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Contribution of savings and credit cooperatives to food crop production in Swaziland: A case study of smallholder farmers

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Using primary data collected in Ludzeludze and Bhekinkhosi/Mliba RDAs from 80 smallholder farmers in the 2008 cropping season, the study used a Cobb-Douglas production function model to analyze the contribution of savings and credit cooperatives to food production in Swaziland. The results from the analysis indicated that on average, members of savings and credit cooperative societies used capital worth E 6185.00, compared to E 4520.00 that was used by non-members on crop production. Households who are members of savings and credit cooperative societies had an average maize yield of about 2.6 times that of households who are non-members. Similarly, average yields of potatoes for members is about 2.7 times those recorded by non-member households and average yields of beans of about 2.2 times than those obtained by non-members. The analysis reveals that households who are members of savings and credit cooperative societies produced more output per hectare of maize, sweet potatoes and beans than those households who are non-members. The high yields for members of savings and credit cooperative societies could be attributed to their ability to spend more on improved seeds, pesticides, fertilizers and other farm inputs. All the independent variables in the production model were found to explain 75.3% of the variation in the total amount of food crop produced by the farmers. The regression coefficient of capital used in food crop production indicates that all things being equal a 1% increase in capital used the value of food crops produced would increase by 0.34%, while a 1% in increase in labour and in land would result in 0.088% decrease and 1.027% increase in output respectively. The study has shown that savings and credit cooperatives play an important role in improving agricultural production. Hence there is a need to encourage farmers to join and save with cooperatives in order to have access to microfinance and improve their production through the use of improved seeds, technology and fertilizers.

Key words: Smallholder farmers, savings and credit cooperatives, contribution, food crop production.

INTRODUCTION

Swaziland has a total land area of 1736,456 ha, of which 56% is Swazi Nation Land (SNL) and 44% is Title Deed Land (TDL). While SNL farmers mainly produce crops for self consumption, TDL farmers produce crops for commercial purposes. About 70% of the country's population lives in rural areas and on SNL and most of them are smallholder farmers who depend on subsistence agriculture for survival (Government of Swaziland, 2008).

It is believed that farmers on SNL operate under various constraints, which lead to low yields. Food adequacy in the country differs from one ecological zone to another. Some ecological zones do experience food deficiency due to various factors that are area specific. Farming on TDL is largely in the hands of Europeans and other foreigners and is devoted to commercial production of forests and arable crops. Large-scale agribusiness operators (producers and processors of sugar, citrus, pineapples and cotton) on TDL use capital-intensive production technology, enjoy access to well-developed market channels and have attained world competitive

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levels of output per unit area. It is currently estimated that about 72% of agricultural output comes from TDL commercial producers and only 28% from SNL smallholder farmers (Government of Swaziland, 2008).

Agricultural production in Swaziland

The agricultural sector plays a very important role in the economy of Swaziland. It accounts for 10% of the Gross Domestic Product and remains the most important sector with great potential for poverty reduction. However, the sector continues to be characterized by poor performance as a result of erratic rainfall patterns accompanied by heat waves, poor crop diversification, invasion by alien weed species, effects of fire on the forestry industry, escalating agricultural input prices that smallholder farmers cannot afford, poor market structures, lack of appropriate research, existing monopolies in the marketing of agricultural inputs, HIV and AIDS ravaging the productive human resources and poor land use planning (Government of Swaziland, 2009).

Agricultural production in Swaziland is characterized by arable crop farming and livestock production. The achievement of sustained and equitable agricultural development remains the greatest challenge facing the Swazi Nation. Swaziland's potential for greater growth and development lies in the agricultural sector, which contributes a large proportion of the GDP. In Swaziland agriculture portrays a distinct bimodal pattern of ownership, production technology and output. There is a substantial agricultural sub-sector which operates on Title Deed Land (TDL) and is characterized by: relatively high capital intensity; cash cropping and large farms. There is also the traditional smallholder agricultural sub-sector operating in SNL.

Here farmers tend to concentrate on the production of food crops for home consumption and to market any surpluses. The principal food crop is maize but other crops such as groundnuts, dry beans, sorghum, pumpkins, jugo beans, soya beans and sweet potatoes are being produced. Smallholder farmers tend to use labour-intensive production technologies, thus employing relatively less capital and have relatively low levels of output per unit area (Government of Swaziland, 2007).

