International Journal of Economics, Commerce and Management
United Kingdom ISSN 2348 0386 Vol. VII, Issue 11, November 2019

http://ijecm.co.uk/

THE INFLUENCE OF ACCESS TO CREDIT ON SMALL SCALE COFFEE PRODUCTION IN KANGUNDO SUB-COUNTY, MACHAKOS COUNTY, KENYA

Francis Mutethya Kaula
Master of Business Administration (MBA) Candidate,
School of Business and Economics, Machakos University, Machakos, Kenya
framkar1970@gmail.com

Robert Arasa
Professor, School of Business and Economics, Machakos University, Machakos, Kenya
rarasa4@mksu.ac.ke

Susan Nzioki
Lecturer, School of Business and Economics, Machakos University, Machakos, Kenya
sknzioki@yahoo.com

Abstract

Despite many government interventions aimed at reviving the declining coffee industry in Kenya, the quality and quantity of Kenyan coffee is deteriorating. Research has shown that farmers are not applying production inputs due to lack of capital. The study reported in this paper adopted a descriptive survey design and was carried out with an aim of determining how access to credit influences small scale coffee production in Kangundo Sub-county. The study randomly sampled 2 factories in each of the 6 societies and included 370 farmers who were randomly selected. A validated and vetted questionnaire was administered to selected farmers. The results show that: less than half (42.0%) of farmers do not have collateral to secure loans; almost a third (31.1%) of farmers cannot get a guarantor to secure a loan; majority (69.2%) of the farmers cited interests charged on loans are quite high; and majority (43.3%) of farmers indicated that they do not have a solid financial relationship with lenders. The paper

recommends that the national and county government should consider coming up with a preferential coffee credit facility with features such as: a grace period of 12 months; preferential low interest rates; and with government guaranteeing each loan taken. The study recommends that future studies should explore on other variables such as climate change, land succession, age and gender.

Keywords: Small Scale Farmers, Access To Credit, Collateral Requirement, Interest Rates, Financial Relationship

INTRODUCTION

Coffee is grown in many parts of the world and plays an important role to the economies of many developing countries. It is the second traded commodity and first agricultural traded commodity in the world with an estimated value of over 80 billion US dollars annually (Thong, 2018). The global coffee economy is important to the livelihood of 25 million small scale producers and over 125 million people who directly or indirectly depend on coffee (Karanja & Nyoro, 2002). According to Gatura (2013), coffee originated from Ethiopia and was first grown by the Europeans and British only because Africans were not allowed to venture into any industry activity. The world coffee economy has undergone a significant transformation. According to the ICO report, over the last 50 years, there has been a steady growth in world coffee production, from 47 million bags in 1963 to 145.1 million bags in crop year 2012/2013. However, some countries in Africa, Kenya included, have experienced negative production grown.

In terms of production, Kenya grows mainly the Arabica variety. Since its introduction to Kenya, the predominant commercial cultivars grown are the SL28, SL34, K7 and Ruiru ll. Batian was released by the Coffee Research Foundation of Kenya (CRFK) in 2011. It is disease and pests resistant and has a higher yield than the traditional varieties. According to Bichanga and Kabaka (2013), coffee production in Kenya is two level; farmers organised into cooperatives and through estates. Production rates in cooperatives and estates are 65% and 35% respectively. Kegode (2005) add that there were 700,000 smallholder coffee farmers who marketed their produce through cooperative societies. This industry employed over 7 million people either directly or indirectly (GoK, 2009). However, with declining coffee industry, there is no recent data to show how many farmers and people are involved in coffee cultivation.

The coffee industry has been shrinking since 1990's from average of 1.3 million bags in 1988/1989 to 795,000 bags in 2018 translating to a decline of 38.8% (ICO, 2014; ICO, 2019). Research shows that coffee production has played a significant role in Kenya's economy. According to Mureithi (2008), coffee was the leading export crop and foreign exchange earner in Kenya from 1963 up to 1988. Between 1975 and 1986, coffee constituted over 40 per cent of Kenya's total export; but this value dropped to 9 per cent by 1992 and to 4 per cent in 2004. The contribution of coffee to the economy further dropped to 3% in 2010 and therefore lost its position as a top foreign exchange earner to tourism, horticulture and tea (Wangari, 2014). This paper attempts to link access to credit to declining coffee production.

Evidence demonstrates that when smallholder farmers are provided with credit at preferential credit terms, they result to maximizing their output. Kenya achieved its peak coffee production between the period 1970's and 1980's. Although many researchers have attempted to link declining coffee production since 1990's to the collapse of International Coffee Agreement (ICA) that ensured relatively higher and stable global prices in 1989, little is written on the contribution of a preferential credit that was in place. During this period, Kegode (2005) reveals that the Small holder Coffee Improvement project (SCIP) was introduced through a World Bank funded project through the cooperative bank of Kenya and the government of Kenya. The program provided credit to the tune of 2.6 Billion shillings to finance the implementation of Improved Coffee Payment system (IPS), Cherry advance Payment Systems (CAPS), Farm Input Loans Scheme (FILS) and Coffee Factory Development Scheme (CFDS). Since then, such an arrangement has not been in place and its absence has also seen declining coffee production.

