Farm Characteristics on Credit Access among Smallholder Tea Farmers in Kericho County, Kenya

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ABSTRACT

The tea crop is a major income earner and employer to numerous smallholder farmers and value chains in in Kenya. Most of the tea crop and processing plants are in the County of Kericho, and there is potential for improved production in response to the progressive Global demand for the produce. Despite the presence of several credit service providers in the County, the tea farmers still have challenges in accessing financial services to improve their production performance. Moreover, there was inadequate evidence on credit access by the farmers. This study analyzed the farm characteristics on credit access against the income of 150 smallholder tea farmers, who were sampled from 109,401 tea growers distributed in 11 tea factories in the County. The findings revealed that land size and the number of tea bushes significantly influenced credit access; with the farmers having larger land sizes being associated with higher borrowing and credit access. Financial literacy and availability of suitable credit products were noted as challenges to uptake of available credit services.

Keywords: Farm Characteristics, Credit Access, Smallholder Tea Farmer, Kericho County, Kenya.

INTRODUCTION

Tea is among the most popular low-cost beverages globally. Kenya is ranked as the third major tea producer in the world, with a production of 412 thousand metric tons in 2023. The industry has potential for expansion to optimize on the increasing demand for tea products. This is an opportunity for the smallholder farmers, who constitute 60% of the tea growers, to earn living wages from the crop, and contribute positively to the country's socio-economic development programmes. However, the sector attracts limited credit and financial capital from lending institutions due to stringent loaning conditions.

RESEARCH METHODOLOGY

The study was conducted in Kericho County, Kenya. The research study employed a descriptive and explanatory survey design. The study area was identified through purposive sampling technique. Proportionate sampling procedure was used to identify the number of small-scale tea farmers in the respective factories. Simple random sampling technique was used to select 150 small-scale tea farmers from eleven selected factories. Primary data was collected directly from respondents using a Questionnaire. Both descriptive and inferential statistical methods were employed to analyze data. Binary logistic regression test was used to test the significance levels of the farm characteristics influencing credit access.

RESULTS AND DISCUSSION

Farm Character and Credit Access

The binary logistic regression analysis showed farm ownership, distance, extension support, land size, and the number of tea bushes) impacted on the likelihood of obtaining a loan among smallholder tea farmers.

Table 1: Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	63.604	6	.000
	Block	63.604	6	.000
	Model	63.604	6	.000

The Chi-Square test demonstrated statistical significance, with a chi-square value of (χ^2 (6) = 63.604, P < 0.05), indicating that the independent variables collectively had a meaningful relationship with credit access. Hence, farm characteristics had significant association with credit access by small scale farmers in Kericho County.

Table 2: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	99.195a	.389	.543
a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.			

The R Square results from model summary that the model indicates farm characteristics explained between 38.9% (Cox & Snell R Square) and 54.3% (Nagelkerke R Square) of the variability in loan access and accurately classified 79.1% of cases, reflecting a strong predictive capability.

Table 3: Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	100.752	8	.100

The goodness-of-fit test, as indicated by the Hosmer and Lemeshow statistic (χ^2 (8) = 100.752, P > 0.05), suggested that the model fitted the data well, further validating its robustness. Hence, the model confirmed that the farm characteristics had significant influence on the credit access by small scale farmers in the County.

Table 4: Classification Table

	Observed		Predicted		
			Access to Credit		Percentage Correct
			No	Yes	
Step 1	Access to Credit	No	34	8	81.0
		Yes	19	68	78.2
	Overall Percentage				79.1
a. The cut value is .500					

The classification table indicated that an average of 79.1% of the farm characteristics were correctly identified to affect access to credit. Hence, farm characteristics reflect a strong predictive capability of credit access.