Livestock production is also a major activity in the rural sector. About 81% of the total cattle population is owned by SNL farmers who, traditionally, keep livestock, especially cattle, for social and economic reasons. Livestock enhance social status, being viewed as a store and measure of wealth and are also used as a medium of exchange in marriages. However, livestock manure derived from the practice of night kraaling is a valuable source of organic fertilizer. Those farmers who do not have access to mechanized means of land preparation use cattle as draught animals. Cattle are accepted as collateral for agricultural loans by the state owned bank

Swaziland Development and Savings Bank (SDSB).

Recent annual statistics indicate that real economic growth of 2.8% was expected in the year 2009. In terms of international and regional comparison, Swaziland's growth falls below the average expansion in world and regional output achieved in 2005. Moreover, this rate of growth is less than the 5% required for reducing the poverty rate by 50% in 2015, given an assumed population growth rate of 2.75%. Agriculture, which mainly stimulates sugar manufacturing, recorded a 0.1% recovery in 2007 from an equivalent decline in 2006. It is noteworthy that this recovery was a result of an improvement in crop yields from private farms. Crop yields on SNL declined by 0.4%, while the livestock sub-sector also declined by 7.5% in 2007 (Government of Swaziland, 2006, 2008; Pali-Shikhulu, 2000; Meyer and Nagarajan, 1994).

Although the desirability of agricultural development is fully recognized, recent years have witnessed rising concern about development constraints that limit agricultural development. Assessment of the present situation shows that large and efficient agricultural production systems, such as sugar and citrus industries, are in place and that there are also smaller production systems and farms with economic and sustainable outputs. At the same time, large parts of the country are not devoted to sustainable production systems, as is evident through low outputs and land degradation.

The Swaziland Government, through the Ministry of Agriculture and Cooperatives, has developed an overarching policy framework embracing the Comprehensive Agriculture Sector Policy (CASP) and the National Food Security Policy (NFSP). It has also established the National Programme for Food Security (NPFS) to guide implementation of these policies so as to create new opportunities in agriculture (Government of Swaziland, 2008).

Leliveld (1994) classified rural Swazi homesteads based on structural categories distinguished by their position in a system of production relations in agriculture as; poor (16%), lower-middle (57%), upper-middle (18%) and rich (9%). Currently this classification is still reflected in the country. The poor constitute homesteads that do not produce enough from all their agricultural activities to ensure subsistence. In addition, they do not engage in non-agricultural petty commodity production. Their subsistence needs are secured partly through agricultural production and sale of labour power. The lower-middle homesteads are those that do not achieve subsistence in their agricultural production but unlike the poor, engage in non-agricultural petty commodity production. As in the poor category, subsistence production is based on family labour alone. Homesteads in the upper-middle category are those that produce enough from all their agricultural activities to achieve subsistence, also primarily based on family labour. The rich homesteads, however, achieve subsistence levels and are able to employ wage labour

from outside the homestead or to employ resident wage-labour in conjunction with ownership of expensive equipment such as tractors and irrigation facilities.

Rural areas constitute the traditional smallholder agricultural sub-sector with about 90,000 household-operated farms on Swazi Nation Land (SNL) on which communal tenure and subsistence farming are practiced, with average farm of about 1.7 ha (World Bank, 2000). Rich homesteads produce more than ten times maize, than maize per resident and have surplus in maize equivalents than poor homesteads. Generally, rich homesteads have means available (are far better equipped and make use of modern inputs) to raise agricultural production, compared to other categories that are dependent on hiring tractors and/or oxen and plough (Leliveld, 1994).

A considerable proportion (68%) of the poor homesteads are female headed, compared to 43% of lower-middle, 42% of upper-middle and 23% of rich homesteads. Given that women in Swaziland generally have less access to resources and tend to be listened to less in their appeals for help with ploughing (Leliveld, 1994; Keregero, 2000), agricultural production in female-headed homesteads tends to suffer when compared to that in male-headed homesteads. According to Leliveld (1994), a higher proportion of the poor homesteads are involved in wage-labour and 50% of poor and lower-middle homesteads earn more than 80% of their cash income by offering wage-labour. This seems to suggest that these homesteads have enterprises which are relatively vulnerable to external (economic) shocks and that their continuity is relatively easily jeopardized in times of economic crises (Government of Swaziland, 2008).

The role of microfinance in agricultural production

Access to credit is a crucial factor in the development of the agricultural sector. Agricultural producers rely on credit facilities to raise the capital required to initiate and sustain production activities. The role of credit in agricultural production is crucial because inputs such as seeds and fertilisers are purchased at the beginning of the production season, but returns are realised only at the end of the season (Masuku, 2009). The provision of credit has been regarded as an important tool for raising the incomes of rural populations, mainly by mobilizing resources to more productive uses.