Research suggests that access to credit can impact on coffee production. Coffee being a seasonal product requires investments prior to harvest and revenue returns. Gathura (2013) claim that small scale farmers with a low capital and savings base may frequently rely on advances and credit to supply requisite pre-harvest inputs and living expenses. However, Machuka (2016) reports that smallholder farmers face difficulties in accessing such needed credit facilities that would enable them to acquire modern agricultural inputs. He argues that sometimes farmers go into debt at exorbitant rates of interest of loans to buy inputs and if crops fail they have no way of paying back their loans. He concludes that promoting modern agricultural inputs, in the absence of financial access, may result in worse income and greater volatility.

On the same note, Kegode (2005) concur that there is limited access to credit and the cost of borrowing is high. He adds that the requirement by the commercial banks for security has been a major impediment to accessing finance by the coffee growers. According to Swinnen (2007),

most banks find the financing of agriculture as a very high-risk activity due to low profitability of the sector, high inflation rates, poor land markets and problems associated with collateral relating to the uncertainty of property rights. Berger and Udell (2006) claim that borrowers who have a long banking relationship with lenders would get reduced interest rates, and at times they may become less likely to pledge collaterals. On the contrary, research suggests that there is a weak relationship between banks and farmers and as a result, farmers have often been made to provide long-term collateral as security for short-term loans (Hayes, 2004).

In Kenya, Songa and Cheluget (2016) reports that farmers who need loans have difficulties in obtaining guarantors, a requirement at formal financial institutions; and thus posing a challenge for them to borrow funds from legal institutions. According to Adofu, Abula and Audu (2010), the interest rates charged by banks on loans are a key impediment to the economy and were found to discourage local investors. The local small-scale farmers may not afford the high-interest rates and so may opt not to take the loan thus affecting their choices of finance. This paper is grounded on the premise that access to credit could be one of the factors responsible for declining coffee production in Kangundo Sub-county.

Coffee production in Kangundo Sub-county is mainly through smallholder farmers who market their coffee through six (6) coffee co-operative societies. The sub-county lie at latitudes lower than 10° and altitudes of 3600-6300 feet with frequent rainfall that causes almost continuous flowering of coffee, which results in two harvesting seasons (Mutua&Kioko, 2016). Information provided by the Kangundo Sub-county Co-operative Development Office (2018) indicates that coffee production in Kangundo has fallen from a peak of 12,708,126 kilograms in 1989 to an average of 3,260,685 kilograms for the period 2012 – 2017. Between years 2000 and 2016, a lot of acres have been uprooted or destroyed to create room for more competitive agricultural enterprises. The average cherry production per tree per year is 1.77 kilograms against the national average of 3 kilograms per tree.

RESEARCH QUESTION

To what extent does access to credit influence small scale coffee production in Kangundo Sub-county?

THEORETICAL FRAMEWORK

Lender-Based Theory of Collateral

In 2007, Inderst and Mueller proposed Lender-Based Theory of Collateral model. The model states that borrowers whom lenders have smaller information advantage about them are required to provide more collateral. In their model, they opine that lenders who have soft private

information about a borrower are more advantaged than lenders who depend on publicly available information about borrowers. The model holds in an imperfectly competitive loan market. For example, the implications of technological innovations that that narrow the information advantage of local lenders, such as small business credit scoring, lead to lower loan rates but higher collateral requirements. Likewise, innovations that lower the costs of underwriting transaction loans lead to lower loan rates, and higher collateral requirements.

Moreover, the increase in collateral requirements is greater for borrowers for whom the local lender has a weaker information advantage, such as borrowers who are located farther away from the local lender, or borrowers with whom the local lender has no prior lending relationship. They conclude that: borrowers who can pledge more collateral are more likely to obtain credit; that observably riskier borrowers face higher collateral requirements; and that, controlling for observable borrower risk, collateralized loans are more likely to default ex post.

EMPIRICAL REVIEW

Access to formal and semi-formal financing could be a key driver to Vietnam's booming small scale coffee sector. According to IFAD (2015), banks implements national government policies for rural development which focus on enhancing preferential rural credit to farmers. Under this arrangement, farmers are given loans with a grace period of 12 months that earn an interest of 7%. Apart from this formal credit, there are other informal sources of credit. For instance, farmers can borrow credit for coffee production from their friends and relatives. Additionally, traders also advance credit in form of fertilizers and pesticides. It can therefore be concluded that Vietnam coffee farmers have access to various credit facilities that enables them to invest in coffee production.

Indonesia is a major word's coffee producer competing with Columbia as the World's largest producer and exporter. According to Neilson, Labaste and Jafee (2015), coffee production in Indonesia is mainly through 2 million smallholder farmers who live in remote villages. Most of the rural households are poor and are expected to remain in coffee cultivation. Pratiwi (2015) conducted a qualitative study that adopted a descriptive survey research design to investigate the role of farmer cooperatives in the development of coffee value chain in East Nusa Tenggara of Indonesia. The study used semi-structured interview guides to collect data. Included in the study were farmers, intermediaries, managers of the farmer cooperatives and government officials. The study results showed that financial resource constraints hindered farmers from producing coffee. Given that majority of coffee farmers are poor, it means, if they were to be provided with credit, Indonesia could become a top producer of coffee because it has a larger population involved in coffee production.

