

Determinants of Access to Credit and Performance of Smallholder Farmers in Kumba Municipality, South West Region of Cameroon

Abstract

Cameroon like any other developing country in the world, main economic back bone is agriculture. Owing to this sector, it is mostly dominated by smallholder farmers. Limited finance remains the major challenge hampering production, productivity and income of smallholder farmers. Thus, this study aimed at investigating the impact of the determinants of access to credit on the performance of smallholder farmers in the Kumba municipality. Specifically, the study sought to examine the impact of (1) collateral security, (2) cost of credit facility and (3) knowledge/awareness of financial procedures as determinants of access to credit on the performance of smallholder farmers in the Kumba municipality. The study adopted a descriptive survey research design. Using a multi-stage sampling procedure, the study adopted the sample size of 272 smallholder farmers in the Kumba municipality. Questionnaire was used for data collection. The data was analysed descriptively with the use of frequency tables and inferentially, using the multiple regression analysis. The findings revealed that collateral security, cost of credit facilities and knowledge/awareness of financial procedures have a significant impact on the performance of smallholder farmers as indicated by the t-values of 4.74, 4.73 and 17.43 respectively. The F-statistics of 21.19 which was greater than the critical F-value of 3.157 implied that there exists a significant relationship between the determinants of access to credit (collateral security, cost of capital and knowledge and awareness of financial procedures) and performance of small holder farmers in the Kumba municipality. The study recommended amongst others that government should provide exclusive financial services to farmers and also ensure the smooth running and establishment of policies governing agriculture. Micro financial institutions should provide financial literacy to smallholder farmers and also develop new financial products that will cater for the needs of smallholder farmers both in the Kumba municipality and Cameroon.

Keywords:- Smallholder farmers, Formal Credit, Performance, Collateral Security, Cost of Capital

1.0 Introduction

Agriculture continues to be a vital tool for sustainable development and poverty reduction in Cameroon; yet, financial constraints in the sector remain pervasive, farming remains costly and finances inequitably distributed, severely limiting smallholders, the capability to compete (Mandiefe, 2015; Besong, 2011; World Bank, 2013). Consequently, cultivation practices in Cameroon continue to be characterized by the use of essential tools, small farm size, low capital input, high labor inputs, limited control of plant pests and diseases, and low yields (MINADER 2014, 2015).

Making available credit is one of the essential components of rural development, which helps to achieve rapid and sustainable growth of agriculture (Yehuala, 2009) . Farm credit is a temporary substitute for personal savings, which enhances the process of agricultural production and productivity. To boost agricultural production and productivity, farmers have to use improved agricultural technologies (Yehuala, *ibid*). However, the adoption of modern technologies is relatively expensive, and smallholder farmers cannot afford to self-finance. As a result, the utilization of agricultural technologies is very low. It is argued that enhanced provision of rural credit would accelerate agricultural production and productivity (FAO, 2016).

Kumba the capital of Meme division and the agricultural hub of the Southwest region (SWR) has contributed enormously to the agricultural output of the southwest region over the years. Just like other areas of the SWR, the majority of agricultural activities in Kumba are carried out by smallholder farmers. This farmers generally cultivate on small pieces of land using rudimentary tools. The availability and access to food to a large extent depend on increased food production as well as income to meet the household's consumption needs (Besong, 2016). Funds to carry out timely purchases of cash inputs such as fertilizer, quality seeds, herbicides and pesticides into agricultural production, as well as to buy capital equipment like hoes, cutlasses and water pumps have long been regarded as one of the critical constraints hindering increased food production in smallholder agriculture (Akanga, 2017; Chenaa & Kimengsi, 2017).

Most of these Smallholder farmers finance their agricultural activities through equity funds from their on-farm and off-farm activities (Seini, 2002; Sadick, Egyir & Amegashie, 2013). Due to the subsistence type of agriculture practiced by the smallholder farmers, their on-farm and off-farm activities are usually smallscale and yield little income. As such, they are not able to invest in

improved production technologies that will increase food production. This challenge plaguing the agricultural sector in Kumba is further corroborated by an interview granted by George Njeck, a cocoa farmer in the Mbonge Subdivision in the Southwest Region by the Post Newspaper, Business News of Thursday, 4 September 2014, and he said: “We need money more than the Cameroon Government,” while explaining that it is in order to improve their productivity.

Many of these farmers cannot farm on a large scale because they mostly use family labour for farming, so if the family size is small, farming a large piece of land would be very difficult (Chenaa & Kimengsi, 2017). The only other possibility would be to get paid labour for a larger farm which entails money to pay this extra labour. Banks and microfinance institutions always ask for collateral security before giving out loans, and these farmers have only their farmlands as collateral. The principal problem is that most of these farmlands have no land title, which makes them invalid to be used as collateral security making it difficult for them to have a loan (Bichi, 2016). Also, the cost of accessing these institutions is perceived high by the farmers. Worse still, some of the farmers do not have information and knowledge of the available financial services for them, their importance’s and their accessibility modalities. This has limited their access to formal credit. The inability for these farmers to access credits have severe implications for the development of the economy of the SWR in particular and Cameroon in general.

For Cameroon to be able to attain the Vision 2035 and meet its developmental targets, the small-scale farming sector should be given due attention. Many efforts have been made by the government of Cameroon to make funds available to farmers to increase agricultural output in Cameroon. Despite these efforts, one important problem remains, namely smallholder access to these funds (Akanga, 2017; Chenaa & Kimengsi, 2017). The study sought to investigate the determinants of access to credit by smallholder farmers and to ascertain its relationship with the performance of the farmers, using Kumba as a case study. Specifically, the study sought: to examine the relationship between collateral security, cost of credit facility and knowledge/awareness of financial procedures as a determinant of access to credit and the performance of smallholder farmers in the Kumba municipality.

