

Sources and Effects of Rural Credit Systems on Smallholder Farming Systems in Botswana.

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Abstract

To facilitate economic growth in the rural areas the Government of Botswana has, over the past few years, been giving financial assistance to smallholder farmers in Botswana. Nevertheless, there are clear indications that the problems and issues that led to the establishment of such financial assistance schemes are still prevalent. These include high poverty level and low agricultural productivity. To overcome the financial constraints to a greater extent, the smallholder farmers have resorted to credit.

The primary concern of this study was to examine the sources of credit, its effects on farm incomes and its relative importance in the rural areas of Botswana. The data used, come from a farm management survey of 60 randomly selected households conducted in 1993/94 agricultural year. We concluded that credit is popular and is in a high demand in the area. Most average households' credit came through non-institutional (informal) sources. The amount of credit received accounted for 67% of total estimated amount of money required by the farmers at the beginning of the farming season. Farmers used credit mainly to hire farm labour. Farm incomes were higher among credit recipient households ($P < 0.05$).

These findings have important implications for agricultural and rural development in Botswana. They suggest the need for designing appropriate rural credit policies. Such policies should ensure an easy accessibility by most smallholder farmers to existing formal credit institutions in the country. Also, they show that agricultural finance can influence growth in farm productivity.

1 Introduction

One component of Botswana's effort to facilitate economic growth in the rural areas has been the financial assistance given to smallholder farmers for the development of their crop-livestock production systems. In spite of this effort, there are clear indications that the problems and issues that led to the establishment of such financial assistance schemes are still prevalent. These include high poverty level and low agricultural productivity. It is assumed that the amounts of financial assistance given to the farmers

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are inadequate. Also many target groups of the programmes, for various reasons, do not benefit from these programmes.

To overcome the persisting financial constraints, it has been observed that most farmers in the rural areas have resorted to credit. However, there is limited information available on the various sources of credit systems in the rural areas. Particularly, quantitative data on the relative importance of the prevailing credit sources and their effects on farm incomes are scanty. The main focus of this paper is to address these issues.

2 Materials and method

The data used in this study come from a random sample of Botswana's smallholder farmers production activities for the 1993-94 agricultural year. The sample comprised of 60 households selected from two villages from Kgatleng district. A structured questionnaire was used to obtain the data through personal interviews. The interviews were conducted between September and November 1994. Information on various aspects of crop-livestock production systems and credit-related issues was collected from the selected households. The main respondents were always the heads of households. However, assistance was, at times, sought in answering appropriate questions from other household members.

The study area is located in the south-eastern part of Botswana. The selected villages are within a 20-40km radius from Gaborone, the capital of Botswana. Crop and livestock farming are the main activities of most people in the area. Livestock, and particularly cattle, dominate the smallholder farming systems with respect to income and employment. Nevertheless about 30-40% of the households in the area do not own any cattle (MOA, 1991,-PANIN, 1993). The major crops grown in the area are sorghum, maize, beans and millet. These are commonly grown in mixtures of two or three crops. Sorghum, in terms of acreage and use, is the most important single crop.

3 Results and discussion

3.1 Characteristics of sample households

Some socio-economic aspects of the sample households are shown in Table 1. Household sizes in the study area ranged between 1-12 with an average of 4.2 persons. About 67% of the households were headed by males and the rest (33%) by females. Average age of household heads was 50 years. This compares closely with similar findings by Panin (1995). The average cultivated area of 6.2 ha was relatively large. Cattle herd size varied greatly among the households. The average was 11.7 units. As revealed in the table, amounts of cash initially available to households for farming purposes at the beginning of the cropping season were very little with an average of P86.00. This, however, varied substantially between the households. Nevertheless, it underlies the problem of persistent poverty in the rural areas.

Table 1: Some characteristics of sample households¹

Characteristic	Average per household (N=60)	
Number of persons	4.50	(2.281) ^a
Age of household head (yr.)	50.07	(12.633)
Farm size (ha)	6.21	(2.498)
cattle herd size	11.73	(12.863)
Initial available cash (Pula)	86.67	(196.982)
Heads of households by sex		
Sex	Number (% share of total)	
Male	40	66.67
Female	20	33.33

Some of the socio-economic aspects do have influence on the decision whether to take credit or not, and the amount of credit received. For example, results from a correlation analysis performed in this study revealed that age of household heads and the initial available cash correlated with loans received by the households. Age related inversely to the credit amount ($r=-0.32$, $P<0.05$). Contrarily, there was a positive relationship between the initial available cash and the amount of credit obtained ($r=0.33$, $P<0.01$).

3.2 Importance of credit and credit sources in the study area

Table 2 presents the potential and effective demand of credit for households in the study area. Potential demand includes all households who expressed their desire for credit irrespective of whether they received any. Effective demand, on the other hand, consists of only households who received credit during the period under investigation. The results show that the potential demand was extremely high. It covered 88% of the total sample households in the area. Only 12% of all the households did not need credit. Regarding effective demand, slightly more than 50% of the total sample households received credit. The average amount of credit per recipient household came to P714.00. The major reasons given by households that had wanted credit but failed to apply was lack of collateral and fear of not being able to pay back the money.