Bellachew (2015) carried a study to assess coffee production in Angola. The study was conducted through discussion with relevant government bodies, field visit and discussion with coffee farm owners, and review of available reports. The study results reveals that coffee farmers lack access to credit services in order to rehabilitate coffee farms that have been neglected for more than four decades due to 1963 – 2002 civil wars. The study further reports that rehabilitation of coffee farms require high capital investment which is not affordable by the small scale farmers and medium scale plantation owners. It can therefore be seen that access to credit by farmers can significantly impact on any coffee revival programs.

While evaluating the impact of Technoserve Coffee Initiative which was launched in 2010 in Ethiopia, Technoserve (n.d) report finds that access to credit can enable farmers to increase their output. Technoserve in 2010 through its Coffee Initiative spearheaded an effort that involved the International Finance Corporation (IFC) covering up to 75% of any credit losses that Nib bank would advance to farmers through cooperative societies. Because of this credit, a total of 62 cooperatives, representing more than 47,000 farmers, were able to export 3,000 metric tons of high-quality, washed coffee to international buyers; receiving premiums averaging 40% above the price of previously produced low-quality, unwashed coffee. It can therefore be concluded that access to credit by smallholder farmers can increase coffee production output as well as quality which is the main concern of this paper.

Evidence from a study conducted by Bernard, Sare and Musah (2014) on effects of interests rates in financing decisions conducted in Ghana showed that a majority of small-scale businesses resort to informal sector financing for support of their activities. This was attributed to several factors where the interest rate was found to be the major factor influencing the decisions made by the choices of finance. This paper was also interested in demonstrating how interest charged on loans can be a demotivating factor to access to credit.

In Kenya, it seems lack of access to credit is a problem that has affected smallholder coffee farmers for long. A study conducted by Kegode (2005) in Muranga District on economic governance of coffee had reported that there was limited access to credit and the cost of borrowing was high. The study had further revealed that the requirement by the commercial bank for security was a major impediment to accessing finance by the coffee growers. Recent empirical studies revealed in this paper still confirm that the situation has not changed almost a decade a half since then.

Minai, Nyairo and Mbataru (2014) conducted a descriptive study on socio-economic factors influencing coffee yields within the smallholder sector in Kirinyaga County. A total of 251 farmers were selected from the study area using the stratified random technique. The results showed that majority (76.52%) of farmers indicated that they need credit to farm their coffee.

Majority had access to credit while minority had no access to credit. Slightly more than half of indicated that the facility was not adequate. On where they were able to access credit, almost 9 in every 10 farmers indicated that they sourced their credit from their cooperative societies while very few (4.24%) said they sourced credit from the banks. As a result of availability of credit, the study found that majority of the farmers (72.91%) were producing 3 kilograms of cherry per tree or less which can be considered significantly higher compared to other regions such as Kangundo (1.77Kg/tree). Even though farmers in this study reported to have access to credit, the study still validates claim that farmers are not able to access formal credit institutions to access formal credit.

Kiplimo, Ngeno, Koech and Bett (2015) conducted a study on determinants of access to credit services by smallholder farmers in Western and Eastern Counties of Kenya. Structured interviews were used to collect qualitative and quantitative data from the credit financial service providers in the study area. Baseline survey data from International Maize and Wheat Improvement Centre (CIMMYT) was also used to supplement the collected data. The results show that, risk associated with borrowing, high interest rates and unavailability of credit financial institutions in the study area as among the major constraints smallholder farmers face. Credit financial providers on the other hand, claim that farming is risky, the distance to the farm makes appraisal process very difficult, and stringent regulations in the requirement of collateral is major constraints in providing credit financial services to the smallholder farmers.

Songa and Cheluget (2016) investigated determinants of choice of finance by coffee farmers in Machakos. The study adopted a descriptive approach which utilized both quantitative and qualitative research methodologies. The study used questionnaires to collect data from a sample of ninety-six (96) respondents. The study results showed that majority of farmers had a loan with a Farmer Self Help Group. Few others had: a loan from a SACCO; savings which they use to guarantee loans in a SACCO; have valid title deeds which they can pledge as collateral for a loan in a bank; and in other cases, the bank have refused to use rural land as collateral for loans. Also, the study results showed that the interest rate is a major determinant of their choice of finance. Further, the results revealed that family savings was the preferred choice of finance followed by sale of coffee income and then loans from financial institutions. These study findings still confirm farmers are not able to access the mainstream financial system to access credit.

RESEARCH METHODOLOGY

This study adopted a descriptive survey research design. Cooper and Schindler (2008), define descriptive survey as being concerned with finding out who, what, where, when and how variables. Descriptive studies not only establish facts but they are also solutions to problems

(Kothari & Gaurav, 2014). The target population for the study was all the small scale coffee farmers in Kangundo.

According to Kangundo Sub-county cooperative office (2018), there are 11,348 smallholder coffee farmers who market their produce through six cooperative societies. Therefore, the target population was all the 6 cooperative societies and all the 11,348 smallholder farmers.