Table 5: Variable in the Equation

		B	S.E.	Wald	Df	Sig.	Exp(B)
Step 1a	Farm_Own	-.726	.626	1.344	1	.246	.484
	Dist_Creditor	-.076	.133	.330	1	.566	.927
	Ext_Creditor	21.365	14872.171	.000	1	.999	1.898exp 9
	Acres	1.058	.354	8.943	1	.003	.347
	Tea_Acres	-.591	.531	1.237	1	.266	.554
	Tea_Bush	.001	.000	15.022	1	.000	1.001
	Constant	-18.856	14872.171	.000	1	.999	.000
a. Variable(s) entered on step 1: Farm_Own, Dist_Creditor, Ext_Creditor, Acres, Tea_Acres, Tea_Bush.							

The variable in the equation indicated that, land size in acres emerged as a significant factor in access to loan facilities (B = 1.058, Wald = 8.943, P = 0.003, Exp(B) = 0.347). This result indicates that farmers with larger land holdings have higher odds of accessing credit, implying that those with smaller land sizes are more likely not to access credits. This suggests that farmers with larger land holdings have higher odds of securing loans, indicating a potential perception by lenders that these farmers may have higher need for external financing.

Similarly, the number of tea bushes had a significant effect on access to loan (B = 0.001, Wald = 15.022, P = 0.000, Exp(B) = 1.001). This implies that farmers with higher number of tea bushes had higher odds of borrowing than those with few number of tea bushes. This could suggest that lenders view a larger number of tea bushes as an indicator of agricultural productivity and potential profitability, making these farmers more attractive candidates for borrowing.

Farm ownership, distance of creditor, creditor extension services and tea acres were found to be insignificant factors as they did not affect access to credit. This leaves the farm size and number of tea bushes the main factors that influenced access to credits.

DISCUSSIONS

This study found that the size of the land was major factor, with farmers having larger land sizes getting higher odds of accessing credit, while those with smaller land sizes less likely to access credit. The number of tea bushes was also significant (p=003<0.05). The farmers with more tea bushes had higher chances of accessing credit. This access to credit supported tea productivity, tea quality and earnings, although it did not significantly impact the expansion of acreage.

The results of the study indicated that specific farm characteristics significantly influenced credit access and the performance of smallholder tea farmers. Comparatively, farmers with large land sizes were more likely to access credit, than those with small land holdings experience lower odds of accessing credit. This finding concurred with Musuva et al. (2016), who observed that land size and farmer demographics played crucial roles in credit accessibility among tea farmers in Kiambu County in Kenya. This also was concuring to observations by Dlamini and Mohammed (2018) that larger farms were be perceived as more stable and established for credit worthiness. If it apples, this study found that the number of tea bushes positively correlated to credit access, echoing Mpirwa (2022), who identified farm size and productivity as significant determinants for credit approvals to smallholder coffee growers in Rwanda. Furthermore, the positive impact of credit on productivity, tea quality, and earnings supported the findings of Chenaa et al. (2018), which emphasized the importance of credit facilities enhanced smallholder farmers' performance in Cameroon. The current results indicate no significant impact of credit access on acreage expansion, which contrasts with Topor et al. (2023), who found that factors such as overall asset worth and turnover significantly influenced credit levels and agricultural expansion. This divergence suggests that while credit access is crucial for improving productivity, strategic use of credit for expansion may be hindered by other constraints not fully captured in this analysis.

CONCLUSIONS AND RECOMMENDATIONS

The study concluded that farm characteristics, particularly land size and the number of tea bushes, played a significant role in determining credit access. Farmers with larger land holdings are more likely to secure loans, which suggested that small landholders may face unique barriers in accessing financial resources. This finding highlights the need for financial institutions to adopt flexible lending criteria that considers the diverse characteristics of farmers, rather than relying solely on traditional metrics such as land size as indicators of creditworthiness. This should include considerations to develop tailored financial products that specifically target smallholder tea farmers. The products should tap into opportunities arising from the unique challenges faced by farmers, on account of varying land sizes and income levels. With flexible lending criteria that prioritize the credit-worthiness of farmers rather than collateral securities, could improve credit uptake by the tea farmers.

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