

Full Length Research Paper

Non-credit services of group-based financial institutions: Implications for smallholder women's honey income in arid and semi arid lands of Kenya

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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 were mainly enterprise development services (including trainings 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 indicated 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 confirmed 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.

Key words: Group-based financial institutions, non-credit services, smallholder women, beekeeping, income.

INTRODUCTION

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% 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 of improving access to services based on self-help and community-based groups that also provide a forum for social interaction purposes (Holt, 1994). These programmes are mostly supported by non-governmental organizations (NGO) addressing poverty reduction concerns in rural areas. Normally, group-based financial institutions use 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.

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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.

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 these programmes' 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 (Cheston and Kuhn, 2002). 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 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 the arid and semi arid zone with low unreliable rainfall of about 1000 mm that spread in two seasons. Economic activity is agriculture which is mainly small-scale, with 60 - 65% of farm families living below the poverty line (SN Muricho, University of Nairobi, Kenya, unpublished thesis). The area is one of the key beekeeping zones in the country (Swiss contact, DANIDA/ Ministry of Agriculture, unpublished study). 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:

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

Where, HONINC = logarithm form of honey income; EDUC = level of education; OFFARMI = 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) was 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

Table 2. 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% level of significance; ** = 5% level of significance; * = 10% level of significance. Source: Survey, 2005.

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 indicated 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 need to take into account the cost and benefit analysis of the services.

Conclusion

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 revealed 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 showed 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 where knowledge is not readily available to the decision makers. These non-credit services include trainings in business plan development and implementation; phased enterprise development and near term

marketing options; sub-sector analysis and appropriate buyer sector selection; quality assurance and standards; use of innovative technologies as mobile phones for timely market information and to enhance negotiation skills; product grading, packing and branding for various buyer sectors. Secondly, positive effect of resource poor women's access to non-credit services on agricultural income indicated that provision of non-credit services to rural smallholder women agricultural entrepreneurs was an effective tool for improving their incomes. Thus nurturing their management skills within the programme set-up also offered them additional incentive that at the long run and most appropriate time they can apply for and acquire the necessary credit for enterprise expansion.

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