1.1 Hypothesis of the study

1.1.1 Main Hypothesis

The determinants of access to credit have no significant impact on the performance of smallholder farmers in the Kumba Municipality.

1.1.2 Specific Hypothesis

1. Collateral security as a determinant of access to credit have no significant impact on the performance of smallholder farmers in the Kumba municipality.

2. Cost of credit as a determinant of access to credit have no bearing on the performance of smallholder farmers in Kumba municipality

3. knowledge/awareness of financial procedures as a determinant of access to credit have no significant impact on the performance of smallholder farmers in the Kumba municipality.

2.0 Literature Review

Historical development and the associated culture, of the banking system, underpin the problem of the emphasis on the provision of collateral as a primary condition in lending (Subeyr & Muturi, 2017). Banks have always adopted an adverse risk stance towards small firms, with an accompanying inability to focus on the income generating potential of the venture, when analyzing the likelihood of loan repayment (Beaver, 2002). Credit constraints can occur when banks increase collaterals for loans. As a result, banks charge low-interest rates for less risky businesses (big farmers) and high-interest rate for risky businesses (Smallholder farmers) (Stiglitz & Weiss, 1981). This is supported by Byaruhanga (2013) who conducted a study to examine the empirical relationship between credit terms, credit accessibility and the performance of agricultural cooperatives in Rwanda. The result revealed that there is an inverse relationship between credit terms, accessibility and the performance of agricultural cooperatives.

Lack of access to credit facilities is almost universally indicated as a key problem for small and micro enterprises. In most cases, even where credit is available mainly through banks, the entrepreneurs may lack freedom of choice because the banks' lending conditions may force the purchase of heavy, immovable equipment that can serve as collateral for the financial institution. Credit constraints operate in a variety of ways in Cameroon where undeveloped capital market forces farmers to rely on self -financing or borrowing from friends and relatives. Lack of access

to long-term credit for micro, small and medium smallholder farmers forces them to rely on high-cost short term finance (Wanjohi & Mugure, 2008).

In a study by Hallberg, (2002), he singled out high risks associated in lending smallholder farmers and fixed costs associated in getting sound information about the borrower by financial institutions as the principal driving force to the high cost of credit. High transaction costs do therefore not only increase the cost of borrowing but can also restrict access to external finance for some borrower groups. While transaction costs are restraining for all borrowers, there are arguments that they are even more constraining for small and micro enterprises.

According to Masuko & Marufu (2003), high transactions cost of borrowing emanating from these two sources discourage small farmers, artisans, entrepreneurs from availing themselves of formal credit. Here the market fails from the demand side. Girabi & Mwakaje (2013) posit that the major factors hindering smallholder farmers' access to credit were reported to be lack of information, inadequate credit supply, high-interest rates and defaulting. It has been estimated that only five percent of the farmers in Africa and about fifteen percent in Asia and Latin America have had access to formal credit; and on an average, across developing countries, five percent of the borrowers have received eighty percent of the credit (Bali, 2001). Access to affordable agricultural credit enables farmers, who constitute the majority of the population in most developing countries, to adopt new technology and take advantage of new economic opportunities to increase production and income (Gyau, Mbugua & Oduol, 2016).

To more effectively facilitate smallholder farmer's access to microcredit, there is need to better understand and identify the major factors that affect smallholder farmers' accessibility to microcredit and the influence of accessing credit on smallholder farmers' performance (Mottaleb, Krupnik & Erenstein, 2016). Consequently, due to this gap, it will require both the knowledge of the present study and requires further research.

Even though they have been a plethora of research carried out in the thematic area, a lot of emphasis has been laid on ascertaining the contribution of micro-credits alleviating poverty (Toh, 2013; Akanga 2017), agricultural productivity (Besong, 2011; Awotide, 2015; Ogunremi, 2013), agricultural variability challenges and agricultural productivity (Tingem, Rivington & Bellocchi 2009; Abdelateif, 2013; Balgah, 2017), agricultural extension services and wellbeing (Nyambi, Shinn & Briers, 2017; Besong, 2016). However, to the best of the researcher's knowledge, very

little is known on the factors influencing access to credit in the Kumba municipality. The authors who researched on the determinants of access to microcredits mostly looked at collateral security and in line with the performance of small and medium-sized enterprises. This study intends to fill the gap by assessing the impact of the determinants to access of credits on the performance of smallholder farmers. The study did not limit the variables to collateral and demographic factors as most studies did, but, expanded it to include knowledge/awareness and cost of credit facilities.

Also, Unlike Okaten & Osil (2004) which made use of the probit model in their study, this study adopted the linear regression analysis to ascertain the impacts of the determinants of access to credit on the performance of smallholder farmers in Kumba municipality SWR of Cameroon. To more effectively facilitate smallholder farmers' access to microcredit, there is need to better understand and identify the major factors that affect smallholder farmers' accessibility to formal credit and the influence of accessing to credit on smallholder farmers' performance. Mottaleb, Krupnik & Erenstein (2016) posit that to more effectively facilitate the development and investment in scale-appropriate machinery, there is a need to better understand the factors associated with agricultural machinery purchases and service provision. Consequently, due to this gap, it will require both the knowledge of the present study and requires further research. This study will contribute to knowledge by filling this gaps, thereby, updating and expanding the existing literature.