Agricultural credit plays an important role in enhancing agricultural productivity in developing countries like Swaziland. According to Muhammad et al. (2003) agricultural growth depends on increased use of agricultural inputs, technological change and technical efficiency. Muhammad et al. (2003) argued that technological change is the result of research and development efforts, while technical efficiency with which new

technology is adopted and used more rationally is affected by the flow of information, better infrastructure, availability of funds and farmers' managerial capabilities. The optimal use of inputs requires funds at the disposal of farmers.

These funds could come either from farmers' own savings or through borrowings. In less developed countries like Swaziland where savings are negligible especially among the smallholder farmers, agricultural credit becomes an essential input along with modern technology for higher productivity. Credit requirements of the farming sector have increased rapidly over the past few decades resulting from the rise in use of fertiliser, improved seeds and mechanisation and hike in their prices. Qureshi and Shah (1992) observed that institutional credit affects agricultural output also through financing of capital investment. They found that the responsiveness of agricultural output is larger to institutional credit than that of output to fertiliser.

Savings and credit cooperatives societies (SACCOS) in Swaziland

Savings and credit cooperative societies are defined as associations for people who pool together their financial and human resources for the purpose of giving loans to each other and using the pool of ideas for the betterment of their members. They are formed under a pre-defined common bond. Loans are used for economic and other worthwhile purposes. The members are owners of the SACCOS and customers at the same time (SASCCO, 2008). The history of savings and credit cooperatives in Swaziland dates back to the 1960s when they were established, although their existence was short-lived, as most of them became dormant because much focus was on farmers' cooperatives.

The original "credit system" (including Loan Application Forms and Deed of Hypothecation Forms) was not always adhered to and the system devised by Central Cooperative Union (CCU) and Cooperative Development Centre (CODEC) in 1978 was never fully implemented. From 1977, the volume of credit increased and the number of accounts expanded tremendously without a fully implemented system, a clear credit policy, adherence to existing rules, a monitoring and supervisory force and the necessary managerial skills in primary societies. The consequence was that the cooperative movement was heavily indebted to farm suppliers to the extent that its entire future was jeopardized (SASCCO, 1996, 2003, 2008; Matsebula, 1997; Motsa, 1997).

The savings and credit co-operative unions were then revitalized in the 1980s when the Government of Swaziland, together with Cooperative African Confederation of Cooperative Savings and Credit Associations (ACCOSCA), developed favorable policies which provided an environment that was conducive for

the growth and development of such cooperatives (Guma and Simelane, 1982; Fakudze, 2006; Nxumalo, 1994). The need for representation nationally and internationally and the demand for services, such as education and training to enhance the quality and quantity of the savings and credit cooperatives called for societies coming together. This, finally, led to the societies forming an apex body, the Swaziland Association of Savings and Credit Cooperatives (SASCCO), which was registered in 1988 (SASCCO, 2008). Its main purpose is to ensure the building up of sound and sustainable savings and credit cooperatives.

Currently, SASCCO has 41 member societies. According to SASCCO (2008), the mandate of these societies include: making people develop a habit of saving money; teaching people modern techniques of saving money; introducing people to business concepts; making people re-discover themselves; develop a culture of saving money, not saving the balance; cultivate a culture of business ownership; teach people how to manage their resources properly and teach people how to borrow from a source they have created themselves.

The problem

There are indications that the agricultural sector is underfunded. This is, particularly, the case for agricultural (crops and livestock) production and other agro-related activities of smallholders' farmers on SNL, who produce more than 80% of maize, which is the nation's staple food (Economic Planning Office, 2006). Agricultural lending by financial institutions in the country is limited to serving large-scale corporate farms, like sugar and citrus estates, with which they have had long-standing credit relationship (Central Bank of Swaziland, 2008). The Swaziland Development and Savings Bank (SDSB), a parastatal that advocates targeted credit to agriculture at subsidized interest rates, has put in place conditions that make it difficult for small-scale farmers to access credit from the institution. One such condition is that a farmer must provide collateral to get credit, which most small-scale farmers do not have (SDSB, 2008). The small-scale farmers, who do not have collateral, therefore, do not have access to credit from financial institutions in the country. Yet, even though they are failing to access credit from financial institutions, they are still expected to produce enough food and reduce poverty whose prevalence remains at 69% (Government of Swaziland, 2008).