Sampling Technique

A sample is defined as a smaller group obtained from the accessible population (Mugenda & Mugenda, 2003). The study included two (2) factories from each of the 6 societies in Kangundo Sub-county. Simple random technique was used to select the actual 2 participating factories. The study employed Krejcie and Morgan (1970) sample size table that gives sample sizes for finite population. According to Krejcie and Morgan (1970) table, farmers' population of 11,348 was matched with a sample size of 370 and was therefore sampled. From each of the participating factors, an equal number of farmers were randomly selected to participate in the study.

Data Collection Tools

Data was collected using self-designed vetted and validated questionnaire by a research expert. The questionnaires were administered on respondents through face-to face method. The questionnaires consisted of both open ended and closed questions to allow variety and in-depth information.

Analytical Approach

According to Kothari and Gaurav (2014), the most commonly used method in reporting descriptive survey research is by developing frequency distribution tables, calculating on percentages and tabulating them appropriately. After receiving the completed questionnaires, the researcher inspected all of them for completeness and suitability for coding. Analysis of quantitative data was performed using the Statistical Package for Social Science (SPSS) computer program (version 22).

Descriptive statistics such as frequencies and percentages was used to analyze the quantitative data. The qualitative data from the open ended question was analyzed thematically. Valid responses that were in line with the study objective were used to support quantitative data.

ANALYSIS AND RESULTS

Response Rate

The study sampled 370 smallholder farmers. Out of 370 questionnaires, ten (10) questionnaires were incompletely filled and were not analysed. The response rate was therefore 97.3%. The results are presented in figure below.

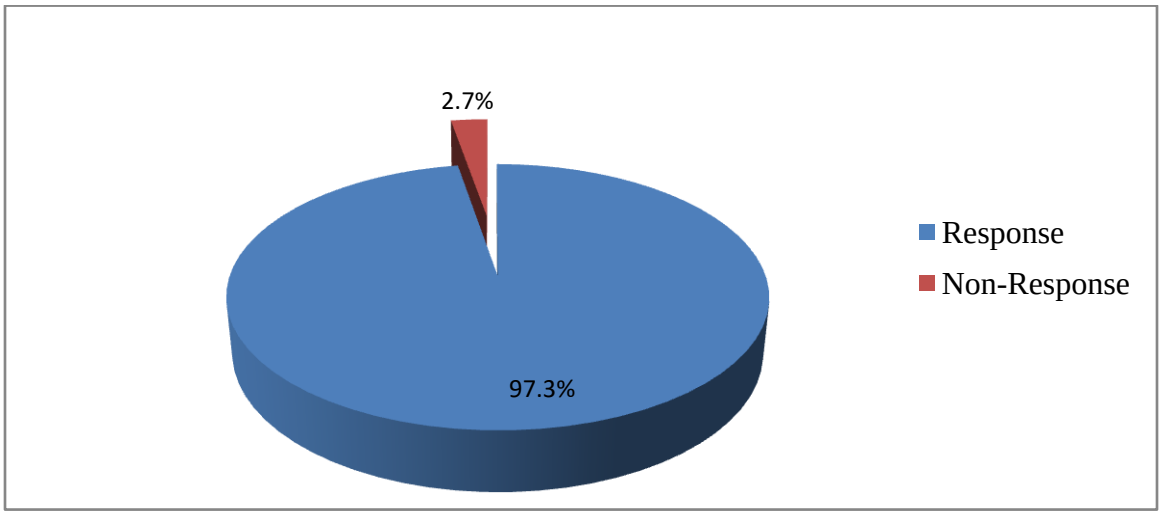

Figure 1: Response Rate

According to Mugenda and Mugenda (2003), a response rate of 50% is adequate enough for analysis and reporting while a response rate of more than 60%-69% is considered to be good and that of above 70% is excellent. This study achieved high response rate because farmers were interviewed using a translated questionnaire in Kikamba.

Demographic Information of Respondents

Gender of the Farmers

The study collected farmers' information on their gender. The results are presented in table 1.

Table 1: Gender of Coffee Farmers

Gender	Frequency	Percent
Male	216	60.0%
Female	144	40.0%
Total	**360**	**100.0%**

The results show that majority (60.0%) of smallholder farmers in Kangundo Sub-county are males while females were slightly lower (40.0%).

Age of Coffee Farmers

The study obtained information on farmers' age in Kangundo Sub-county. Figure 2 provides the information.

