loan guarantees and/or donor-sourced credit lines to lend more to producers.

Suggestion for further research

The research invites all interested persons to bring their contribution in this domain. He suggests that research should be extended to performance of coffee producers in provinces of Rwanda. The scholars in the whole country should examine how other factors such as natural factors, transport cost and policies affect the performance of coffee producers.

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APPENDIX I A

TRANSMITTAL LETTER FROM CHDR

KAMPALA INTERNATIONAL UNIVERSITY

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Fax: +256 - 414 - 501 974
E-mail: admin@kiu.ac.ug
Website: www.kiu.ac.ug

OFFICE OF THE HEAD OF DEPARTMENT, ECONOMICS AND MANAGEMENT SCIENCES
COLLEGE OF HIGHER DEGREES AND RESEARCH (CHDR)

Date: 24. August 2012

RE: REQUEST FOR UMURERWA DENYSE MBA/20084/82/DF TO CONDUCT RESEARCH IN YOUR ORGANIZATION

The above mentioned is a bonafide student of Kampala International University pursuing Masters of Business Administration.

she is currently conducting a research entitled" **Financial Credit and Performance of Coffee Producers in Southern Province of Rwanda."**

Your organization has been identified as a valuable source of information pertaining to her research project. The purpose of this letter is to request you to avail her with the pertinent information she may need.

Any information shared with her from your organization shall be treated with utmost confidentiality.

Any assistance rendered to her will be highly appreciated.

Yours truly,

pp

Mr.Malinga Ramadhan
Head of Department,
Economics and Management Sciences,(CHDR)

NOTED BY:
Dr. Sofia Sol T. Gaite
Principal-CHDR

"Exploring the Heights"

APPENDIX IB

PERMISSION LETTER TO CONDUCT RESEARCH

KOTEKAYA

Cooperative

Southern Province

Rwanda

The coordinator

Business and Management Office

Kampala International University

School of Post Graduate Studies and Research

UGANDA

August, 2012

Dear Sir/Madam,

RE: REQUEST FOR UMURERWA DENYSE, MBA/20084/82/DF

This serves as an approval allocated by our organisation to Mrs. UMURERWA Denyse, a master student enrolled in your University, for accessing on any information related to the fulfilment of her academic requirements. She is in good position to conduct her research entitled **Financial Credit and Performance of Coffee Producers in Southern Province of Rwanda.**

Thank you very much in advance

GAHAMANYI Faustin

President of KOTEKAYA Cooperative

APPENDIX IC

TRANSMITTAL LETTER FOR THE RESPONDENTS

Dear Sir/ Madam,

Greetings!

I am a graduating student of Kampala International University. Part of the requirements for the award is a thesis/dissertation. My study is entitled **Financial Credit and the Performance of Coffee Producers in Southern Province.** Within this context, may I request you to participate in this study by answering the questionnaires. Kindly do not leave any option unanswered. Any data you will provide shall be for academic purposes only and no information of such kind shall be disclosed to others.

May I retrieve the questionnaire within five days (5)?

Thank you very much in advance.

Yours faithfully,

UMURERWA Denyse

APPENDIX II A

FACE SHEET: PROFILE OF THE RESPONDENTS

Age

a) Below 20 ☐
b) 20-39 ☐
c) 40-59 ☐
d) Above 60 ☐

Marital status:

a) Single ☐
b) Married ☐
c) Divorced ☐
d) Widowed ☐

Gender: Male ☐

Female ☐

Please tick your working Experience in coffee production:

_______Below 5years

_______5-10

_______10-15

_______15 years and above

Please specify your level of education

______No primary level

______Primary School

______Secondary School

______Higher education

APPENDIX II B

QUESTIONNAIRE TO DETERMINE THE EXTENT OF FINANCIAL CREDIT

Direction: Please pick your rating on the box after each option which corresponds to your best choice. Kindly use the scoring system below. Be honest about your options as there is no right or wrong answers

Response Mode	Rating	Description	Legend
Strongly Agree	(4)	You agree with no doubt at all.	SA
Agree	(3)	You agree with some doubt	A
Disagree	(2)	You disagree with some doubt	D
Strongly disagree	(1)	you disagree with no doubt at all	SD

Aspects on sources of credits	SD	D	A	SA
1.You get credit from UBPR.	1	2	3	4
2.you get credit from ECOBANK.	1	2	3	4
3.you get credit from Bank of Kigali.	1	2	3	4
4.you get credit from other resources	1	2	3	4
Aspects on collateral	**SD**	**D**	**A**	**SA**
5.You do not have any collateral	1	2	3	4
6.Your collateral is livestock	1	2	3	4
7.Your collateral is land	1	2	3	4
8.Your collateral is house	1	2	3	4
Aspects on process of getting credit	**SD**	**D**	**A**	**SA**
9.You have difficulties in loan application	1	2	3	4
10.You have difficulties in loan contract	1	2	3	4
11.You have difficulties in carrying out the decision on loan	1	2	3	4
12.You have difficulties in loan repayment	1	2	3	4

Aspects on the distance between households and banks	**SD**	**D**	**A**	**SA**
13.You use less than 1km to join bank	1	2	3	4
14.You use between 1and 5 km to join bank	1	2	3	4
15. You use between 6 and 10 km to join bank	1	2	3	4
16.You use above 10 km to join bank	1	2	3	4
Aspects on Payment system	**SD**	**D**	**A**	**SA**
17.You use cash to pay bank	1	2	3	4
18.You use cheque to pay bank	1	2	3	4
19.You use credit transfer to pay bank	1	2	3	4
20.You use mobile banking to pay bank	1	2	3	4
Aspects on ways of getting information	**SD**	**D**	**A**	**SA**

You would prefer to get information about credit and other matters that affect you and your output through:

