

Influence of Credit from Diverse Sources on the Performance of Smallholders Horticultural Agripreneurs in Rwanda, A Case of Musanze District (2017-2019)

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Abstract

Agriculture remains the central economic activity and employs the majority of the people in most low income countries. This study intends to analyze the influence of credit from diverse sources on the performance of smallholder horticultural agripreneurs in Rwanda, especially in Musanze District. The study aim was to finding out whether the influence of credit from diverse sources were effective and whether they really have influence on the performance of smallholder horticultural agripreneurs in Rwanda. The design of this study was a quantitative descriptive in nature. A sample size of 100 respondents were selected randomly to take part into this study and Descriptive statistics such as frequency, percentages, mean and standard deviation were obtained to describe the characteristics of the variables whereas multiple regressions model was used to establish the relationships between the variables. data were analyzed using statistical package for social sciences (SPSS) version 20. The findings revealed that there is very significant and strong influence of credits from diverse source on the performance of horticultural agripreneurs. The study also revealed that there is very strong correlation between diverse source of credit and performance of horticultural agripreneurs.

Keywords: Credits; performance; horticultural agripreneurs; financial institution; saving association and Smallholder agriculture.

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1. Introduction

Smallholder agriculture remains important for economic development and poverty reduction in developing countries, but its development is challenged by the need for institutional innovations to overcome market failures [1]. In the developing world, agriculture plays a critical role in the entire life of the economy. It remains the backbone of economic system of developing countries. In addition to providing food and raw materials to the industrial sector, agriculture is the main source of livelihood of majority of rural population, providing employment opportunities to a very large percentage of population [2]. Worldwide, there are nearly 450 million households whose dominant activity is agriculture. Agripreneurs in developing countries, predominantly those in low income countries, experience a number of challenges including low productivity, limited access to markets for their products, lack of adequate risk management products and services and limited access to finance. Whereas agriculture remains a key economic activity in Africa employing about 55% of the populace, only around 1% of formal bank lending goes to the agricultural sector [3]. The agribusiness sector, which encompasses the commercial activities performed from the farm to the consumer's dining table, is now considered a major generator of employment and income worldwide [4]. Agriculture is the main economic activity in Rwanda with 70% of the population engaged in the sector, and around 72% of the working population employed in agriculture. The agricultural sector accounts for 33% of the national GDP. In general, Rwanda's GDP has been growing at the rate of 7% since 2017. Tea and coffee are the major exports while plantains, cassava, potatoes, sweet potatoes, maize and beans are the most productive crops. Rwanda exports dry beans, potatoes, maize, rice, cassava flour, maize flour, poultry and live animals within Eastern Africa [5]. In Rwanda, the government has a good governance and political will to develop the agricultural sector as it is being the economic backbone of the country by employing about 87% of the working population, producing around 46% of GDP and generating about 80% of the total export revenues. Agriculture contributes immensely to Rwandan economy in many ways, such as, in the provision of food to the population; supply of raw materials and provision of markets to the industrial sector; a major source of employment generation, foreign exchange earnings[5-6] Smallholder agripreneurs face various constraints, which lead to low returns. Among these constraints is limited access to inputs and financial services [7]. Agricultural productivity is low and declining and its competitiveness, in both domestic and export market, has worsened. Poor performance by agripreneurs in agriculture in Rwanda in terms of productivity is generally attributed to the use of poor technologies (farm inputs and machinery) due to limited access to credit [8]. Lack of adequate credit from formal financial institutions has been prominently highlighted as one of the main factors that contribute to underperformance by agripreneurs in Rwanda [8-9]. To fill this gap created by the limited number of formal financial service providers, informal financial service providers have stepped in to provide credit to the smallholder agripreneurs [9-10]. There are no comprehensive comparative studies that have been carried out on the influence of credit from different sources on the performance of smallholder agripreneurs. This study sought to fill this gap by investigating the influence of credit from diverse sources on the performance of the smallholder agripreneurs in Rwanda and to what degree. The knowledge from this study will help in the development of appropriate policies to support the scale up of these credit sources to improve the performance of agripreneurs in Rwanda.

