

CHAPTER SEVEN: SUMMARY AND CONCLUSIONS

7.1 INTRODUCTION

This study provided extensive discussions on factors influencing access to agricultural credit and thereafter an exploratory analysis of the accessibility, use and impact of such credit on small-scale farmers in the Limpopo Province of South Africa. The positive impact of credit is regarded as a major justification for facilitating access to credit. One of the major factors negatively affecting the development of rural areas is the limited access to appropriate financial services. The stimulation of the rural economy in developing countries depends on economic growth in agriculture and other micro, small and medium enterprises. These enterprises constitute the engine for growth, employment and income for the rural community.

In South Africa, the past policies of apartheid created structural imbalances in the whole socio-economic fibre of the society, causing different racial groups to have different social contexts and access to wealth and services. The policies resulted in disempowerment of rural communities, where about 40% of the population lives - blacks constitute about 91% of the rural communities (Spio, 1995:54). Financial intermediaries directed their attention to commercial farmers at the expense of the small and emerging farmers, and micro-enterprises. However, the delivery mechanisms and the production environment failed to ensure the sound debt carrying capacity of these commercial farmers.

Apart from these policies, the financial intermediaries have not been able to accommodate small-scale rural clientele easily because it is a costly, risky and difficult task. Local lenders were faced with covariant risks and high transaction costs and therefore became reluctant to lend to the poor. Lack of information prevented large formal lenders who had the capacity to serve the small farmers and the poor from doing so. The lack of information made them prone to problems of adverse selection, moral hazard, and high enforcement costs. In addition, their rural clientele were heterogeneous and geographically dispersed; they dealt in small transactions and their activity was

highly dependent on exogenous forces. The methods and practices of most banks did not meet the needs and characteristics of their clients.

Credit market intervention and credit liberalisation policies have been justified on the ground of improving the formal credit access to small-scale farmers (Carter, 1989:13). The question is: does credit actually enhance the productivity of small-scale farmers in the study area and how far is the depth of intermediation? Thus, is access necessary? These questions were addressed in this study.

7.2 DELIMITATIONS, EXECUTION AND RESULTS OF THIS STUDY

The population from which data for this study was collected consists of small-scale farmers in the Lowveld and Northern Regions of the Limpopo Province. Three-stage cluster sampling was employed to obtain a random sample of small-scale farmers. Taking into account the cost considerations and other limiting factors, a sample of 153 farmers was interviewed using a structured questionnaire; 93 from the Lowveld region and 60 from the Northern region.

In an effort to study the accessibility to and impact of credit on small-scale farmers in the Limpopo Province of South Africa, two approaches were followed:

1. Determination of small-scale farmers' access to formal loans, and differential access within the small farming sector.
2. Econometric estimates of the shadow price of working capital for, and the effect of credit, on small-scale farmers.

A summary of the results is presented below:

A socio-economic comparison based on the credit status of small-scale farmers indicates that borrowers have significantly higher values than non-borrowers, especially in area cultivated, input usage and productivity. A similar trend was observed when farmers with farm size equal to or greater than two hectares were compared with those with less than two hectares. Those with farm size equal to or greater than two hectares had higher

socio-economic values in farm income, non-farm income, savings, area cultivated and productivity.

The results of the probit regression indicate that small-scale farmers with bigger farm size, good repayment record and who hold title deeds to land are more likely to borrow. On the other hand, farmers with higher family labour stock, higher non-farm income, higher remittances and pensions are less likely to borrow for farming purposes.

The results of the output supply regression show that the following factors affect productivity of small-scale farmers positively: farm size, education, land ownership, seeds usage, fertiliser usage, other inputs usage such as chemicals and family labour stock. The results also reveal that small-scale farmers in the Lowveld region are more productive than those in the Northern region.

The results of the credit effect measures indicate that the difference in productivity between borrowers and non-borrowers is due both to the use of credit and to the pre-existing inherent characteristics of the farmers. The difference measures up to about 40 per cent, of which 21 per cent is due to credit. The hypothesis that latent characteristics of farmers significantly affect output cannot be rejected. The total credit effect, which is determined by the credit random effect, indicates that credit can increase the output of a randomly selected small-scale farmer by 21 per cent.