3.0 Materials and Methods

3.1 Study Area

Kumba is a city in the Southwest Region, Western Cameroon also known as K town. Kumba has an estimated population of about 400,000 inhabitants with about $\frac{3}{4}$ of this population falling within the youthful age group. Kumba which is the headquarter and the economic capital of the Meme Division of Cameroon is located between latitude 3° 4' N of the equator and longitude 9° 10' east of the Greenwich Meridian with a total surface area of about 800 km² (Kumba Urban Council, 1995). It is bounded to the North by Barombi Kotto, to the South by Mukonje and Matumba II, to the East by Mabanda and to the West by Kake II (Figure 1). Kumba is a town in Cameroon with a colonial history; it has gone through pre-colonial, through colonial and post-colonial developments and can, therefore, be used to picture the Cameroonian situation. Also, it

acts as a redistribution center for all divisions of the Southwest Region, and it is a transit zone to Nigeria through Mundemba and other creek zones of the Region.

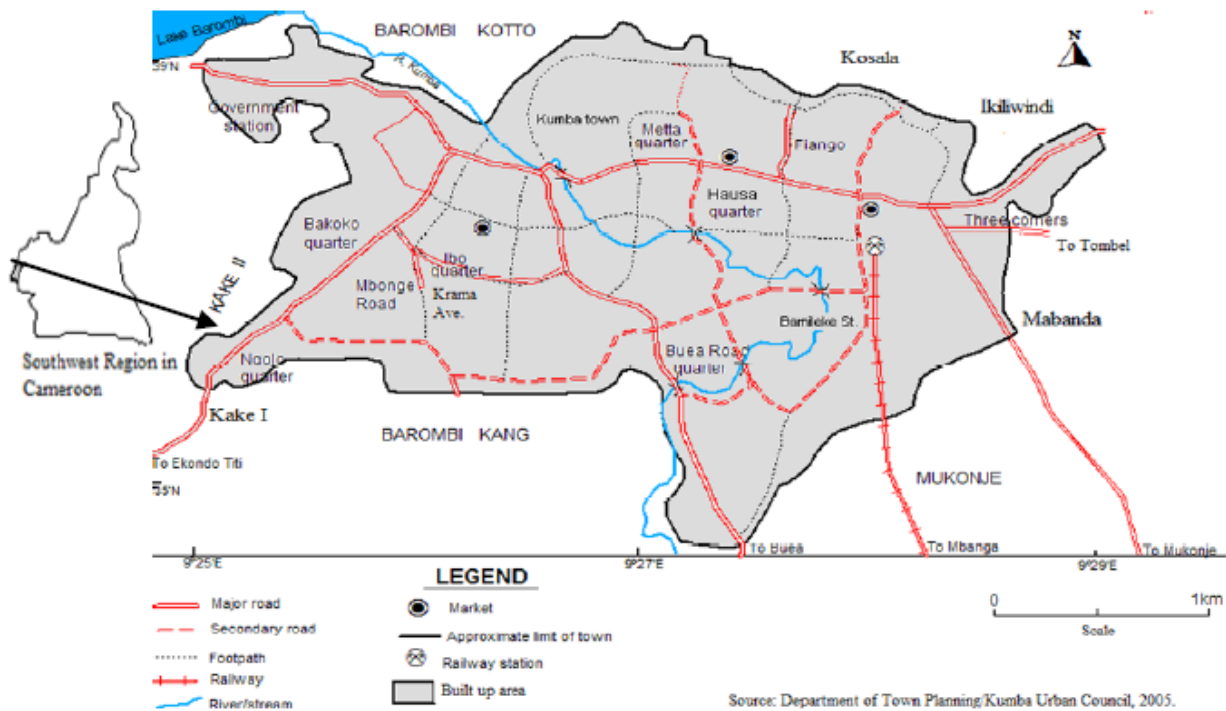


Figure 1. The map of Kumba (Department of Town Planning/KUC, 2005).

3.2 The Study Design

The study adopted the survey research design. This design was adopted because it enabled the researcher obtain data about practices, situations at one point in time through questionnaires and interviews in the field.

3.3 Population and Target Population

The total population of Kumba is about 400.000 inhabitants and the target population constituted all smallholder farmers registered under cooperative societies. The information of the registered farmers were obtained from the Delegation of Agriculture and Rural Development in Kumba. This information is presented on the table 1.

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Table 1 Target=ed population

Cocoa	472	151.75
Cassava	166	53.37
Cocoyam's	87	27.97
Maize	77	24.75
Plantains	34	10.93
Yams	10	3.21
Total	846	272

Source: Delegation of Agriculture and Rural Development, Kumba (2017)

3.5 Sampling Technique and Sample Size

The researcher used a multi-staged sampling procedure. The first stage, the farmers were grouped according to their activities (cocoa, cassava, cocoyams, plantains, and yams) as seen in table 1. In stage two, a proportionate sampling procedure was used to determine the number of farmers to be selected from each of the group based on the sample size. Finally, in stage three, the farmers were randomly selected with the use of the balloting system to make up the determined proportion of each category.

3.6 Data Collection

Data for the study were collected from primary sources; It involves the use of a structured questionnaire, interviewing method was employed for the collection of data.

4.0 Findings and Discussion

4.1 Demographic information of Respondents

The first part of the presentation of findings was done by cross-tabulations to ascertain whether some demographic factors (gender, age, and level of education) influence the access to credit in

the Kumba municipality. Access to credit was further cross-tabulated with Performance of smallholder farmers. The findings are represented in table 4.1, 4.2, 4.3 and 4.4 respectively.