2. Significance of the study

The contribution of this study is generally to address the basics of stated problem. In addition, the researcher attempt to provide solution to the impacts and help to achieve agripeneur goals. This study seeks to present the present status of the influence of credit from diverse sources and how effect the performance of smallholder horticultural agripeneurs. There is a research gap where little is known about the influence of credit from diverse sources on the performance of smallholder horticultural agripeneurs. This study therefore seeks to investigate whether the credit from diverse sources have an effect on the performance of smallholder horticultural agripeneurs that is by evaluating whether the use of the credit from diverse sources will led to increase or decrease performance of smallholder horticultural agripeneurs. Moreover, this study will contribute to the body of knowledge on an understanding of how credit from diverse sources will effect on production, job creation and income of smallholder horticultural agripeneurs. This can be used in future as a reference article to smallholder horticultural agripeneurs to ask in difference source of credits. This paper also enables some highlights for further studies and researchers on respective areas. The main aim of the study was to help fill significant gaps in knowledge about the credit from diverse sources has an effect of on the performance of smallholder horticultural agripeneurs in Rwanda. In addition to this, the study findings are expected to be of great use to researcher, Population of Musanze District, University of Kigali, horticultural agripeneurs, government and researchers.

2.1 To the researcher

This study is of importance to the researcher as it equips him with the knowledge of the credit from diverse sources will led to increase or decrease performance of smallholder horticultural agripeneurs in Rwanda.

2.2 To University of Kigali

The research report will be available in library of University of Kigali and will use by other future researchers who would be interested in this area of my research.

2.3 To the society

It will contribute to help smallholder horticultural agripeneurs to better understand difference source of credits appropriate to agriculture investment. They will be able to know where the difference source of credits in terms of adoption to increase performance.

2.4 To the government

The research will benefit the government of Rwanda in general if recommendation that stated from this research is adopted and taken into consideration to declare the matter identified.

2.5 To the smallholder horticultural agripeneurs

The research report will help the smallholder horticultural agripreneurs to improve on their finance performance accordingly especially if they adopt the recommendations highlighted. The smallholder horticultural agripreneurs will also have a benchmark for measuring their difference source of credits and their performance.

2.6 To future researchers

The study will help scholars understand the various forms of difference source of credits and its effects on the performance of smallholder horticultural agripreneurs.

3. Methods

A quantitative descriptive in nature were used in this study to finding out whether the influence of credit from diverse sources were effective and whether they really have influence on the performance of smallholder horticultural agripreneurs in Rwanda. Primary data were gathered using a self-administered questionnaire to 100 respondents. Data were analyzed using the Statistical Package for Social Sciences (SPSS) version 20. Statistical analysis using inferential statistics was used considering p-value 0.05 as the level of significance and 95% Confidence Interval (95% CI).

4. Results and Discussion

The researcher gave the respondents various statement regarding Credit from diverse sources in terms of Credit from formal financial institution, Credit from Group saving Association, Credit from family and friends and analyzed their level of agreement.

Table 4.1: Sources of Credit for Agripreneurs.

Credit Source	Mean	Standard deviation
Credit from formal financial institutions (Commercial banks, Microfinance institution, Sacco)	3.43	.42
Credit from group Savings Associations (Rotating saving & Credit Association, Accumulative saving & credit association, Voluntary saving & Loan association)	4.30	.49
Credit from family and Friends (Individual family members, Individual friends, Groups of family and friends)	3.46	.37

Source: Primary data, 2021

From the table above, revealed Credit from formal financial institutions (Commercial banks, Microfinance institution, Sacco) (\bar{X} =3.43 and SD=0.42) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses, Credit from group Savings Associations (Rotating saving & Credit Association, Accumulative saving & credit association, Voluntary saving & Loan association) (\bar{X} =4.30 and SD= 0.49 this shows that there is high mean and strong evidence of the existence of the fact and homogeneity of responses, Credit from family and Friends (Individual family members, Individual friends,

Groups of family and friends) (\bar{x} =3.46 and SD= 0.37) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses. These findings supported by Deku [11] which confirm that alternative financing (credit from informal sources) positively associates with agripreneurs' firm performance.