The marginal credit effect estimated at mean loan size indicates that the average loan size for the small-scale farmers is below the income maximising size, since the estimated marginal net return of 35 per cent exceeds the average interest rate of 18 per cent. The marginal credit effect at zero loan size is estimated to be 2.10. A randomly selected individual farmer with zero formal credit would generate an additional R2.10 worth of output with a R1 loan. The results imply that the shadow price of capital is 110 per cent. This implies that non-borrowers are credit constrained, confirming the hypothesis of the inefficiency of rural credit markets.

More than 57% of the credit used by small farmers comes from informal sources and sources like pensions and remittances. Formal loans constituted 42.75 per cent of all

borrowings. Access to formal credit increases as the size of the holding increases. The two access ratios indicated a differential access to loans by small-scale farmers; accessibility increases as the size of holding increases. The results of the logistic regression shows that area cultivated, family labour, title deeds, non-farm income, awareness, repayment record, remittances and pensions, and savings are important variables which can be used to predict the accessibility of credit.

7.3 CONCLUSION

The empirical results obtained in the study raise several issues pertaining to the small-scale agricultural financial markets. Purposeful research, being hypothesis-oriented, requires conclusions to be made in terms of the formulated hypothesis.

Hypothesis 1: Access to credit to small farmers is limited, and within the small farmers' group, the farmers closer to the upper limit or to the size of commercial farmers are relatively better off in terms of access to credit, thus resulting in differential access to the formal credit institutions.

This finding strengthening the hypothesis that access to formal credit is skewed to large farms (Amjad, 1993); and that there is unequal access to credit, even within the small-scale farming sector. The results indicate a greater access for large size farms than smaller farms.

Hypothesis 2: Rural agricultural financial markets are inefficient; both borrowers and non-borrowers are credit constrained.

The findings of this research certainly provide support for this hypothesis. The marginal credit effect at zero loan size indicates a shadow price of credit of 2.10. This is a useful indicator of the efficacy of the rural financial system (Sial & Carter, 1996:771). The estimated shadow price is far in excess of the social opportunity cost of capital. This is an indication of weak financial intermediation in the financial market. The marginal credit effects at mean loan size also indicate that the average loan size is below the income maximising size. The analysis did not, however, estimate the optimal loan size

that will give the maximum returns; hence it is not possible to infer whether some of the borrowers are financially constrained. However, most borrowers indicated that the loan size was not large enough to cope with their financial demand.

Hypothesis 3: Interest rates in the markets are very high; thus, the shadow price is not far in excess of the social opportunity cost of capital; credit should therefore be subsidised.

The findings of the research do not provide any support for this hypothesis. The marginal net returns of 35 per cent far exceed the average 18 per cent interest rate charged in the study area. There are strong indications in this study that small-scale farmers are capable of realising high rates of return on capital, and hence they are potentially capable of paying market rates of interest. Subsidised interest rate proposals are therefore not supported.

Hypothesis 4. Credit has direct productivity effects and could be expected to reduce the unbalanced pattern of growth in South African farmers.

This study strengthens the hypothesis that there is a direct relationship between credit and productivity. Provision of credit to small-scale farmers makes them more productive. The results also indicate that other latent characteristics of borrowers, such as managerial skills also contribute to higher productivity. An Adams gap of about 18.4 per cent was obtained. This supports the hypothesis of Adams (1988), that borrowers may still be performing better than non-borrowers even without credit, because borrowers have certain characteristics that make them inherently more productive.

7.4 RECOMMENDATIONS

7.4.1 Policy implications

The provision of financial services, especially credit and saving facilities, plays an important role in the development of the rural economy. Rural households are caught in a vicious cycle of low rates of capital investment and low levels of income that

inevitably lead to low levels of productivity and low levels of savings. This cycle can be broken if the financial markets function efficiently. The role of the institutional financial sector in the developing areas of South Africa has been severely circumscribed by a number of factors, which have rendered the rural financial markets and financial institutions ineffective and inefficient in providing quality financial services to small-scale farmers and the poor. In many, if not most, of the developing areas, it is common to find that the formal financial sector has contracted rather than expanded in its ability to provide financial services, leading to severe credit rationing, to the point that only a very small number of potentially bankable clients receive financial services.