Dlamini (1977, 1990) observed that funds for the purchase of inputs are an important factor affecting the adoption of new technologies. Farmers who access to credit are most likely to adopt yield-enhancing interventions, while the shortage of credit constraints production. Thus, the importance of agricultural credit in food production cannot be overemphasized.

Savings and credit cooperative societies are known to provide funding to their members at reasonable interest rates and without the requirement of collateral. They are, therefore, vital organs for financing food production. However, no studies have been done on the extent to which these organs have been helpful towards enhancing food production and alleviating hunger and poverty in the country. This study is, therefore, an attempt to fill this gap.

Objectives of the study

The purpose of the study was to establish the contribution of savings and credit cooperatives to smallholder food production in Swaziland. The specific objectives of the study include: description of the socio-economic characteristics of smallholder farmers who are members of savings and credit cooperative societies and those who are not; comparison of food crop output by smallholder farmers who are members of savings and credit cooperative societies and those who are not and determination the effect of credit on smallholder food crop production.

The study hypothesizes that there is a relationship between the credit size and agricultural output and that limited access to credit results in reduced food crop production.

METHODOLOGY

The study area and data collection

In the study area there were five Rural Development Areas (RDAs) and a total of 797 farmers, of whom 397 were members of savings and credit cooperative societies and 400 farmers who were not. The farmers in the study areas are all smallholders cultivating an average of 2.5 ha of land and produced, at least, one food crop. However, for this study only two of the five RDAs were considered and these are Ludzeludze and Bhhekinkhosi/Mliba areas. These two areas were selected and studied on grounds that the two had the highest number of farmers who are members of savings and credit cooperative societies. They were, therefore, considered to be in a better position to provide the necessary data for the study. The two selected RDAs had a total of 290 farmers, of whom 122 were members of savings and credit cooperative societies and 168 were non-members. The actual sample size for this study was 80 farmers. Using stratified random sampling procedure (the strata being membership to savings and credit cooperative) a total of 34 farmers who are members of savings and credit cooperative societies and 46 farmers who are non-members were selected.

Primary data were collected through structured questionnaire and the use of an interview schedule. It consisted of four parts: farming resources and acquisition of finances, costs and returns, use of recommended crop management practices and demographic data. The data were collected during February 2009. The data used for the study were cross sectional data from production records for the year 2007 as individual farmer's production. It was assumed that all activities pertaining to food crops produced from this production year were finalized in 2008; therefore, it was the most recent complete food crops data that was available in full from the farmers.

Table 1. Summary of some socio-economic characteristics for savings and Credit cooperative members and non-members for the 2007 production season.

Variable	Members of savings and credit cooperatives (n= 34)	Non-members of Savings and credit cooperatives (n = 46)
No. of farm Households who purchased food	0	16
No. of farm households who did not purchase food	34	30
No. of households who applied lime on their farms	21	0
No. of households who did not apply lime	13	46
Households who bought new farm tools	16	2
Households who did not buy new farm tools	18	44
Average amount of credit used for food production(E)	4036 (1025)	0
Average amount of credit used for other purposes(E)	1804 (512)	0
Average amount of capital used (E)	6185 (1311)	4520 (1096)
Average Labour (hours)	72 (140.01)	201.22 (89.48)
Land (is in ha)	2.47 (0.66)	2.10 (0.50)
Average production (Kg):		
Maize	9392 (2510)	3651 (1153)
Sweet potatoes	21625 (1580)	8000 (2012)
beans	1310 (285)	600 (105)

Note: numbers in parentheses indicate standard deviation.

Input data, such as quantities of fertilizer and seeds were also collected. Quantities of yields and quantities of all other variable inputs used were also obtained.

Data analysis

The Statistical Package for Social Science (SPSS version 10) programme was used to analyze the data. Data analysis involved the use of a regression technique in the form of a Cobb-Douglas function. Despite its well known limitations, the Cobb-Douglas functional form was used in this study because it exhibit any degree of returns to scale, it has an elasticity of substitution equal to 1 and is also quite useful in many applications because it is linear in logarithms. These properties of the Cobb-Douglas production function have made it very appropriate for analyzing agricultural production. Hence, it was chosen and used in this study. The general regression model used was specified as follows:

$$Y(t) = F(K(t), L(t), T(t), D_1) \quad (1)$$

$$K = F(Cr, Eq) = Cr + Eq$$

The Cobb-Douglas production function was specified as:

$$Y = \beta_0 K^{\beta_1} L^{\beta_2} T^{\beta_3} e^u \quad (2)$$

Taking the natural logarithms of both sides the log linear form of the production model used is:

$$\ln Y = \ln \beta_0 + \beta_1 \ln K + \beta_2 \ln L + \beta_3 \ln T + D_1 + u \quad (3)$$