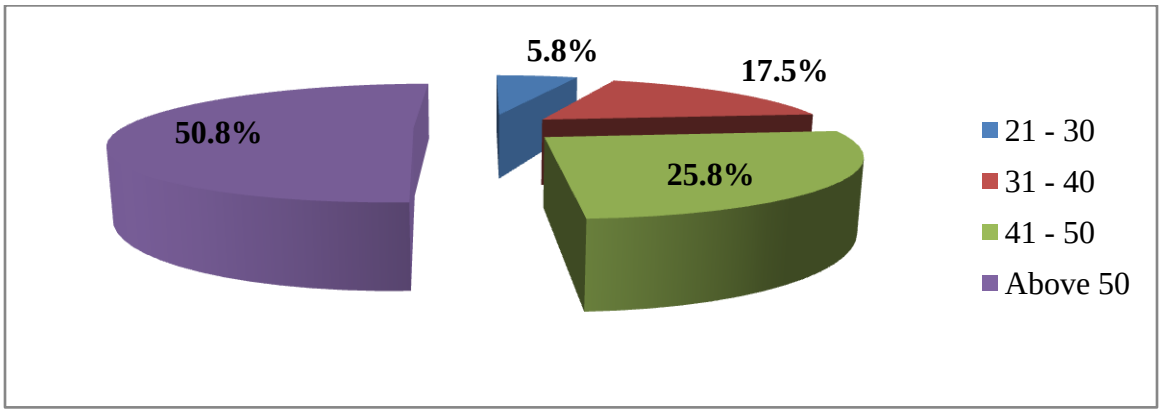

Figure 2: Age of Coffee Farmers

The results show that majority (50.8%) of coffee farmers in Kangundo Sub-county are above 50 years followed by 41 – 50 age bracket at 25.8%. Only few (23.3%) farmers are below 40 years, as represented by 17.5% who are between 31 – 40 bracket and 5.8% who are aged between 21 – 30 years. These findings indicate that either coffee farming in Kangundo Sub-county is dominated by aged farmers who probably own the coffee farms or youthful farmers are not interested in coffee cultivation.

Farmers' Level of Education

The study obtained information on the level of education of smallholder farmers in Kangundo Sub-county. Figure 3 provides the information.

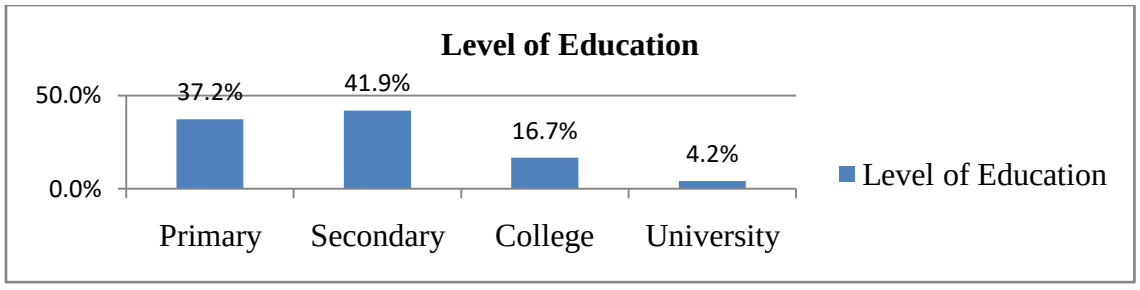

Figure 3. Farmers' Level of Education

The results show that majority of farmers have attained primary (37.2%) and secondary (41.9%) education while minority have attained college (16.7%) and university (4.2%) qualifications.

Land under Coffee

The study probed farmers on their size of land under coffee. Table 2 provides the information.

Table 2: Area under Coffee in Acres

Land Size	Frequency	Percent
Below 1	175	48.6%
Between 1 to 2	131	36.4%
Between 2 – 4	33	9.2%
5 and above	21	5.8%
Total	**360**	**100.0%**

Findings show that nearly half (48.6%) of coffee farms in Kangundo Sub-county are below 1 acre. Slightly more than a third (36.4%) of coffee farms are between 1 to 2 acres. In total, majority (85.0%) of coffee farms in Kangundo Sub-county are below 2 acres and thus cannot meet the minimum acreage requirement of 5 acres to be issued with pulping license.

The Influence of Access to Credit on Coffee Production

Coffee is a seasonal crop that is harvested twice (in some regions) but requires continuous application of inputs such as manure, fertilizer, harvesting and pruning labor and sprays to rid of pests infestation and diseases long before the coffee proceeds reach farm gates. Therefore, farmers may require obtaining all these inputs on credit. This study sought to investigate how access to credit by coffee farmers in Kangundo Sub-county may be impacting on their coffee production output.

Farmers' Credit Seeking Behaviour

Farmers were asked whether in the last 5 years prior to the study they had obtained any form of credit from a financial institution. The results are presented in figure 4.

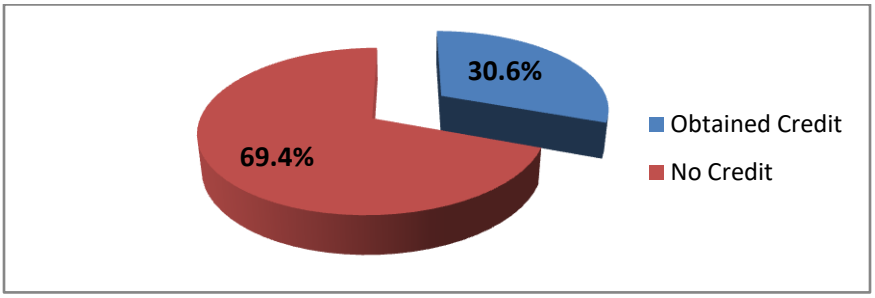

Figure 4: Farmers' Credit Seeking Behavior

The findings show that 7 in every 10 farmers had not obtained credit from a bank. The findings could suggest that farmers may not be attending to their coffee because they do not have access to credit.

Sources of Finance for Coffee Farming

Farmers were asked to list their sources of finance. The results are presented in figure 5.

