Research Application Summary

Micro credit intervention in rural poor households and its effects on household vulnerability to poverty

Kiiru, J.M.
University of Nairobi, School of Economics, P. O. Box 30197, Nairobi, Kenya
Corresponding author: joykiiru@yahoo.com

Abstract

Empirical studies have suggested the possibility of fuelling vulnerability among households by microfinance programmes through indebting the poor. Hulme and Mosley (1996) found that there exists a tradeoff between changes in income and vulnerability for poor households: Poverty-as measured by income can be reduced by borrowing, but such debt can make the poor more vulnerable because of the added risks associated with borrowing. This study set out to establish if there exists any direct relationship between microfinance and vulnerability to poverty. We constructed a relative wealth index and a relative poverty line, and observed households over a period of eighteen months. We used a Probit model to estimate the probability that a household becomes vulnerable in future. Both participants in microfinance and non participants were included in the study. Poorer people tended to take smaller loans with a more frequent repayment period.

Key words: Micro credit, rural poor, poverty, vulnerability

Résumé

Des études empiriques ont suggéré la possibilité d'entretenir la vulnérabilité des ménages par les programmes de microfinance par le biais d'endettement des pauvres. Hulme et Mosley (1996) ont trouvé qu'il existe un compromis entre la modification des revenus et la vulnérabilité des ménages pauvres: la pauvreté, telle que mesurée par le revenu, peut être réduite par l'emprunt, mais cette dette peut rendre le pauvre plus vulnérable à cause des risques accrus liés à l'emprunt. Cette étude visait à établir s'il existe une relation directe entre la microfinance et la vulnérabilité à la pauvreté. Nous avons construit un indice relatif de richesse et un seuil relatif de pauvreté, et observé les ménages sur une période de dix-huit mois. Nous avons utilisé un modèle Probit pour estimer la probabilité qu'un ménage devienne vulnérable dans l'avenir. Les participants à la microfinance et les non-participants ont été inclus dans l'étude. Les plus pauvres ont tendance à prendre de petits prêts avec une période de remboursements plus fréquents.

Mots clés: Micro crédit, pauvres ruraux, pauvreté, vulnérabilité

Background

There has been consensus that financial intermediation is crucial for economic development. Rural finance has emerged as a big concern, especially given the difficulties by commercial banks to advance credit to farmers. With access to credit farmers would be induced to irrigate, apply fertilizers and adopt new crop varieties and technologies. Thus it would be possible for them to increase land productivity, increase labor demand while increasing agricultural wages.

Since the 70s, Microfinance has received with lots of enthusiasm in the development arena. This is because it allows poor farmers who are sidelined by large commercial banks to access credit. New lessons regarding micro credit and its effects on rural livelihoods are emerging. This paper picks up on this line of inquiry and proceeds with an attempt to model the relationship between micro credit and vulnerability to poverty.

Literature Summary

Rigorous empirical analysis in the issue of statistical impact of microfinance on household welfare began in the 1990s. The results from these studies are highly provocative. Some of these studies tend to question the relevance of micro credit as a poverty reducing tool (Adam and Von Pische, 1992). Other studies find negative impacts of micro credit among the rural poor (Hulme and Mosley, 1996) while others find mixed results on the impact of microfinance on household welfare (Kiiru, 2007). This paper picks on similar lines of inquiry and tries to establish a link between micro credit and vulnerability to poverty within poor rural households in Kenya.

Study Description

The study is designed as an experimental case study. A random sample of respondents from 16 villages in Makueni district in Kenya was used. There were two sets of respondents; one set consisted of 200 respondents who were micro credit recipients. The other set consisted of 200 respondents who did not receive micro credit and was used for control purposes. Formal structured questionnaires were administered every six months to both participants of micro credit and non participants. We constructed a relative wealth index and a relative poverty line, and observed households over a period of eighteen months. We used a Probit model to estimate the probability that a household becomes vulnerable in future. Both participants in microfinance and non participants were included in the study.