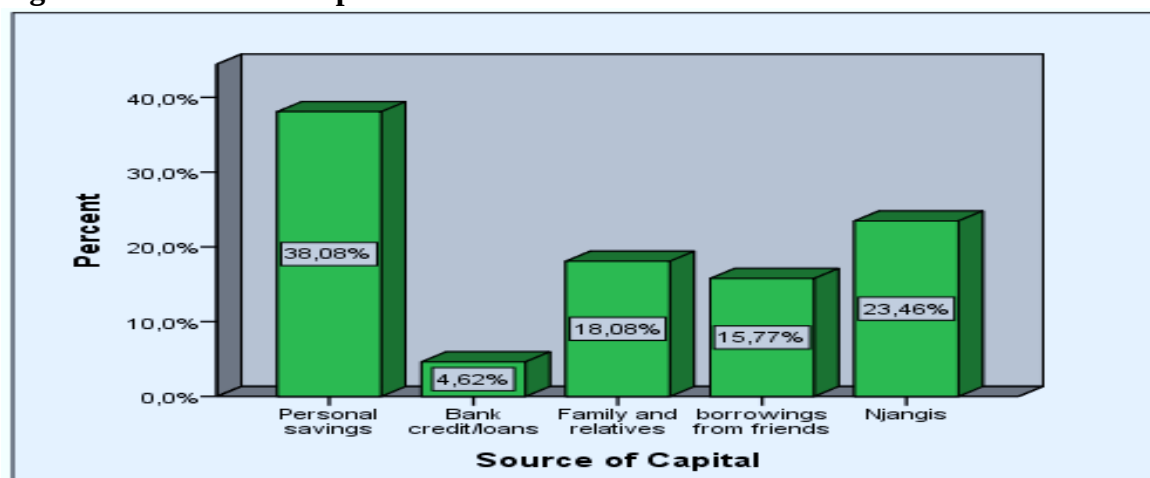
Table 4.1: Access to Formal Credit by smallholder farmers in the Kumba Municipality

	Frequency	Percent	Cumulative Percent
Yes	75	27.6	27.6
No	197	72.4	100
Total	272	100.0	

Source: Field survey, 2017

Table 4.1 shows that majority of the respondents, that is 72.4% do not have access to credit and only 27.6% of the respondents have access to credit in the Kumba municipality.

Figure 4.1 Sources of Capital



Source: Field survey, 2017

Figure 4.1 reveal that almost half of smallholder farmers (38.08%, 23.46%), finance their farming activities using internal sources (personal savings, Njangi, family and relatives). On the other hand, only 4.62% smallholder farmers of the total sample finance their farming activities using bank credit. Bank credit is the least source of capital used by farmers.

Table 4.2 Access to credit * Gender of smallholder farmers Cross tabulation

	Gender of smallholder farmers		Total
	Male	Female	
Access to credit Yes	27	48	75
Access to credit No	95	102	197
Total	122	150	272

Source: Field survey 2017

The findings in Table 4.2 reveal that more female (102) do not have access to credit, as compared to males (95). While of the 272 respondents, only 75 of them have access to credit, 48 females, and 27 males.

Table 4.3: Access to credit * Level of Education Cross tabulation

	Level of Education				Total
	No formal education	primary education	Secondary education	Tertiary education	
Access to credit Yes	20	45	10	0	75
Access to credit No	78	80	35	4	197
Total	98	125	45	4	272

Source: Field survey 2017

The findings on table 4.3 reveal that majority of the respondents 197, cannot access finance due to little or no formal education (that is; 78 are farmers with no formal education, 80 are farmers with primary education and finally 35 farmers having a secondary education). Thus, it can be observed that most farmers do not have access to finance due to little or no formal education.

Table 4.4 Access to credit * Performance of smallholder farmers Cross tabulation

		Performance of smallholder farmers						Total
		increase in productivity	increase annual return	improve technology	increases the skills of labor	Increase farm size	increase the use of fertilizer and chemicals	
Access to credit	Yes	27	40	35	36	26	24	188
	No	16	18	16	14	5	13	82
	Total	43	58	51	50	31	37	270

Source: Field survey 2017

Apart from the demographic factors that influence access to finance, the study also looked at the influence of access to credit on performance. Access to credit was cross-tabulated with the performance of the smallholder farmers to find out if access to credit can influence the performance of farmers. Table 4.4 revealed that if smallholder farmers have access to credit, it will increase productivity (27), annual return (40), technology (35), skill labour (36) farm sizes (26) and use of inputs (24). On the other hand, if they do not have access to credit, there will be a decrease in productivity (16), annual return (18), technology (16), skill labour (14) farm sizes (5) and use of inputs (13).

4.2 Presentation of Findings in line with the Objectives of the Study

Table 4.5 Means interpretation keys

Range	Extent of Influence
1.0 – 1.5	Very Small Extent
1.6 – 2.5	Small Extent
2.6 – 3.5	Moderate Extent
3.6 – 4.5	Great Extent
4.6 – 5.0	Very Great Extent

Table 4.5 would be used to explain the extent to which factors influence the access to credit. The scale used is from 1 to 5. Where 1.0-1.5 is very small extent, 1.6 – 2.5 small extent, 2.6 – 3.5 moderate extent, 3.6 – 4.5 great extent and 4.6 – 5.0 very great extent. This scale of measurement is adopted from (Gichuki, Njeru & Tirimba, 2014)