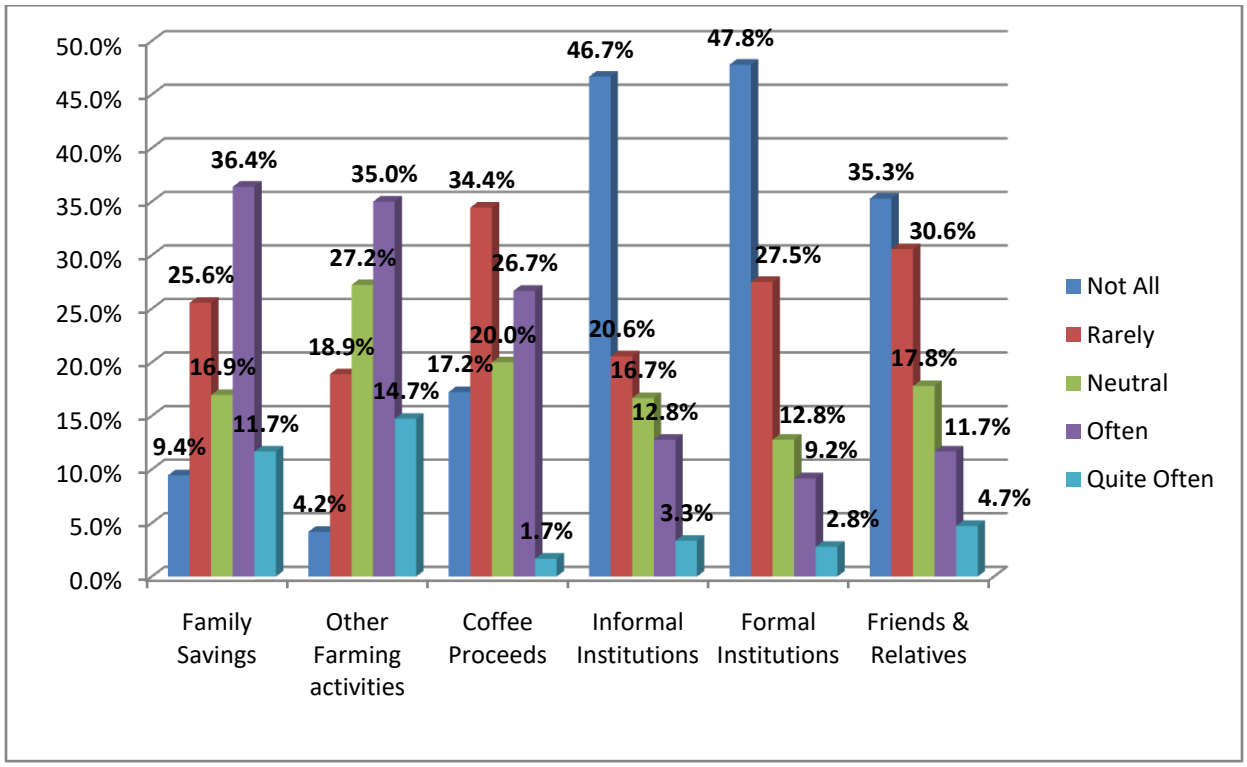

Figure 5: Farmers' Responses on their Sources of Finance

The results show that nearly half (48.1%) of farmers finance their coffee farming from their family savings and proceeds from other family activities (49.7%). The proceeds of the coffee itself, finance coffee farming at a small extent (28.4%) while sources from informal institutions (16.1%), formal institutions (12.0%) such as banks and friends and relatives (16.4%) are negligible. The finding clearly demonstrates the magnitude of farmers' inability to access mainstream financial system to access credit to finance coffee farming enterprise.

Factors Hindering Farmers from Accessing Formal Credit

The study sought to expose factors that may be hindering farmers from accessing credit. The results are presented in table 3 below.

Table 3: Farmers Responses on Factors Hindering Credit Access

	SD	D	N	A	SA
I do not have a title deed/log book that I can use to secure a loan	17.8%	31.7%	8.6%	30.3%	11.7%
I cannot get a guarantor to guarantee a loan	16.1%	36.1%	16.7%	23.6%	7.5%
Saccos/Banks decline to give loans to coffee farmers	15.0%	34.4%	20.3%	23.9%	6.4%
The interest on loans are quite high and discouraging	5.0%	10.0%	15.8%	41.4%	27.8%
I do not have a solid financial relationship with lenders	11.1%	29.2%	16.4%	27.5%	15.8%

Results show that less than half (42.0%) of farmers, as affirmed by 30.3% who agreed and 11.7% who strongly agreed to the statement that they do not have title deeds/logbook, do not have these important documents to secure loans. Almost a third (31.1%) of farmers, as indicated by 23.6% and 7.5%, who agreed and strongly agreed respectively, cannot get a guarantor to secure a loan. Nearly half (49.4%) of farmers, as indicated by 15.0% and 34.4% who strongly disagreed and disagreed respectively, denied that banks decline to give loans to coffee farmers, implying that majority are aware that with the right collateral requirements, they can secure a loan. It emerges that the main reason why farmers could be shying away from bank loans could be interests charged on loans. For example, majority (69.2%) of the farmers, as indicated by 41.4% and 27.8% who agreed and strongly agreed respectively affirmed that interests charged on loans are quite high. Majority (43.3%) of farmers, as affirmed by 27.5% who agreed and 15.8%, who strongly agreed respectively, indicated that they do not have a solid financial relationship with lenders. Although minority said guarantor and documents of titles are a hindrance, a larger proportion revealed that loan interests and relationship with lenders are the main reasons why they are not taking up loans.