The study raised important issues relating to the accessibility and impact of credit on small-scale farming productivity. First, rural agricultural financial markets in the study are inefficient and participants in the market are credit constrained, as reflected by the excessive shadow price of credit. A shadow price of credit far in excess of the social opportunity cost indicates weak financial intermediation. This implies that markets are not competitive, participants are not fully informed, and that there is not a full set of markets. As pointed out by Sial and Carter (1996:771), the inefficiencies signal the absence of or weakness of insurance markets and their social substitutes. This at times forces participants in the market to rely upon autarkic insurance strategies (for example, individuals diverting investible wealth from productive investment to assets that generate low or even negative rates of return). In such an environment, provision of a subsidised interest rate policy may not be rational since it will reduce rather than improve access to credit.

Secondly, the marginal returns of small-scale farmers are such that they are capable of paying for a market related interest rate. The provision of credit at a subsidised interest rate is therefore not justified. If farmers pay a market related interest rate, this will enable lenders to cover their full costs, hence ensuring their financial viability. This will in effect reduce rationing of credit by lenders, thus improving credit accessibility in rural financial markets in South Africa. In addition, it may also reduce the segmentation/fragmentation found in rural credit markets. Because participants in the market would be facing similar prices, funds will flow across groups of individuals easily and freely.

Finally, the results also point to the fact that even within the small-scale farming sector itself, farmers low on the farm size ladder are discriminated against in the allocation of credit. This implies that the degree of credit constraints deepens as one moves down the farm size ladder.

7.4.2 Policy proposals

The traditional view of the small-scale farmers or of the poor as passive recipients of subsidized credit and charity has been challenged by the poor themselves. The results of the study have strengthened and demonstrated the role of the poor as economic agents ready to pay for services tailored to their needs. In addition, the study also indicated that having access to credit¹³, small-scale farmers could improve their productivity, hence enabling them to pay market related interest rates for credit. Since the experience with subsidized credit has been rather unfortunate, both in subsistence and commercial agriculture, this should not be policy. It is a counter-productive tool, and it should be a policy to avoid such subsidisation. The insistence on market rates in the White Paper on Agricultural Policy in South Africa is therefore strongly supported.

However, it must be pointed out that a credit policy, which improves access to formal credit for small farming enterprises is a necessary condition, but not sufficient in itself to solve the inequality and stagnation problems encountered in the small-scale farming sector. It is therefore imperative that the appropriate incentives are provided that will enable farmers to maintain a high level of production and adequate returns on capital investible and labour employed.

It is argued that lack of access to credit can distort the pattern of agriculture growth and income in small-scale farming sector. However, most profit maximising banks have continuously and systematically rationed small farms on the basis of the high cost and

¹³ *Access to credit will mean very little if most of the distortions such as lack of clearly specified property rights, access to effective research and extension services, lack of serviceable and reliable marketing channels, imposition of anti-agricultural price policies by urban based government, and lack of savings and insurance facilities are missing.*

riskiness of the enterprise. It is therefore imperative that financial strategies and innovations designed to improve the small-scale farmer's access to credit should first modify the existing rural financial environment by firstly reducing the cost and risk to financial institutions of delivering credit services to small farmers, and secondly, by lowering the cost to small-scale farmers of gaining access to these services. The challenge is therefore to develop strategies that will address these two issues. Among the financial strategies that could improve credit access for small-scale farmers as well as reducing cost and risk to financial institutions are:

- Restructuring of poorly performing financial institutions.
- Development of an effective and efficient financial infrastructure.
- Decentralization of major role-players in agricultural financial markets.
- Credit based on social collateral and other collateral substitutes.
- Development of non-farming economic sectors in rural areas.

Restructuring of poorly performing financial institutions

As the South African rural financial system undertakes a paradigm shift towards a more market-based approach, many participants are still paying the price in the form of costly, poorly performing institutions. The rehabilitation or restructuring or even the possible closure of government owned agricultural and rural banks/institutions that do not enjoy adequate autonomy, and that lack professionalism to improve their services and make them financially viable and sustainable, should be top priority for policy makers.