Table 4.2: Credit from diverse sources on the performance of horticultural agripreneurs.

Statements	Mean	SD
Obtaining the credit from diverse sources for the development of your horticulture enterprise influenced your business the most in terms of increase in production	3.73	0.33
Obtaining the credit from diverse sources for the development of your horticulture enterprise influenced your business the most in terms of increase in job creation	3.64	0.36
Obtaining the credit from diverse sources for the development of your horticulture enterprise influenced your business the most in terms of increase in business expansion	3.28	0.39
Obtaining the credit from diverse sources for the development of your horticulture enterprise influenced your business the most in terms of increase in income	3.60	0.35

Source: Primary data, 2021

This table revealed the results of 100 respondents that have completed the questionnaire out of 100 distributed and analysis based on mean and standard deviation Obtaining the credit from more than one source for the development of your horticulture enterprise influenced your business the most in terms of increase in production (\bar{x} =3.73 and SD=0.33) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses, Obtaining the credit from more than one source for the development of your horticulture enterprise influenced your business the most in terms of increase in job creation (\bar{x} =3.69 and SD= 0.36) this shows that there is good mean and strong evidence of the existence of the fact and homogeneity of responses, Obtaining the credit from more than one source for the development of your horticulture enterprise influenced your business the most in terms of increase in business expansion (\bar{x} =3.60 and SD= 0.35). This is indicated that access to credit from the three sources increased the overall amount of production, job creation, and business expansion and increase income for the agripreneurs in Musanze District.

The results above show that there is a moderate correlation between credits from diverse sources on the performance of smallholder horticultural agripreneurs as Pearson correlation is 0.894. The p-value is 0.000, which is less than both standard significance levels of 0.05 and 0.01. This indicates that, out of the considered determinants of performance of small horticultural agripreneurs as measured by credit from formal financial institution has significant effect on its performance of small horticultural agripreneurs. From the correlation table, the results show that there is very strong correlation between credit from formal financial institution and performance of small horticultural agripreneurs as Pearson correlation is 0.887. The p-value is 0.000, which is less than both standard significance levels of 0.05 and 0.01. This indicates that, out of the considered determinants of performance of small horticultural agripreneurs as measured by credit from group saving association has significant relationship with performance of small horticultural agripreneurs.

Table 4.3: Correlations analysis.

		Credit from formal financial institution	Credit from group saving association	Credit from family and friend	Performance of small horticultural agripreneurs
Credit from formal financial institution	Pearson Correlation	1	.783	.789*	.894**
	Sig. (2-tailed)		0.000	0.000	0.000
	N		100	100	100
Credit from group saving association	Pearson Correlation		1	.836**	.887**
	Sig. (2-tailed)			0.000	0.000
	N			100	100
Credit from family and friend	Pearson Correlation			1	.810**
	Sig. (2-tailed)				0.000
	N				100
Performance of small horticultural agripreneurs	Pearson Correlation				1

Source: Survey data, 2021

Table 4.4: Regression coefficients.

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sign
1	(Constant)	.0001	1.12		2.774	.007
	Credit from formal financial institutions	.689	.156	.512	6.319	.000
	Credits from family and friends	.510	.147	.270	3.467	.001
	Credit from group saving associations	.366	.108	.022	4.320	.000

a. Dependent Variable: Performance of horticultural agripreneurs

The regression analysis equation as $Y = \alpha + \beta_1 \chi_1 + \beta_2 \chi_2 + \beta_3 \chi_3$

This implies that $Y = 0.0001 + 0.689 \text{ Credit from formal financial institutions} + 0.510 \text{ Credits from family and friends} + 0.366 \text{ Credit from group saving associations}$