Table 4.5.1 Influence of collaterals securities

N ⁰		Mean	St. Deviation
1	The collateral demanded by most financial institutions are so high	3.61	1.304
2	Smallholder farmers do not have enough assets to stand as a collateral for loans	3.85	1.214
3	There are many financial institutions that give collateral free loans	3.63	1.149
4	One of the easiest way to secure a loan is through group guarantee	3.50	1.377
5	Limited capital means limited collateral which will limit your access to loans	3.61	1.362
6	Collateral requirement affect the capital of smallholder farmers	3.85	1.232
	Average	3.68	1.26

Source: Primary Data from field survey, (2017)

The findings in table 4.5.1 shows that, the high collaterals demanded influenced access to credit to a great extent (M= 3.61, SD = 1.304), while the fact that smallholder farmers don't have enough assets influences access to credit to a great extent (M = 3.85, SD = 1.214), so do the fact that MFI's give free loan influenced access to credit to a great extent (M =3.63, SD = 1.149), adding to that, group guarantee influenced the access to credit to a moderate extent (M = 3.50, SD = 1.377), and the limited collaterals influenced the access to finance to a great extent (M = 3.61, SD = 1.362) and finally collateral requirement influences the access to credit to a great extent (M = 3.85, SD = 1.232). Thus to conclude, collateral securities influence the access to credit to a great extent (Av, M= 3.64, SD=1.26). Showing that access to credit was highly restricted by the stringent collateral requirements.

282 **Table 4.5.2: the influence of cost of capital**

N ⁰		Mean	St. Deviation
1	Financial institutions charge high interest rates	3.77	1.288
2	Taxes, Loan processing charges and inspection fees prior to the awarding of loans are very high	3.93	1.314
3	There is room for negotiation of the interest rate with most financial institutions	3.75	1.368
4	High inflation level of taxes and fluctuation of interest rates increases cost of credit	3.80	1.413
5	Smallholder farmers do not meet up the repayment period	3.77	1.381
6	The cost involved in lending procedure also increases the cost of credit.	3.97	1.265
	Average	3.83	1.34

283 **Source: Primary Data from field survey (2017)**

284 On the extent to which cost influences the access to credit, table 4.5.2 shows that, the high interest
 285 rate influence access to credit in a great extent (M= 3.77, SD = 1.288), while the high taxes, loan,
 286 proceeding charges influences the access to credit to a great extent (M= 3.93, SD= 1.214),
 287 followed by no negotiating room of interest rate influences access to credit to a great extent (M =
 288 3.75, SD = 1.368), also fluctuation of taxes influenced access to credit to a great extent (M = 3.80,
 289 SD = 1.413), adding to that, repayment period influenced access to credit to a great extent (M =
 290 3.77, SD = 1.381), and finally fluctuation of interest rates influenced the access to finance to a
 291 great extent (M = 3.97, SD = 1.265). Cost of credit influence access to credit to a great extent
 292 (AV, M= 3.83, SD=1.34). Thus proving that high-interest rate, taxes, legal fee, insurance and
 293 traveling expense are the cost factors that influence the access to credit.

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295 **Table 4.5.3: Influence of knowledge/awareness**

N ⁰		Mean	St. Deviation
1	Smallholder farmers lack the knowledge of accessing finance	1.85	1.178
2	smallholder don't see the need of accessing micro credit	1.99	1.318
3	Smallholder famers are aware how to go about securing credit facilities	2.29	1.321
4	They are aware of the chances they are exposed to when they have access to micro credit	2.09	1,355
5	Smallholder farmers are aware who is offering credit facilities	2.29	1.394
6	Smallholder farmers have the ability to compile financial records and accounts	1.98	1.245
	Average	2.08	1.29

296 Source: Primary Data from field survey (2017)

297 In regards to the extent to which knowledge/awareness influences access to credit, table 4.5.3
 298 shows that, knowledge influenced access to credit to a small extent (M= 1.85, SD = 1.178),
 299 meanwhile the need to access influences access to credit to a small extent (M = 1.99, SD = 1.318),
 300 also aware of the importance influenced access to credit to a small extent (M = 2.29, SD = 1.321),
 301 adding to that, aware of the chances influenced the access to credit to a small extent (M = 2.09,
 302 SD = 1.355), and also aware of the benefits influenced access to credit to a small extent (M =
 303 2.29, SD = 1.394) and lastly aware of the offers influenced access to credit to a small extent (M =
 304 1.98, SD = 1.245). Thus, in a nutshell, knowledge/awareness influence access to credit to a small
 305 extent (AV, M=2.08, SD=1.29).

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310 **Table 4.5.4 Performance of smallholder farmers**

N ^o		Mean	St. Deviation
1	Access to credit enables an increase in productivity	3.73	1.571
2	Also Access to credit increased annual return	3.61	1.287
3	Access to credit will improve technology	3.86	1.185
4	Access to credit also increases the skilled of labor	3.67	1,156
5	Access to credit will increase farm size	3.30	1.288
6	Mori credit will also enables the use of fertilizer and chemicals	3.42	1.306
	Average	3.63	1.16

311 **Source: Primary Data from field survey (2017)**

312 The findings of table 4.5.4 reveals that, access to credit will lead to increase in productivity to a
313 great extent (M= 3.73, SD = 1.571), whereas, access to credit will lead to an increase in annual
314 return to a great extent (M= 3.61, SD= 1.287), access to credit will improve technology to a great
315 extent (M = 3.86, SD = 1.185), also access to credit will influence an increase in the use of skilled
316 labor to a great extent (M = 3.67, SD = 1.156), adding to that, access to credit will influence an
317 increase in farm size to a moderate extent (M = 3.30, SD = 1.288), and finally, access to credit
318 will influence an increase in the use of inputs to a moderate extent (M = 3.42, SD = 1.306).