Where: $\ln Y$ = natural logarithm of output (Emalangeni), $\ln K$ = natural logarithm of capital (Emalangeni), $\ln L$ = natural logarithm of labour (Hours), $\ln T$ = natural logarithm of size of cultivated land from, where the harvest was obtained (Hectares), D_1 = Membership to a savings and credit cooperatives (1= member; 0 = non-member), Cr = credit capital (Emalangeni), Eq = equity capital

(Emalangeni), u = Random error term independently and identically distributed with zero mean and constant variance.

RESULTS AND DISCUSSION

In this section, summary of some of the socio-economic characteristics for members of savings and credit cooperatives and non-members was presented. The results indicate that members of savings and credit cooperatives use more capital to produce food crops (E 6185) and use more land (2.47 ha) to produce food crops compared to non-member farmers. The results further reveal that these farmers also produce more food crops compared to non-member farmers.

As seen in Table 1 every indication is that those households who are members of the savings and credit cooperatives have used the loan they obtained from the cooperative for production purposes. For instance about 16 of the 34 sampled members of the cooperative bought new farm tools while only 2 of the 46 non-members bought new farm tools. The results revealed that members of the cooperatives were in a better position to acquire the necessary tools to improve agricultural productivity and thereby increase agricultural production. This could be attributed to the fact that members of the cooperative have access to farm related loans.

The estimates of food crop production function

The effect of credit on smallholder food production was examined through the use of a Cobb- Douglas food crop

Table 2. The estimates of a food crop production function for members and non-members of savings and credit cooperatives.

Variable	Coefficients	Std. Error	t-value
Constant	5.893	2.038	2.891
LnK (Capital)	0.340	0.246	1.379
LnL (Labour)	-0.088	0.113	-.781
LnT (Land)	1.027	0.262	3.929*
Membership	0.847	0.118	7.196*

R², 0.766; Adjusted R², 0.753; F-value, 61.362, Number of observations 80. *Significant at 1% level.

production model. A total of four variables were included in the production function. Out of four variables only two were statistically significant at 1% probability level. The adjusted R² was found to be 0.753 indicating that the independent variables explained 75% of the variation in the food crop output. The regression results from the production model are presented in Table 2. The coefficient for land was positive and statistically significant ($p < 0.01$) suggesting that a 1% increase in capital used by the respondents in food crop production would increase the value of output by 0.34% assuming the other variables remain constant. Membership to a savings and credit cooperative is positive and significant, suggesting that members of savings and credit cooperatives have 0.847% output more than that of non members. This is probably because of having access to capital to enhance production.

Members of savings and credit cooperative societies get loans from their cooperative societies and use part of such loans to produce food crops. The credit helps to add to their equity, thus increasing the capital they use in food crop production. Even though all of the savings and credit cooperative society members indicated that they did not direct all the credit they got from the cooperative societies into food crop production, a large part of the credit did go to food crop production. This finding is in line with the findings by Dlamini (2008) that an increase in capital usage on the farm would lead to the attainment of higher maize productivity.

Land was included in the analyses to determine its impact on the food crop production. The coefficient of land was positive and statistically significant ($p < 0.01$). A 1% increase in the size of land used for food crop production would result in 1.027% increase in value of food crop produced, assuming other variables considered in the study remain constant. This is expected because increased land size, other things being the same, means more crop plants are grown. Also the sum of the input elasticities which is 2.126 demonstrates increasing returns to scale. That means if the sampled farmers double all inputs food crop output would increase by more than double.

Conclusions

The findings of the study indicate that savings and credit cooperatives have a positive contribution towards food crop production as it enhances farmers' ability to purchase farm inputs and easily acquire other farm requirements. Members of savings and credit cooperative societies demonstrated the attainment of higher food crop yields to meet household needs and had capacity to utilize more capital for production than non-members. This indicates that membership to a cooperative enables members to access credit, which becomes useful in improving agricultural production. Availability of credit through cooperatives made a very good contribution towards augmenting available capital to enhance production. Capital and land are the most important factors contributing towards higher food crops yield. Their coefficients point out that their additional use can further enhance output if these variables are available in their right amount and properly used. As a result of the positive contribution made by savings and credit cooperatives towards crop production farmers need to be encouraged to join savings and credit cooperative so that they have access to credit, hence improve agricultural production through the use of improved technology and inputs.