The regression coefficients above establish that taking all factors into account and credit from group saving association's evaluation constant at zero, performance of horticultural agripreneurs was be 0.0001. This implies that when the horticultural agripreneurs does not access the credit from formal financial institutions, credits from family and friends and credit from group saving associations they was be no performance. The credit from formal financial institutions is positively related with performance of horticultural agripreneurs as indicated with a positive coefficient. Credit from formal financial institutions is statistically significant as ($p=0.000<0.05$). The findings presented also show that a unit increase in credit from formal financial institutions will lead to 0.689

unit increases in performance of horticultural agripreneurs of commercial banks. Credits from family and friends is positively related with performance of horticultural agripreneurs as indicated with a positive coefficient. Credits from family and friends is statistically significant ($p = 0.0001 < 0.05$). A unit increase in credits from family and friends will lead to 0.510 unit increase in performance of horticultural agripreneurs. Credit from group saving associations is statistically significant because of positive coefficient ($p = 0.000 < 0.05$). A unit increase in credit from group saving associations evaluation leads to 0.366 unit increase in performance of horticultural agripreneurs.

5. Conclusion

This study has been conducted with the main objective to the influence on diverse source of credit on performance of commercial bank in Rwanda. The study established that credit from financial institution, credits from friends and family, credit from group and association has effect performance of horticultural agripreneurs in Muzanze District. Furthermore, in view of the findings and problems associated with the access of credit divers' sources which significantly influence performance of horticultural agripreneurs in terms of production and productivities, job creation and increase incomes. Based on these findings the study concluded credit diver's sources effect the performance of horticultural agripreneurs in Rwanda.

6. Recommendations

Based on the above findings and conclusion, the following recommendations are given to not only to the horticultural agripreneurs but also to the future researchers.

6.1 To horticultural agripreneurs

This study recommends that all smallholder agripreneurs in all the agricultural sub- sectors should be encouraged to join group savings associations to help them develop a resilient savings culture bolstered by the inherent groups 'peer accountability structures.

The formal financial institutions should try and develop and pilot more innovative financial products that appropriately speak to the needs of the smallholder agripreneurs

6.2 Suggestions for futures researches

Based on the findings, conclusion and recommendations of the study, the ability to generalize the result of this study is restricted. Hence, it is suggested that the further research should identify and document the nature and types of financial products, ascertaining what and how much interest is charged on the products and services. There is also a need to carryout research that could help formal financial institutions especially the commercial banks to develop appropriate and ground-breaking financial products for the smallholder agripreneurs.

References

- [1]. Hertzberg, A. (2015). Exponential Individuals, Hyperbolic Households. Working Paper, Columbia University.
- [2]. Adam, A. (2015). Financial openness induced growth and poverty reduction. *The International Journal of Applied Economics and Finance*, 5(1), 75-86.
- [3]. IFC, (2016). Access to Finance for Smallholder Farmers. Washington, DC: IFC.
- [4]. Konig, G., Da Silva, A., & Mhlana. (2015). Enabling Environment for Agribusiness and Agro-Industries development. Regional and Country Perspective, Rome: Food and Agricultural Organization of the United Nations.
- [5]. MINAGRI. (2019). Explanatory note of PAPSTA handover to the ministry of agriculture and animal resources. Kigali: MINAGRI.
- [6]. Mugo, W. (2015). Factors affecting entrepreneurs' performance in Kenya: A Case of Nairobi Women Groups in the Central Business District: Unpublished PhD thesis, Nairobi: University of Nairobi.
- [7]. World Bank, (2018). Growing Africa: unlocking the potential of agriculture. Washington DC: World Bank.
- [8]. Wiggins, S., Kirsten, J., & Llambi, L. (2016). The future of small farms. *Journal of World Development*, 38(10), 1341–1348.
- [9]. Williams, M., Grajales, C., & Kurkiewicz, D. (2016). Assumptions of multiple regression: correcting two misconceptions. *Practical Assessment, Research & Evaluation*, 18(11), 1–14.
- [10]. Chisasa, J., & Makina, D. (2016). Trends in credit to smallholder farmers in South Africa. *International Business and Economics Research Journal*, 11(7), 771-784.
- [11]. Deku, S.Y. (2015). Access to consumer credit in the UK. *European Journal of Finance*, 2(3).