21.Face-to-face with supervisors/managers	1	2	3	4
22.Coffee producers meetings with top management	1	2	3	4
23.Training	1	2	3	4
24.News media (e.g., newspapers, TV, Radio)	1	2	3	4
Aspects on types of credit borrowed from Bank	**SD**	**D**	**A**	**SA**
1.You do not borrow any types of credit from bank	1	2	3	4
2.You borrow the short term credit	1	2	3	4
3.You borrow the medium term credit	1	2	3	4
4.You borrow the long term credit	1	2	3	4
Aspects on the contribution of types of credits	**SD**	**D**	**A**	**SA**
5.Any type of credit extent by your bank can not contribute to your output.	1	2	3	4
6.The short term credit extent by your bank can contribute more to your output.	1	2	3	4
7.The medium term credit extent by your bank can contribute more to your ouput.	1	2	3	4

8.The long terms credits extent by your bank

can contribute more to your output.	1	2	3	4
Aspects on reasons for not receiving any types of credit	**SD**	**D**	**A**	**SD**

You did not receive any types of credit last time because of the following reasons:

9.No needs for credit	1	2	3	4
10.Unvailabillity of lending facility	1	2	3	4
11.Lack of collateral	1	2	3	4
12.Interest rate too high	1	2	3	4
Aspects on types of interest rate	**SD**	**D**	**A**	**SA**
1.You pay below 10% of interest rate.	1	2	3	4
2.You pay between 10 and 20% of interest rate.	1	2	3	4
3.You pay between 20 and 30% of interest rate.	1	2	3	4
4.You pay above 30% of interest rate.	1	2	3	4
Aspects on condition of payment	**SD**	**D**	**A**	**SA**
5.You failed to pay bank.	1	2	3	4
6.You have never paid in time.	1	2	3	4
7.You have sometimes paid in time.	1	2	3	4
8.You have often paid in time.	1	2	3	4
Aspects on the contribution of interest rate	**SD**	**D**	**A**	**SA**
9.Interest rate does not affect your output.	1	2	3	4
10.Interest rate affects your output at low intensity.	1	2	3	4
11.Interest rate affects your output at moderate intensity.	1	2	3	4
12.Interest rate affects your output at high intensity.	1	2	3	4

APPENDIX II C

QUESTIONNAIRE TO DETERMINE THE LEVEL OF PERFORMANCE OF SELECTED COFFEE PRODUCERS

Direction: Please pick your rating on the box after each option which corresponds to your best choice regarding your perception. Kindly use the scoring system below. Be honest about your options as there is no right or wrong answers.

Response Mode	Rating	Description	Legend
Strongly Agree	(4)	You agree with no doubt at all.	SA
Agree	(3)	You agree with some doubt	A
Disagree	(2)	You disagree with some doubt	D
Strongly disagree	(1)	you disagree with no doubt at all	SD

Aspect on output per season	SD	D	A	SA
1 Your output is below 100kg.	1	2	3	4
2 Your output is between 100 and 200kg.	1	2	3	4
3 Your output is between 200 and 300kg.	1	2	3	4
4 Your output is above 300kg.	1	2	3	4

Aspects on technology used	SD	D	A	SA
5 You always use none improved seeds.	1	2	3	4
6 You always use improved seeds.	1	2	3	4
7 You always use pesticides.	1	2	3	4
8 You always use fertilizers.	1	2	3	4

Aspects on land used	SD	D	A	SA
9 You cultivate below 1 acre of land.	1	2	3	4
10 You cultivate between 1 and 3 acres of land.	1	2	3	4
11 You cultivate between 3 and 5 acres of land.	1	2	3	4
12 You cultivate above 5 acres of land.	1	2	3	4

Aspects on labours	**SD**	**D**	**A**	**SA**
13 You do not use any labour.	1	2	3	4
14.You use below 3 labours	1	2	3	4
15.You use between 3 and 5 labours.	1	2	3	4
16.You use 5 labours and above.	1	2	3	4

Aspects on savings	**SD**	**D**	**A**	**S**
17.You did not save any amount of money monthly.	1	2	3	4
18.You saved below 10,000 monthly.	1	2	3	4
19.You saved between 10,000 and 20,000.	1	2	3	4
20.You saved amount of money above 20,000.	1	2	3	4

Thank you for your time.

Appendix III

The Sloven's formula to determine sample size

$$n = \frac{N}{1+N\,a^2}$$

Where n: sample size

N:Population

a: Level of significance (=0.05)

KOTEKAYA: $n = \dfrac{55}{1+55*(0.05)^2} = 48$

ABAHUZAMUGAMBI: $n = \dfrac{40}{1+40*(0.05)^2} = 36$

KARABA Cooperative: $n = \dfrac{30}{1+30*(0.05)^2} = 28$

MUGOMBWA Cooperative: $n = \dfrac{25}{1+25*(0.05)^2} = 24$

Total Population : $n = \dfrac{150}{1+150*(0.05)^2} = 108$

Coffee producers Association	Population	Sample size
KOTEKAYA	55	48
ABAHUZAMUGAMBI	40	36
KARABA Cooperative	30	28
MUGOMBWA Cooperative	25	24
Total	**150**	**108**

CURRICULUM VITAE

Personal profile

Names: UMURERWA Denyse

Gender: Female

Marital status: married

Birth date: June 16, 1983

Nationality: Rwandan

Phone: (+250) 782691984

Educational background

Master in Business Administration (management): KIU, Uganda, 2012

Bachelor of Arts in Sociology: ULK, 2008

Advanced certificate in Human Sciences: Notre Dame de la Providence Karubanda, 2001

P6 at Butare Catholic, Rwanda, 1996

Work Experiences

3 Years as a Secondary School Teacher, GS GiKongoro, Rwanda.