Most retail level institutions do not have adequate capacity to expand the scope and outreach of their services on a sustainable basis to most of their potential clients. Many institutions:

- (i) Lack capacity to leverage funds, including public deposits, in commercial markets.
- (ii) Are unable to provide a range of products and services compatible with the potential client's characteristics.

- (iii) Do not have adequate network and delivery mechanisms to cost effectively and efficiently reach the poorest of the poor, particularly those concentrated in resource-poor areas and areas with low population densities.
- (iv) Do not show a vision and a commitment to ensure their financial soundness and sustainability within a reasonable period and to become subsidy independent.

There is an urgent need to promote the development of efficient rural financial markets with the institutional capacity to mobilize savings effectively and efficiently, leverage funds, provide credit based on prudent banking principles in cost effective ways, reduce their transaction costs as well as those of their clients, improve management information and accounting systems, and manage risks to expand their services.

The current restructuring of some of the rural financial institutions to effectively and efficiently provide the needed services to its clientele is in the right direction. There is the need to strengthen the human resources and knowledge base through adjustment in the staff skill-mix in the operational departments and offices. Areas worth looking at are:

1. The improvement of staff involved in lending-related work at a general level, including managers of operational units in finance development institutions.
2. Thorough training of staff involved in processing and administration in various aspects of lending, such as product development and design of projects focused on the poorest of the poor and on resource-poor areas.
3. The improvement of the knowledge base of the staff regarding pro-poor financial technology and institutional modalities.
4. Increasing staff exposure to international best practices in agricultural and rural finance.

The institutional development of rural financial institutions needs to encompass the strengthening of the management information systems and accounting policies and practices, efficient management of their loan portfolios to ensure quality and growth, and the development of systems and procedures and financial technology for reducing transaction costs. The existing evidence suggests that there is no best banking

technology. What makes the difference between success and failure in the end is a) the environment in which the lending institutions operate (micro, meso, and macro); b) the quality of governance within the lending institutions; c) the detailed design of financial services and banking technology; and d) the quality of the lending institution's human resources (Lariviere & Martin, 1999:10; Chaves & Gonzalez-Vega, 1996:68)

Development of an effective and efficient financial infrastructure

Financial institutions can develop sustainable commercial services on a permanent basis, and expand their scope of operation and outreach, only if they operate within an appropriate financial infrastructure. Both policy makers and financial institutions should therefore focus on critical elements of financial infrastructure, such as the information systems and training facilities necessary for the development of the rural financial system in South Africa. The legal framework, supervision and regulation of the financial institutions are important because they facilitate sound growth and improve the capacity of financial institutions to leverage funds in the market and provide competition. Policy makers are encouraged to ensure that legal and regulatory systems do not discourage financial innovations, stunt institutional growth, and allow the emergence of a diverse set of dynamic institutions. For instance, the present legal system systematically prevents collateralization of the type of assets small-scale farmers or micro-entrepreneur have, thereby creating an obstacle to innovative lenders to reach this clientele through the use of non-traditional collateral. The contract enforcement milieu is extremely important in creating the "setting" for lenders to engage in innovative practices to expand access downstream. The results of the marginal credit impact in the study strengthen the argument against the usury law currently in effect in South Africa, since small-scale farmers can pay market related interest rates on loans.

Decentralization of major roleplayers in agricultural financial markets

Expansion of banking outlets contributes to rapid credit delivery, increased credit turnover, and lower administration costs due to economies of scale. By reducing costs, decentralising branches and improving credit evaluation, financial institutions could more easily afford to service small loans and deposit accounts needed by low-income customers.

The need for decentralised structures is rather obvious. Financial institutions which are highly decentralised in their operations, for example Grameen Bank, have achieved much wider coverage and reached a far higher number of borrowers than those operating from a single head office or from a regional office at a distance that may be difficult for some to reach. A centralised system as found in many parts of Africa - and also that of the Land Bank and some development corporations in South Africa - leads to costly delays and high transaction costs. In the event of difficulties leading to prohibitive costs of decentralised structures, the state can consider some subsidisation of operating costs, provided it will have a reasonably short life, for example, eight years, and provided that the subsidisation is systematically reduced according to a predetermined time-scale. While decentralisation will obviously entail more branch offices for some institutions such as the Land Bank, on smaller levels these institutions can be represented by other decentralised structures. These may be local co-operatives, or even local informal borrowing and lending groups. Stokvels may even serve such a purpose.