REFERENCES

- Central Bank of Swaziland (2008). A Quarterly Review, December 2008, Central Bank of Swaziland, Mbabane.
- Dlamini AM (1996). The Impact of Savings and Credit Cooperative Societies on the Socio-economic Development of Swaziland. SASCCO Paper, Lobamba, Swaziland.
- Dlamini M (1990). A review of the Non-commercial Agricultural Sector in the Shiselweni Region of Swaziland: Input-output Relationship, Problems Experienced by Farmers and Possible Solutions. Unpublished B.Sc. Research Project Report, University of Swaziland, Luyengo, Swaziland.
- Dlamini VM (1977). The Role of Farmer's Cooperatives in Agricultural Development in Swaziland. Unpublished B.Sc. Research Project Report, University of Swaziland, Luyengo, Swaziland.
- Economic Planning Office (2006). Development Plan, 2006/2007-2007/2008, Economic Office, Ministry of Economic Planning and Development, Mbabane.
- Fakudze SN (2006). The Benefits Derived by Members of Savings and Credit Cooperatives in Swaziland. Unpublished B.Sc. Research Project Report, University of Swaziland, Luyengo, Swaziland.
- Government of Swaziland (2006). National Programme for Food Security: Draft. Ministry of Agriculture and Cooperatives, Mbabane, Swaziland.
- Government of Swaziland (2007). Economic performance report. Ministry of Agriculture and Cooperatives, Mbabane, Swaziland.
- Government of Swaziland (2008). Economic performance report. Ministry of Agriculture and Cooperatives, Mbabane, Swaziland.
- Guma XP, Simelane VR (1982). Small Farmer Credit and Small Farmer Attitudes towards Cooperatives. University of Swaziland, Social Science, Research Unit for the Ministry of Agriculture and Cooperative Development. Mbabane. Swaziland.
- Keregero KJB (2000). Reaching Swazi Nation Land farmers: Challenges to the Credibility of Agricultural Extension in Swaziland. UNISWA J. Agric. Sci. Technol.,
- Leliveld A (1994). Social Security in Developing Countries: Operation and Dynamics of Social Security Mechanisms in Swaziland. Thesis

- Publishers, Amsterdam, The Netherlands.
- Masuku MB (2009). Access to credit by smallholder farmers: Implications for policy. *UNISWA Res. J. Agric. Sci. Technol.*, 12(1): 23-32.
- Matsebula MS (1997). Role of Savings and Credit Cooperative Societies in Changing Socio-economic Environment. Paper Presented at the SASCCO Workshop, Matsapha, Swaziland.
- Meyer RL, Nagarajan G (1994). Import Substitution for Export Promotion: The Horticulture Sub-sector of Swaziland. USAID, Mbabane, Swaziland.
- Motsa HB (1997). The Contribution of Savings and Credit Cooperative Societies to the Economic Well Being of the Members, Unpublished B.Sc. Research Project Report. University of Swaziland, Luyengo, Swaziland.
- Muhammad I, Munir A, Kalbe A (2003). The Impact of Institutional Credit on Agricultural Production in Pakistan, <http://cgap.org/gm/document-1.9.4396/DB25.pdf>. Accessed 19/09/2010
- Nxumalo SA (1994). Rural Credit Management in Swaziland. Paper Presented at the Rural Credit Management Course, Lagos, Nigeria.
- Pali-Shikhulu J (2000). Evaluation of Constraints to Maize Production in the High Rainfall Areas of Swaziland. University of Swaziland, Luyengo, Swaziland.
- Qureshi SK, Akhtiar HS (1992) A Critical Review of Rural Credit Policy in Pakistan. *Pakistan Dev. Rev.*, 31(4): 781–801.
- SASCCO (1996). SASCCO Annual Report, Mbabane, Swaziland.
- SASCCO (2003). SASCCO Annual Report, Mbabane, Swaziland.
- SASCCO (2008). SASCCO Annual Report, Mbabane, Swaziland.
- Swaziland Development and Savings Bank (SDSB) (2008). Annual Report for the Financial Year Ended 31st March, 2008, SDSB, Mbabane.
- World Bank (2000). Swaziland Financial Sector Study, Microeconomic, Industry, Trade and Finance Division, Southern Africa Department, World Bank, Washington, D.C.