Research Application

All our sample of microfinance participants consisted of members who could only access loans through joint liability

groups. Loans were advanced to individual members of a group through joint responsibility borrowing where every member guaranteed each other's loans. If the group happened to pay a loan installment(s) on behalf of a defaulting colleague they would pressurize the colleague to reimburse the group both the outstanding installment and a fine. If this did not work, the group would impound the assets of the defaulted borrower till every coin is repaid. Literally speaking there was no way a borrower would default without repercussions. It is for such reasons that microfinance institutions dealing with very poor borrowers in joint liability groups recorded very high repayment rates of up to 97 % and most times up to 99% or more. On the other hand, the poor may not necessarily be repaying their loans because they have improved their incomes, rather they could be repaying because they must pay. The ability for the poor to repay a loan should therefore not be "a big worry" to the policy maker. What should instead be the "big worry" to the policy maker is the social costs at which the loans are being repaid. The results of the empirical model are shown Table 1.

Table 1. Determinants of household vulnerability.

	Coefficient	Z	Marginal effects	
	Vul.		dx/dy	z
Partc.	.4244819	0.16	.1056736	0.16
	(2.704296)		(.66817)	
Age	-.1129655	-1.50	-.0282291	-1.50
	(.0751314)		(.01877)	
Sizehh	-.6975584***	-3.48	-.1743137***	-3.49
	(.200274)		(05002)	
Sex	-.4375553*	-1.78	-.1093412*	-1.78
	(.2464972)		(.06159)	
Edu	.3022687	1.61	.0755343	1.61
	(.1877902)		(.04693)	
Borr	-.159186	-.45	-0397792	-1.45
	(.1098029)		(.02744)	
Agesq	.0009639	0.99	.0002409	0.99
	(.0009692)		(.00024)	
Sizehhsq	.0402057**	2.21	.0100471**	2.21
	(.0181941)		(.00454)	
Edusq	-.0218885**	-2.261	-.0054697**	-2.16
	(.0101546		(.00254)	
Constant	3.824171**	2.260		
	(1.468682)			

Key: *** Significant at 1 %, ** Significant at 5%, * Significant at 10%; Standard errors are in parenthesis.
Source: Field data.

From the above results the factors driving household vulnerability (tendency to fall in to poverty in the future) include especially, sizes of households. We find that vulnerability increases with the size of household. Large households who are poor in rural areas are likely to fall in to deeper poverty. Households used some of the loan money for consumption purposes. Large households who are food insecure or have more children related responsibilities will tend to consume large portions of their loan money, thus limiting the extent to which they could invest. Such households tended to repay the loans by liquidating pre existing household assets. Another factor driving vulnerability is gender of household head. Female headed households were likely to be vulnerable to poverty than male headed households. This could be explained by the fact that female headed households tend to be poorer. Poorer people tended to take smaller loans with a more frequent repayment period. Many small size informal enterprises by poor women were unable to grow or compete. We found that about 33% of microfinance borrowers dropped out of borrowing groups over the period of the study.

Acknowledgement

Special thanks to the DAAD, BMZ and GTZ and the University of Nairobi for supporting this study. Many thanks also to field enumerators for their hard work.

References

Adams, D., Graham, D. and Von Pischke, D. 1984. *Undermining Rural Development with Cheap Credit.* Boulder, Colorado: Westview Press Aghion, and Morduch, J. 2005. The Economics of Microfinance, The MIT Press Cabridge, Massachussets London, England.

Chaudhuri, J. and Suryahadi, A. 2002. Assessing household vulnerability to poverty: A methodology and estimates for Indonesia". Department of Economics Discussion Paper No. 0102-52. New York: Columbia University.

Coleman, B. 1999. The impact of group lending in Northeast Thailand. *Journal of Development Economics* 60: 105-142.

Hulme, D. and Mosley, P. 1996. Finance Against Poverty. London: Routledge.

Kiiru, J. and Mburu, J. 2007. User costs of joint liability borrowing and their effect on livelihood assets for rural poor households. *International Journal of Women, Social Justice and Human Rights*.