Asked in an open ended question which other factor may have prevented them from accessing credit, some farmers indicated that coffee payments are unpredictable and therefore pose a significant danger to plan for credit. This farmer had this to say, “you know the coffee payments are quite low and unpredictable. Like in the last season, we were paid just K.shs. 10 per kilogram of cherry. There is another crop season we were paid over K.shs. 60 per Kilo. You see, if I had taken credit anticipating a high payout, I bet my farm would be by now auctioned and for that reason, I just avoid credit.”

Other farmers indicated that bank loans are not customized to take care of coffee farmer who receives payments once in year. A farmer observed, “I avoid bank loans because the repayments are regular. Like for my case I have a title deed I can use it to secure a loan but the requirement to repay on monthly basis irrespective of whether I have been paid the proceeds of coffee or not puts me off.” Other farmers decried that banks do not give sufficient grace period. A farmer observed, “If banks could give a longer grace period, I can take up a loan.” It can be concluded that there are other factors which still hinder farmers from accessing credit.

Results from the current study reported in this paper seem to concur with similar finding from other countries and also, other regions in Kenya. There is evidence that suggests that access to credit can motivate or demotivate coffee production. A study by Pratiwi (2015) on the role of farmer cooperatives in the development of coffee value chain in East Nusa Tenggara of Indonesia found out that financial resource constraint was hindering farmers from producing coffee. Access to formal and semi-formal financing is a key driver to Vietnam’s booming small scale coffee sector. According to IFAD (2015), banks implements State Bank's nation-wide policies for rural development for preferential rural credit conditions. Under this, farmers usually borrow the loan amount for a period of 12 months, and have access to the preferential 7% annual interest rate.

According to ICO (2014), Angola is one of the countries experiencing negative coffee production. Bellachew (2015) reveals that coffee farmers lack access to credit services in order to rehabilitate coffee farms that have been neglected for more than four decades due to 1963 – 2002 civil wars. Just like in Kangundo Sub-county, farmers do not have access to credit. Evidence from a study conducted by Bernard, Sare and Musah (2014) showed that a majority of small-scale businesses resort to informal sector financing for support of their activities. This was attributed to several factors where the interest rate was found to be the major factor influencing the decisions made by the choices of finance. This study concurs with the present study that shows that farmers in Kangundo Sub-county resort to informal credit. The findings that only 12.0% of farmers source their credit from banks agree with similar findings from a study by Minai et al (2014) on socio-economic factors influencing coffee yields within the smallholder sector conducted in Kirinyaga County. The study results showed that only very few (4.24%) farmers said they sourced credit from the banks.

The findings that interests rates is a major hindrance to access to credit are consistent with similar findings from a study by Kiplimo et al (2015) on determinants of access to credit services by smallholder farmers conducted in Western and Eastern Counties of Kenya. The results show that, risk associated with borrowing and high interest rates are the major constraints smallholder farmers face. Similarly, Songa and Cheluget (2016) study on

determinants of choice of finance by coffee farmers in Machakos showed that the interest rate is a major determinant of choice of finance by coffee farmers. Further, the results revealed that family savings was the preferred choice of finance followed by sale of coffee income and then loans from financial institutions.

CONCLUSION AND RECOMMENDATIONS

The objective of this paper was to expose the influence of access to credit on small scale coffee production in Kangundo Sub-county. The results of the study reported in this paper show that less than half (42.0%) of farmers, do not have title deeds or log book to secure loans, almost a third (31.1%) of farmers cannot get a guarantor to secure a loan, majority (69.2%) of the farmers affirmed that interests charged on loans are quite high and majority (43.3%) of farmers indicated that they do not have a solid financial relationship with lenders. Based on the findings, this paper concludes that lack of collateral, guarantor requirement, high interests rates charged on loans and lack of solid financial relationship are some of the factors hindering farmers from accessing formal credit to increase their coffee yields. The paper recommends that both the national and county government should consider coming up with a preferential rural coffee credit that can be administered through existing financial intermediaries. The credit can be tailored in terms of grace and repayment period that should be pegged on coffee yields and payment of coffee proceeds. On how this can be achieved, the national government or the county government can borrow from Vietnam's experience where banks implements State Bank's nation-wide policies for rural development for preferential rural credit conditions (IFAD, 2015). Under this, farmers can borrow the loan amount for a period of 12 months, and have access to preferential low annual interest rate with the government securing farmers' loans. The study recommends that future studies should explore on other variables such as climate change, land succession, age and gender.

REFERENCES

Adofu, I., Abula, M., & Audu, S. (2010). An assessment of the effects of interest rate deregulation in enhancing agricultural productivity in Nigeria. Current Research Journal of Economic Theory. 2(2).

Berger, A. N. & Udell, G. F. (2006). A more complete conceptual framework for SME finance Journal of Banking & Finance, 30(11).

Bichanga, W. & Mwangi, J. K. (2013). Effects of Liberalization on Coffee Production in Kenya. European Journal of Business and Management. 5(3).