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326 Regression result of the factors that influence access to credit on the performance of smallholder
 327 farmers

328 **Table 4.2 Regression result**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	2.417	1.365		1.771	.087
1 The influence of collaterals	-0.768	-0.162	.134	-4.74	.002
The influence of cost	-0.768	-0.162	0.234	-4.740	.000
The influence of Knowledge/awareness	8.908	0.511	0.146	17.437	.000
$R^2=0.84$ Adj. $R^2=0.80$ F-statistics=21.19					

329 **a. Dependent Variable: Performance of smallholder farmers *significant at 5%**

330 The result in Table 4.6 revealed the R^2 value, the coefficient of multiple determinants of 0.84, this
 331 implies that about 84 percent of the variation in the performance of smallholders' farmers is
 332 caused by changes in the factors influencing the access to credit. This implies that the remaining
 333 16 percent changes in performance of smallholders farmers are caused by variation in other
 334 variables not included in this equation and represented by the error term. The F-statistics of 21.19
 335 which is greater than the critical F-value of 3.157 needed for significance at 0.05 level of
 336 significance implies that there exists a significant relationship between the determinants of access
 337 to credit and performance of small holder's farmers in Kumba municipality.

338 The estimated coefficients for the influence of collaterals securities and influence of cost of credit
 339 facility are negative. This result implies that there exists an inverse relationship between these
 340 variables and the performance of smallholder farmers. In other words, an increase in any of these
 341 variables will lead to a decrease in the performance of smallholder farmers in the Kumba

municipality. These results are in order with economic a priori criteria. The result is significant at 5 percent level of significance.

The estimated coefficient for the influence of knowledge/awareness of financial procedures is positive. This means that there exists a direct relationship between knowledge/awareness and the performance of smallholder farmers in the Kumba municipality. These results are in line with economic theories. The result is significant at 5 percent level of significance.

To be able to inferentially test the impact of the determinants of access to credit on performance of Smallholder farmers in the Kumba municipality, the following specific hypotheses were validated.

Hypothesis 1

Ho: Collateral Security as a determinant of access to credit have no significant impact on the performance of smallholder farmers in the Kumba municipality.

Ha: Collateral Security as a determinant of access to credit have a significant impact on the performance of smallholder farmers in the Kumba municipality.

Decision rule;

Accept Null hypothesis (H_0) if calculated $t \leq 1.96$

Otherwise accept alternate hypothesis (H_a)

Since the calculated t-value of 4.74 is greater than the critical t-value of 1.96, the null hypothesis is rejected. It therefore means that collateral securities have a significant impact on performance of smallholder farmers in the Kumba municipality.

Hypothesis 2

Ho: There is no significant impact of cost of credit as a determinant of access to credit facility on the performance of smallholder farmers in the Kumba municipality.

Ha: There is a significant impact of cost of credit facility as a determinant of access to credit on the performance of smallholder farmers in the Kumba municipality.

Decision rule;

Accept H_0 if calculated $t \leq 1.96$

Otherwise accept H_a

Since the calculated t-value of 4.740 is greater than the critical t-value of 1.96, the null hypothesis is rejected. The alternate hypothesis (H_a) is accepted. Therefore, Cost of Credit facility as a determinant to access to credit have a significant impact on the performance of smallholder farmers in the Kumba municipality.

Hypothesis 3

H_0 : Knowledge/Awareness of Financial Procedures as a determinant of access to credit have no significant impact on the performance of smallholder farmers in the Kumba municipality.

H_i : Knowledge/Awareness of Financial Procedures as a determinant of access to credit have a significant impact on the performance of smallholder farmers in the Kumba municipality.

Decision rule;

Accept H_0 if calculated $t \leq 1.96$

Otherwise accept H_a

Since the calculated t-value of 17.43 is greater than the critical t-value of 1.96, the null hypothesis is rejected. The alternate hypothesis is then accepted. Therefore, Knowledge/Awareness of Financial procedures as determinants to access to credit have a significant impact on the performance of smallholder farmers in the Kumba municipality.

4.2 Discussions

The main objective of this study was to investigate the impact of the determinants of access to credit on the performance of smallholder farmers in the Kumba municipality. To achieve this, data was collected from 272 smallholder farmers in the Kumba municipality. It was found that given the sample, 38.08 percent of smallholder farmers finance their farming activities using internal funds, 18.08 percent borrowed from friends/ relatives and 6.62 percent secured bank loans/credit. These findings are consistent with similar discoveries made by InfoDev (2012) who reported that 48 percent of the investment structure of agriculture in Tanzania is derived from internally available funds, 14 percent from family/ relatives and 4 percent from the bank.

More specifically, the study revealed that the influence of collaterals such as high collaterals, limited collaterals, group guarantee, and huge collateral requirement have a great influence in accessing credit. These findings are in line with those of Gichuki, Njeru & Tirimba (2014) who

carried out a study on challenges facing Small and Medium Enterprises (SMEs) in accessing finance from financial institutions, found out that SMEs fail to secure loans because of restrictive requirements, top among them being collateral security. According to objective one, it was hypothesized that there is no significant relationship between collateral security and the performance of smallholder. But since the calculated t-value of 4.74 was greater than the critical t-value of 1.96, as indicated in table 4.6, the null hypothesis was rejected. It, therefore, means that there exists a significant relationship between collateral security and performance of smallholder farmers.