The proposal regarding the possible emergence of specialised rural institutions does not in any way imply that they should be favoured or given preferential treatment by the state *vis-à-vis* the commercial banking sector. The need for competition implies a level playing field. Thus, if the state decides to fund institutions such as the Land Bank, this should not be in the form of grants, but as loans from the state to these institutions at market-related rates of interest and other loan conditions. Otherwise, the state should confirm the current status quo wherein the Land Bank obtains its funds from the capital market. All impediments to rural actions by the commercial banks and all existing legal arrangements discriminating against them should be withdrawn.

Credit based on social collateral and other collateral substitutes.

Financial institutions should reconsider the conventional concept of security. The dominant form of conventional security is the ownership of land embodied in a title deed to land. The most important norm in extending credit to farmers should be the ability of farmers to repay the loan, and the best motivation to repay a loan will be access to future loans.

Character-based assessment and pragmatic concepts of collateral through group guarantees should be encouraged. The adoption of character references as a borrower screening technology has important implications in terms of operating costs. Character-based lending is an inexpensive technique for two reasons. Firstly, local information about a borrower is a sunk cost, in that it is an asset that does not have a value outside the local financial market. Secondly, such information is acquired in a slow fashion, the only needed expenditure resulting from having been in the location for sufficiently long period of time. Character based lending seems to have been comparatively efficient in avoiding costly mistakes in assessing the probability of loan repayment. Financial institutions should be encouraged to relax requirements for physical collateral and use social collateral in its place.

Guarantee based on self-help organizations (SHOs) is also worth looking at. Apart from providing guarantees for members who negotiate loans with formal financial institutions, most lending to self-help groups is guaranteed mutually by all members. To address the problem of idiosyncratic risks, a group life insurance scheme could be undertaken by the SHOs to cover exceptional cases where default may result, example at the death of a member.

Investment in rural infrastructure

A high shadow price of capital as indicated in the results of the study, signals the absence or weakness of institutions which could assist in the provision of financial services to small-scale farmers. One way in attracting these missing institutions to the rural areas is for the government to invest in both soft and hard infrastructure.

Investments are required in a) physical infrastructure, especially irrigation, roads, communication and electricity (the importance of farm-to-market roads in determining marketing margins, agricultural profitability, and farm diversification cannot be overemphasized); and b) human infrastructure, especially education, nutrition, and health, to increase their well-being and productivity. Investment in infrastructure and communication will help to drive down the transaction costs of providing financial services in rural areas. Investment in rural infrastructure will also act as catalyst for the establishment of some of the missing institutions which tends to create market failures in

rural financial markets. The threshold for entry into the financial market is simply too high for many. Hence, creating a conducive environment in rural areas is one of the areas that will require more attention.

7.4.3 Future research

This study did not estimate the average loan amount that will maximise income for borrowers. An analysis of the average loan size would provide some insight into the optimality of the loan size offered by the lenders. Further research into the optimal average loan size for the various farm sizes would also provide useful information to lenders on how much credit should be offered to the various farm size groupings. Apart from the use of the endogenous switching regression method, the use of the linear programming method will generate useful information on the optimal amounts of the various resources that should be used by these small-scale farmers in order to reap the maximum returns from the use of credit.

It was established in the study that both the use of credit and latent borrower characteristics contributed significantly to the productivity of borrowers' farms. The results imply that borrowers do have the advantage in performance over non-borrowers as a result of their inherent characteristics, even when operating without credit. It would be interesting to identify these latent characteristics, which contribute to the increase in farm productivity of the borrowers. The identification of these latent characteristics would have significant implications on policies directed at improving the small-scale farming sector.

Research into the behaviour of credit institutions in the country will also help to explain some of the actions taken by credit institutions as well as assisting policy makers in formulating the appropriate interventions. Lastly, the study relied on cross sectional data; it would be useful if a similar exercise were done using time series data. A comparative analysis could then be done to see which of the two data sets are able to decompose the impact of credit into its direct and indirect effects. In addition, the time series data would provide an insight into the different levels of output in relation to credit use over time.