Bellachew, B. (2015). A brief account of coffee production in Angola: a quick assessment report. Abidjan, Cote d'Ivoire. African Coffee Research Network.

Bernard, B., Sare, Y. A. & Musah, A. (2014). The effect of interest rates on micro, small and medium enterprises financing decision in Wa Municipality of Ghana. International Journal of Business, Humanities and Technology, 4(4).

Chemiat, N. J. (2014). Effect of advance payment of coffee delivered to farmers' cooperative societies on farmers' satisfaction a case of Gusii cooperative societies, Kenya. International Journal of Innovative Research and Development. 3(13).

Cooper, D.R. and Schindler, P.S. (2008). Business Research Methods (10th edn). Boston. McGraw-Hill

Government of Kenya (GoK).(2009). Agricultural Sector Development Strategy. Nairobi. Government printer

IFAD.(2015). Field report rural finance of coffee smallholders in Vietnam - case study in Dak Nong Province. Retrieved from https://asia.ifad.org/documents/10751/084b3711-14d8- 42f8-8d40-d604fa93e385

International Coffee Organization (ICO). (2014).World Coffee Trade (1963 – 2013): A Review of the Markets, Challenges and Opportunities Facing the Sector. Author.

International Coffee Organization (ICO). (2019). Total production by all exporting countries. Retrieved from http://www.ico.org/prices/po-production.pdf

Karanja, A. and Nyoro, J. (2002).Coffee prices and regulation and their impact on livelihoods of rural community in Kenya. Kenya Coffee, 74 (387).

Kegode, P. (2005). Economic Governance of coffee sector-Focus central Province. Nairobi. Center for Governance and Development

Kiplimo, J. C., Ngenoh, E., Koech, W., & Bett, J. K. (2015). Determinants of access to credit services by smallholder farmers in Kenya. Journal of Development and Economic Development. 7(9), 303-313.

Kothari, C. R.& Gaurav, G. (2014).Research methodology, (3rd Ed). New Delhi. Age International Publishers.

Kuguru, N. P. (2016). Effects of government policies on performance of coffee industry in Kenya.Journal of Business and Management. 18(6), 55 – 60.

Krejcie, R. V. & Morgan, D. W. (1970). Determining sample size for research activities. Educational and Psychological Measurement.

Machuka, S. M. (2016). To examine the productivity of small scale holdings of Arabica coffee and its supply response in Kenya. Kinondoni. The Open University of Tanzania.

Minai, J. M., Nyairo, N. & Mbataru, P. (2014). Analysis of socio-economic factors affecting the coffee yields of smallholder farmers in Kirinyaga County, Kenya. Journal of Agricultural and Crop Research, 2(12), 228-235.

Monroy, L., Mulinge, W. & Witwer, M. (2013).Analysis of incentives and disincentives for coffee in Kenya: Technical notes series. Rome. FAO.

Mugenda, O.M. & Mugenda, A. G. (2003). Research Methods: Quantitative and Qualitative Approach. Nairobi. Acts Press.

Mutua, A. M. &Kioko, M. F. (2016). An analysis of agribusiness support projects contribution on coffee production in Machakos county-Kenya. International Journal of Education and Research, 4(7).

Mureithi,L. (2008). Coffee in Kenya: Some challenges for decent work. Washington D.C. International Labour Office.

Murthy, P. S. & Madhava Naidu, M. (2012).Sustainable management of coffee industry by products and value addition—A review. Resour. Conserv. Recycl. 66, 45–58.

Neilson, J., Labaste, P. & Jaffee, S. (2015). Towards a more competitive and dynamic value chain for Indonesian Coffee-Working Paper #7. Prepared for the World Bank, Wahington DC.

Pratiwi, Y. I. S. (2015). The role of farmer cooperatives in the development of coffee value chain in East Nusa Tenggara Indonesia. Unpublished MSC thesis. Berlin. Humbolt University of Berlin.

Roshetko, N. A. (2015). Agroforestry and forestry in sulawesi series: smallholders' coffee production and marketing in Indonesia: a case study of two villages in South Sulawesi Province. (Working paper 205). Bogor, Indonesia: World Agroforestry Centre (ICRAF). DOI: 10.5716/WP15690.PDF

Songa, P. & Cheluget, J. K. (2016). Determinants of choice of finance by coffee farmers in Machakos. International Journal of Management and Leadership Studies. Vol. 1.

Swinnen, J. F. (Ed.). (2007). Global supply chains, standards and the poor: how the globalization of food systems and standards affects rural development and poverty. Cabi. Thaler, R. (1985).Mental Accounting and Consumer Choice. Journal of Marketing Science. 4(3).

Technoserve (n.d).The coffee initiative: Phase one final report 2008 – 2011. Author Retrieved from https://www.technoserve.org/files/downloads/coffee-initiative-phase-one-final- report.pdf

Thong, H. Q. (2018).Economic analysis of sustainable coffee production in Vietnam (Unpublished Phd thesis).Brisbane, Queensland. Queensland University of Technology.

Wangari, R. (2014). Factors that contribute to the declining trend of coffee production in Nyeri County, Kenya. Nairobi. University of Nairobi.