Furthermore, in objective two, the study revealed that the influence of cost of credit such as high-interest rate, taxes, legal fee, insurance and traveling expense, have a great influence on access to credit. This study is in line with Mwangi and Bwisa, (2013), where they found out that most of the youth entrepreneurs faced challenges in accessing credit due to the high cost of credit. It was hypothesized that there is no significant impact of the cost of credit as a determinant of access to credit on the performance of smallholder farmers in Kumba municipality. But since the calculated t-value of 4.740 was greater than the critical t-value of 1.96, as shown in table 4.6, the null hypothesis was rejected. Consequently, there exists a significant relationship between the cost of credit and performance of smallholder farmers in Kumba.

Finally, for objective three the study revealed that another mild factor that influences the access to credit was knowledge/awareness of financial procedures. According to this study, knowledge and awareness will influence credit access to a moderate extent. Aforementioned is in line with (Claessens, 2002; Claessens, 2006 and Beck and Demirgüç-Kunt, 2008). Lastly, the study showed that the factors influence the performance of smallholder farmers to a greater extent. This reflects the study of Byaruhanga (2013), who conducted a study to examine the empirical relationship between credit accessibility and agricultural performance, this was to show whether the agricultural performance was affected by credit accessibility and also see if there is a relationship between the two. Therefore, collateral security and cost of credit as a determinant to access to credit have an inverse relationship with the performance of smallholder farmers in the Kumba municipality. On the other hand, knowledge/awareness of financial procedures by the farmers have a direct relationship with the performance of smallholder farmers. This is demonstrated by

the hypothesis which showed that there exists a significant relationship between knowledge/awareness of financial procedures and the performance of smallholder farmers, even though to a limited extent.

5.0 Conclusion

The study aims to investigate the impact of the determinants of access to credit on the performance of smallholder farmers in the Kumba municipality. The study concluded that the determinants (cost of credit facilities, collateral security, knowledge/awareness of financial procedures by farmers and demographic factors such as age gender, level of education and farm sizes) influence access to credit by smallholder farmers. Cost of credit facilities and collateral securities influenced access to credit to a great extent whereas, knowledge/awareness of financial procedures influenced access to a lower extent. This affects the performance of the farmers and has implications for development.

Consequently, for Cameroon to develop considering that agriculture is the backbone of the economy, financial institutions need to channel their resources to smallholder farmers who account for more than 80 percent of the population in the agriculture sector. Availability of bank credit to smallholder farmers will enhance their efficiency and boost their performance through acquiring new technological tools, knowledge, and skills regarding the modern farming system. Therefore, it was found that despite the fact that smallholder farmers are the major producers in the agricultural sector, a sector that acts as an effective instrument in offering employment, alleviating poverty and enhancing food security, they have very limited access to credit from banks which are also the major suppliers of finance in the economy.

6.0 Recommendations

Based on the findings of this study, the following recommendations were made:

Joint liability borrowings should be encouraged to the farmers. In order to facilitate credit access, smallholder farmers should form groups or cooperatives because financial institutions will prefer lending credit to groups than individuals. Thus it is recommended that smallholder farmers should join unions or create groups to lessen the burden of repayment. Also, pulling their resources together will help them acquire more innovative ways of farming and marketing their produce/products.

Also, the farmers are recommended to partner with other cooperatives for information and resource sharing. The farmers that cultivate maize, for instance, should get a measure per bag of maize and exchange it for fertilizer from farmers involved in poultry farming. This will permit the maize farmers to use the fertilizers on their farms while the farmers dealing with birds can locally transform the maize to feed.

Also, most of the farmers who own land do not have land titles. The study recommends that they should acquire land titles for their lands which they could use as collateral security to secure loans. This will address the challenge of access to credit

Financial institutions should overcome distance barrier and provide financial literacy to smallholder farmers. This is an important aspect that needs to be tackled by the financial institutions themselves. It is recommended that banks should extend and increase branches or agencies (reduce the cost of transportation) in rural areas and conduct some colloquium that will enhance farmers' financial literacy as smallholder farmers are their potentially profitable customers. Also, It is recommended that banks should develop special financial products such as loans that cater for the needs of smallholder farmers which will increase the amount of credit rendered to them and equally reduce the burden of repayments.

The Government of Cameroon through the microfinance institutions should develop an effective social network that links financial institutions and the farmers. The India model can be adapted or adopted in Cameroon. It has been tested in India and has been proven to be a very effective mechanism to finance the rural poor. This will limit transaction cost of the financial institutions and will extend their outreach to the rural communities.

Finally, the government should also facilitate the issuance of Certificate of Occupancy. This is one of the documents required in the process credit lending. Most smallholder farmers have real estate to use to secure loans, but they don't have the certificate for that real estate. Thus if the government facilitates the issuing of this certificates, it will be easy for smallholder farmers to overcome the problem of collaterals.