Table 3 presents the relative distribution of sources of credit among all the credit recipient households. The overwhelming majority of the households (72%) received their credit from non-institutional sources notably from relatives. Credit from an institutional source accounted for only 26%. As indicated by the farmers regarding the uses of

¹ Figures in parentheses are standard errors

credit, credit was mainly used for hiring farm labour. This was followed by purchase of farm tools.

Table 2: Credit demand of sample households

Demand type	No. of Households (N=60)	Share of total households (%)
A. Potential demand:		
households that needed credit	53	88.3
households that did not need credit	7	11.7
B. Effective demand:		
households that received credit	31	51.7
households that did not receive credit	29	48.3

Table 3: Distribution of credit sources among sample households

Credit source	No. of households (N=31)	Percent of total households (N=31)
A) Institutional	8	25.8
B) Non-institutional:		
Relatives	20	64.5
Friends	3	9.7
Sub- total	23	74.2

Contribution of credit to initial households' cash needs for farming activities is shown in Table 4. From the average estimated amount of about P1065.00 required per household, average credit received (P714.00) accounted for a substantial share of 67%. Thus, credit plays a major role in financing agriculture in the area.

The relatively low performance of the institutional source, as to its representativeness in the area, might be due to tight credit conditions and policies of the banks that disqualify most smallholder farmers. Most of the farmers expressed their preference for non-institutional (informal) credit sources because no collateral was required. These findings compare well with the findings of other related studies in Africa. For example, AMANI et al. (1987) and COETZEE et al. (1993) found in Tanzania and South Africa, respectively, that informal finance plays a major role among smallholder farmers.

Table 4. Contribution of credit to initial households cash needs²

	Average amount (Pula) (N=31)	Percent of credit of total amount
Estimated initial amount required per household	1064.52 (607.30) ^a	25.8
Credit received	714.19 (684.7)	67.09

3.3 Credit and cultivated area and farm income

The size of farm cultivated by credit recipient households ranged from 2.0 to 15 ha while that of the non-recipients was between 2.5 to 12 ha. The average cultivated area for the former and the latter was 6.0 and 6.7 ha, respectively (Table 5). The mean difference between cultivated areas of credit recipient households and non credit recipient households was not statistically significant.

Farm income measured in Pula per hectare of cultivated land is compared for credit recipient and non recipient households in the same Table 5. Average net farm income per hectare was P277.87 for credit recipient households and P165.51 for non recipients. The mean difference was statistically significant ($P < 0.05$). This suggests that credit might influence the variation in the resource use efficiency.

Table 5: Effect of credit on farm size and farm income³

Item	Average Values		T-Value
	Credit recipient households (N=31)	Non credit recipient households (N=29)	
Farm size (ha)	5.79	6.67	1.37
Net farm income (Pule/ha)	277.87	165.51	1.98

4 Conclusions and implications

The sources and relative importance of credit and its effects on farm incomes of rural Botswana households were examined in this paper. The study concludes that credit is popular and it is in a high demand by the households in the study area. Both institutional and non-institutional sources of credit are operational in the area, but the non-institutional source, in terms of coverage, is the dominant one. Farm incomes were

² Figures in brackets are standard errors

³ Significant at 5 percent confidence level

higher among credit recipient households than their counterparts without credit.

Results derived in this study have important implications for agricultural and rural development in the country. They suggest the need for ensuring a fairly easy accessibility by most smallholder farmers to existing formal credit institutions in the country. Also, they show that agricultural finance can influence growth in farm productivity.

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6 Zusammenfassung)

Herkunft und Auswirkungen des ländlichen Kreditsystem auf kleinbäuerliche Betriebe in Botswana.

Um das wirtschaftliche Wachstum in den ländlichen Regionen zu fördern hat die Regierung Botswanas die kleinbäuerlichen Betriebe finanziell in den vergangenen Jahren unterstützt. Trotzdem sind die Bauern weiterhin auf Kredite angewiesen.

Die Arbeit konzentriert sich auf die Untersuchung der Herkunft der Kredite, ihre Auswirkungen und ihre Bedeutung für den ländliche Raum. Die meisten Kredite wurden privat vergeben, nur 26 % kamen von institutioneller, staatlicher Seite. Rund 76 % der Kredite wurde zu Beginn der Feldbestellung genommen und weitgehend eingesetzt um Arbeitskräfte zu bezahlen. Das Einkommen war bei den kreditnehmenden Bauern höher ($P < 0,05$). Die Ergebnisse zeigen die Bedeutung der Kredite für die ländliche Entwicklung und weisen auf eine bessere staatliche Kreditvergabe hin.

7 References

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