

AAAE Conference Proceedings (2007) 383-386

Non-Credit Services of Group-Based Financial Institutions: Implications for Smallholder Women's Honey Income in Arid and Semi Arid Lands of Kenya

Peter Shimon Otieno, Rose Adhiambo Nyikal and Fred Inuani Mugivane

Department of Agricultural Economics, University of Nairobi, P.O. Box 29053 Nairobi, Kenya

Abstract

This paper analyses the effect of non-credit services of joint liability credit institutions on smallholder women beekeepers' honey income. The non-credit services offered to the beekeepers are mainly enterprise development services (training on marketing, business, production and subsector analysis). The study uses cross-sectional data from a survey of women beekeepers participating in group-based credit programmes; the survey was conducted in September 2005 in Makueni district of Kenya. The findings indicate that the number of enterprise development related trainings attended by women beekeepers that are offered by the group-based financial institutions positively and significantly influence honey income. The results confirm that non-credit services contribute positively to the enhancement of honey income. These results imply that extension and strengthening of group-based financial institutions' non-credit services in the marginal areas will enhance development of smallholder agriculture for improved income generation.

Keywords: Credit, Finance, Honey, Makueni,

Introduction

Background

In the recent past, smallholder agriculture has assumed an important role in the rural economy of most countries in the sub-Saharan Africa (Cleaver and Donovan, 1995). In Kenya, for instance, 80 percent of the population is rural-based and depends mainly on smallholder agriculture for its livelihood (Republic of Kenya, 2004). Improving access to credit and non-credit services is one of the strategies proposed to stimulate growth and realization of agricultural sector's potential contribution to the economy. In line with the government's policy on revitalization of agriculture and recognizing the inadequacies of previous attempts for the provision of affordable agricultural credit and non-credit services, joint-liability financial institutions are supporting access to credit and non-credit services in the agricultural sector. The non-credit services are mostly enterprise development trainings covering marketing, business, production and subsector analysis issues (Ledgerwood, 1999). This integrated approach is seen as having the potential to improve access to services based on self-help, community-based groups that also provide a forum for social interaction purposes (Holt, 1994). These programmes are mostly supported by Non-Governmental Organizations addressing poverty reduction concerns in rural areas. Normally, group-based financial institutions go the integrated approach

as a means of improving the ability of the clients to utilize financial services and hence help reduce the target group's vulnerability to avoidable risks (Adongo and Stork, 2005; Zeller *et al.*, 2001). It has been observed that women participate more in programmes run by these institutions than men (Atieno, 1999). However, only a small proportion of participating women access credit while the remaining majority do not but continue complying with membership requirements to access non-credit services. Despite this realization, the effect of these services on the smallholder enterprise return has not been adequately addressed. Based on the experiences of women beekeepers in the marginal Makueni District of Eastern Kenya, this paper focused on analysing the implications for non-credit services on resource poor smallholder women's honey income.

Research question

A key interest in measuring the effect of non-credit services offered by group-based financial institutions is to explore the potential for their strengthening. This will make them serve as an indirect vehicle for promotion of poor rural women's agricultural income in the short run. Joint-liability credit programmes have mostly been synonymous with provision of affordable credit. One can hardly find statistical data explaining the influence of non-credit services like enterprise development trainings on agricultural income in sub-Saharan Africa. Yet these services could be critical in

influencing the current level of returns from the agricultural enterprises of poor women. This is because the very poor women may not meet the basic requirements in the immediate short run to upgrade their technology for higher returns but may use the skills gained to influence management approach on existing set up resulting in improved returns (Mwale, 1995). Evidence suggests that mostly the better-off low income farmers have a larger positive response with credit than the very poor (Remenyi and Benjamin, 2000). Access to these non-credit services may also help the smallholder poor woman to use the resources at her disposal more productively and efficiently. In rural Kenya where the incidence of poverty is highest among women due to their over-dependence on subsistence agriculture, provision of non-credit services is intended to overcome some of the constraints on agricultural income enhancement owing to smallholder women's limited ability to self-finance such services (Ledgerwood, 1999). Therefore, the question of whether non-credit services offered by group-based financial institutions can be used as a vehicle to promote poor smallholder women's agricultural incomes takes on special importance.

Methodology

Study area and data collection

The study area is located in Makueni District of Kenya. The area lies in arid and semi arid zone and receives low unreliable rainfall of about 1000mm spread in two seasons. Economic activity is agriculture, mainly small-scale, with 60-65 percent of farm families living below the poverty line (Muricho, 2002). The area is one of the key beekeeping zones in the country (Swisscontact, 2005). The scope of beekeepers analysed in this paper is confined to those in women groups registered with the Ministry of Culture and Social Services and participating in group-based financial institutions providing both credit and non-credit services (Kutz and Johnson-Welch, 2000). A total sample of 62 women beekeepers were selected using random systematic sampling procedure from a list of members of beekeeping women groups within three purposively selected administrative divisions of the District. The data set used in this paper was obtained from the sampled beekeepers through cross-sectional survey using structured questionnaires in September 2005.

The model

For the purpose of analyzing the effect of non-credit services on honey income, the study employs welfare economic theory (Quach *et al.*, 2005). The report adopts a linear regression (analysis of covariance) model (Adongo and Stork, 2005) whose general form is specified as

$$HONINC = f(EDUC, OFFFARM, EXPER, TLU, NTA) + \epsilon_1 \quad (1)$$

Where HONINC represent logarithm form of honey income, EDUC is level of education, OFFFARM dummy variable for access to off farm income, EXPER beekeeping experience, TLU size of livestock herd owned (measured in tropical livestock units), NTA number of group-based credit programmes' enterprise development trainings attended by the beekeepers (a proxy for access to non-credit services). Ordinary least squares (OLS) is applied to a cross-sectional data set to estimate the influence of non-credit services on honey income of the sample using LIMDEP version 7, econometric software. Table 1 presents the characteristics of the variables specified in the honey income equation.