REFERENCES

- Abdelateif B. (2013). Access to Micro credit and its Impact on Farm Profit among Rural Farmers in Dryland of Sudan. *Global Advanced Research Journal of Agricultural Science*, pp. 088-102.
- Akanga F. K. (2017). Microfinance accountability in Cameroon: a cure or a curse for poverty alleviation? *Journal of Accounting & Organizational Change*. ISSN: 1832-5912
- Assifaw, L. (2016). Analysis of Factors Affecting Smallholder Farmers' Access to Formal Credit in Jibat District, West Shoa Zone, Ethiopia. *An International Peer-reviewed Journal* , Vol.25.
- Awotide, T. (2015). Impact of Access to Credit on Agricultural Productivity: Evidence from Smallholder Cassava Farmers in Nigeria. *A Contributed paper Prepared for Oral Presentation at the International Conference of Agricultural Economists (ICAE)*.
- Bali Swain, R. (2001). Demand, segmentation and rationing in the rural credit markets of Puri. Dissertation. Department of Economics, Uppsala University.
- Besong M. (2011). Improving Agricultural Production and Productivity of Smallholders Farmers Through Increased Access to Improved Planting Materials: Evidence from South West Region, Cameroon.
- Besong, J. (2016) Financial Sector Development, Income Inequality and Human Welfare in Sub Saharan Africa. Doctoral thesis, University of Huddersfield.
- Bichi, A. (2016). The Effect of Agricultural Credit on Agricultural Productivity in Bichi Local Government Area, Kano State, Nigeria. *KIU Journal of Social Sciences*: Kampala International University ISSN: 1996902-3; 2(2): 257-265
- Byaruhanga, I. (2013). Credit Terms, Credit Accessibility and Performance of Agricultural Cooperatives in Rwanda. *Journal of Emerging Issues in Economics, Finance and Banking* Volume 1 (6) Page 554 – 570.

520 Chenea, A. & Kimengsi, J. (2017). An Empirical Analysis of PACA's Role in Rural
 521 Development in Mezam Division of Cameroon. *African Journal of Social Sciences*
 522 Volume 7 No. 4 July 2016

523 Claessens, S. 2006. Access to Financial Services : A Review of the Issues and Public Policy
 524 Objectives. Oxford University Press on behalf of the World Bank. © World Bank.
 525 <https://openknowledge.worldbank.org/handle/10986/16428> License: CC BY-NC-ND 3.0
 526 IGO.”

527 Food and Agricultural Organisation (2017). Innovative risk management strategies in rural and
 528 agriculture finance. ISBN 978-92-5-109684-0

529 Gichuki J., Njeru A. and Tirimba O. (2014). Challenges Facing Micro and Small Enterprises in
 530 Accessing Credit Facilities in Kangemi Harambee Market in Nairobi City County,
 531 Kenya. *International Journal of Scientific and Research Publications*, Volume 4, Issue
 532 12, 1 ISSN 2250-3153

533 Gyau A., Mbugua M. and Oduol J (2016). Determinants of participation and intensity of
 534 participation in collective action: evidence from smallholder avocado farmers in Kenya.
 535 *Journal on Chain and Network Science* 2016; 16(2): 147-156 Wageningen

536 Hallberg, K. (2002). A Market Oriented Strategy for Small and Medium Enterprises. *International*
 537 *finance corporation discussion* , paper 40.

538 InfoDev. (2013). *The Agribusiness Innovation Center of Tanzania Scaling Value* . Washington,
 539 DC: World Bank: Finance and private sector development.

540 Madafu, E. (2015). *Asses to bank credit by smallholder farmers in Tanzania challenges*
 541 *opportunity and prospecr*. Tanzania.

542 Manfred T. & Besong, P. (2011). *Improving Agricultural Production and Productivity of*
 543 *smallholder farmers*. Buea.

544 Mohammed S., Egyir I. and Amegashie D. (2013). Social Capital and Access to Credit by Farmer
 545 Based Organizations in the Karaga District of Northern Ghana. Vol 4 No 16
 546

547 Mottaleb K., Krupnik T. & Erenstein O. (2016). Factors associated with small-scale agricultural
 548 machinery adoption in Bangladesh: Census findings. DOI:
 549 10.1016/j.jrurstud.2016.06.012

550 Nyambi G., Shinn G. & Briers G. (2017). Factors that Influence Extension Program Success:
 551 What Can we learn from Cameroon Extension? *International Journal of Agricultural*
 552 *Extension*. ISSN: 2311-6110 (Online), 2311-8547 (Print).

- Okten, C. and Osili, U. (2004). Social Networks and Credit Access in Indonesia. *World Development*, Vol. 32, No. 7, pp. 1225-1246.
- Stiglitz, J. E. & Weiss, A. (1981). Credit rationing in markets with imperfect information. *American Economic Review*, 71(3) 393-410.
- Subeyr, M., & Muturi, W. (2017). Factors Affecting Access to Credit By Microenterprises in Garowe, Puntland. *International Journal of Economics, Commerce and Management*. Vol. V, Issue 3, ISSN 2348 0386.
- Tingem M., Rivington M. and Bellocchi G. (2009). Adaptation assessments for crop production in response to climate change in Cameroon. *Agronomy for Sustainable Development*, Springer Verlag /EDP Sciences/INRA, 2009, 29 (2), pp.247-256. <hal-00886471>
- Toh, Y. (2013). The Impact of Microfinance on Poverty Alleviation in Cameroon: A Case of the Fako Chapter of CamCCUL Ltd. Available at SSRN: <https://ssrn.com/abstract=2760433> or <http://dx.doi.org/10.2139/ssrn.2760433>
- Wanjohi, A. M. (2008). *Factors Affecting the Growth of MSEs in Rural Areas of Kenya*. Washington DC.
- Wanjohi, A. & Mugure, A. (2008). Factors Affecting the Growth of Mses in Rural Areas of Kenya: A Case of ICT Firms in Kiserian Township, Kajiado District of Kenya.
- Wolfenson, K. D. (2013). Coping with the food and agriculture challenge: smallholders' agenda. *Food and Agriculture Organization of the United Nations*.
- WorldBank. (2014). Access to Finance for Smallholder Farmers. *International Finance Corporation*, 84.
- Yehuala S. (2009). *Determinants of Smallholder Farmers Access to Formal Credit*. Haramaya University, Ethiopia.: Unpublished Master's.

585

586