Results and discussion

The linear regression model parameter estimates for logarithm of honey income in table 2 are jointly significantly different from zero with a chi-square statistic being significant at 1% probability level. The results indicate that the number of enterprise development related trainings, a proxy variable for non-credit services accessed by the beekeepers' from the joint-liability credit institutions, is positively and significantly related to honey income at 10% level of significance. Honey incomes improve as the number of trainings accessed by the beekeepers increases. This suggests that providing these services to women beekeepers through group-based financial institutions may increase honey income. However, further discussions and correct policy assessment of the impact of non-credit services needs to take into account the cost and benefit analysis of the services.

Conclusions

This research focused on one key element of group-based financial institutions by attempting to estimate the effect of non-credit services on honey income. The findings reveal some important implications. Typical resource poor beekeeping women will access non-credit services to improve their ability to utilize credit and to manage beekeeping enterprise as a commercial concern. It shows that rural woman beekeeper use this

opportunity to overcome constraints occasioned by lack of necessary enterprise management skills in order to improve incomes. They indeed need enterprise development services to enable them enhance honey income. However, the level of access to these services is influenced by the availability of group-based financial institutions offering them in the rural areas. This implies an important policy conclusion; in order for low-income women smallholders to raise their agricultural income, group-based financial institutions should extend and strengthen provision of non-credit services at the local level. Secondly, positive effect of resource poor women's access to non-credit services on agricultural income indicates that provision of non-credit services to rural smallholder women agricultural entrepreneurs is an effective tool for improving their incomes.

Acknowledgements

Thanks go to the University of Nairobi colleagues who reviewed and gave invaluable comments on this paper. We also acknowledge with special gratitude the contribution of line government Ministries' field staff and members of the women beekeeping groups in Makeni District who provided logistics and information for this study.

References

- Adongo, J. and C. Stork. 2005. Factors Influencing Financial Sustainability of Selected Microfinance Institutions in Namibia. NEPRU Research Report No. 39. Namibia.
- Atieno, R. 1999. Access to Credit by Women in Agribusiness Trade: Empirical Evidence on the use of Formal and Informal Credit Sources. IDS, University of Nairobi, Kenya.
- Cheston, S. and L. Kuhn. 2002. Empowering Women through Microfinance. Women's Opportunity Fund, UNIFEM publication.
- Cleaver, K.M. and W.G. Donovan. 1995. Agriculture, poverty and policy reform in sub-Saharan Africa. World Bank discussion paper No. 280. Washington, D.C.
- Holt, S.L. 1994. The Village Banking Methodology: Performance and Prospects. In Otero, M. and Rhyne, E. 1994. The New World of Microenterprise Finance. Building healthy financial institutions for the poor. Connecticut. Kumarian.
- Republic of Kenya. 2004. Ministry of Agriculture, Strategy for revitalizing agriculture. Government Printer, Nairobi.
- Ledgerwood, J. 1999. Microfinance Handbook: An Institutional and Financial Perspective. Sustainable Banking with the Poor. The World Bank. Washington DC.
- Muricho, S. N. 2002. "Impact of transaction Costs on the marketing channel of Dry Grain Pigeon pea in Makeni District, Kenya". Unpublished MSc. Thesis, Department of Agricultural Economics, University of Nairobi.
- Mwale, A. 1995. Indigenous Technical Knowledge of Farming Practices: A study of the Indigenous Farming Systems in Northern Zambia. FRD study paper. ITC Eschede.
- Quach, M.H., Mullineux., A.W. and V. Murinde. 2005. Access to Credit and Household Poverty Reduction in Rural Vietnam. School of Business, University of Birmingham.
- Remenyi, J. and Q. Benjamin. 2000. Microfinance and Poverty Alleviation: Case studies from Asia and the Pacific. London and New York: Printer, Continuum Press.
- Swisscontact. 2005. Baseline Survey of Financial Services in Makeni District, Kenya. Draft Report, Danish International Development Agency (DANIDA), Ministry of Agriculture, Nairobi.
- Zeller, M, Sharma, M, Akhter, U.A, and Rashid, S. 2001. Group-based financial institutions for the rural poor in Bangladesh. *An Institutional- and Household-level Analysis*. IFPRI. Research Report No 120.

Table 1: Variables in honey income equation

Variable	Definition	Mean	Standard deviation
Dependent variables			
HONINC	Natural log of honey income	4.89	2.196
Independent variables			
EDUC	Years of formal schooling	5.484	3.762
OFFARMI	Dummy for off-farm source of income	0.419	0.498
EXPER	Beekeeping experience in years	8.339	7.181
TLU	Size of livestock herd owned	1.985	2.44
NTA	Number of trainings attended per month	2.891	0.724

Source: Survey, 2005

Table 3: Linear regression model results for effect of non-credit services on honey income

Independent variable	Coefficient	t-statistic	Probability
Constant	3.547***	4.347	0.000
Beekeeping experience of beekeeper	0.095**	2.354	0.022
Education level of beekeeper in years	-0.168**	-2.332	0.023
Size of livestock herd owned in TLU	0.039	0.378	0.707
Access to off farm income	-0.574	-1.036	0.305
Number of trainings attended	2.597*	1.927	0.059
Dependent variable		Log of Honey income	

F-statistic =5.802*** (p=0.001), R^2 =0.341, Adjusted R^2 =0.282, n =62

Asterisks indicate significance at the following levels: *** 1%, ** 5% and * 10%

Source: Survey, 2005