Microfinance for the Urban Bottom of the Pyramid Segment in Nairobi's Kibera Slum in Kenya: Does Financial Training Impact on Sustainable Urban Development?

MUTISYA E. & M. YARIME

[1]Graduate Programme in Sustainability Science, University of Tokyo, Japan
Email: mutisya.emmanuel@gmail.com
[2]Graduate school of Public Policy, University of Tokyo, Japan

Abstract

Although mainstream research on investing in the Bottom of the Pyramid (BOP) segment focus heavily on investors' expected returns, there is less focus on the fast increasing gaps on the role of financial training in academic literature. In addition, there is a lack of deliberate focus on the wellbeing and success of targeted micro-entrepreneurs research in the development arena. This is despite the fact that mainstream debates on the topic often focus on the ample literature that illustrates the importance of investing in the BOP segment. Furthermore, current literature is enormously concerned with business and financial institutions' performance and their impact on development, and it has very little to do with the nexus between financial training and household's development, business, and financial institutional performance and urban sustainability. Using non-randomized control trials, this research measures the impact of financial training on selected groups in Kibera slum using a combination of double difference and propensity score matching approaches. In this study, the treatment group received financial training while the control group did not and the two groups were followed for 12 months. The study's evaluation results find little or no evidence on sustainability outcomes but a significant and small improvement on business, households and microfinance institutions' outcomes.

Keywords: Microfinance institution, financial training, urban sustainability

Introduction

Microfinance is increasingly gaining recognition as an effective way to enhance growth, reduce poverty and support development. Strategies in microfinance have often focused on credit access as the core financial product and financial methodologies used are largely replications of the "best microfinance practices" implemented elsewhere. In addition, the financial products from microfinance institutions, more often than not, are poorly designed in a 'one-size-fits-all' framework. According to Karlan and Valdivia (2010), this is the spirit of the Grameen Bank Model, and is the rationale behind focusing interventions for micro-entrepreneurs solely on credit and savings, with no attention to financial training which is an essential business service for skills development.

As the microfinance sector continues to play a critical role in financially supporting the poor (Barnes 2001; Chen and Snodgrass 2001; Sebstad and Cohen, 2003; Rutherford 2002), the competition and the struggle to reach financial sustainability has forced micro credit institutions (MFIs) to seek out new ways to grow and become profitable and are now offering a wider range of products and services to clients. An increasing number of MFIs are supplementing working capital loans and involuntary savings with experimental savings, insurance, and money transfer services and collaborating with formal financial institutions to increase their capacity to reach the poor (Greenspan, 2002; Sebstad and Cohen, 2003).

One segment that MFIs are shifting their attention to is the urban BOP segment. This is because people in this segment have the same goals as all people. However, they have fewer resources and opportunities as many of them live in high-risk and unpredictable environments. Just like in the rural areas, entrepreneurs in this segment do not have much money (Rutherford 2002; Sebstad and Cohen, 2003). It is of paramount importance for people in this segment to manage the little money they have and this calls for practical management skills to take advantage of business opportunities and plan for the future. The capacity to access financial products and services together with financial skills to manage these resources properly is key to the process of business success in the BOP segment (Tentena, 2010; Tower et al, 2010; Cohen and Nelson, 2011).

Recently, training in cash flow management and record keeping is integral to many micro enterprise programmes involving credit. This is

however limited to a small percentage of BOP entrepreneurs due to the costs associated with it (Greenspan, 2002; Sebstad and Cohen, 2003). MFIs do not want to invest in training because their main focus is profit maximization. Any products and services which add to their operational costs are highly ignored and subsequently dropped (Rutherford 2002; Lund and Srinivas 2000; Gray et al, 2009). In addition, the microfinance sector has become more competitive, their financial portfolios more complex, and many of them find themselves dealing with financial products that they do not fully understand. They lack skills to cost out individual products, assess their best use, and compare alternatives (Rutherford, 2000). In this context, it is difficult for them to determine appropriate financial strategies to achieve investment and other economic goals (Sebstad and Cohen, 2003; Cohen et al, 2008).

Financial Training in the Urban BOP segment

The promotion of financial training in the urban BOP segment microfinance sector is vital and can create a win-win situation for poor people and financial institutions. It helps the poor understand how markets work and how to wisely invest in business. This training can be applied in a wide range of areas that cover individual, household, entrepreneurship, and community resources and other aspects of development (Tentena, 2010; Cohen and Nelson, 2011). The complementary relationship between microfinance and financial education is clear. Financial education can play an important role in helping men and women interface effectively with their financial needs, choose among the increasingly complex array of financial options, and better manage the financial resources they have (Greenspan, 2002; Sebstad and Cohen, 2003).

While financial institutions face the challenge of managing the additional costs, institutional demands and risks of introducing new products, clients face the challenge of deciding which of these products, if any, to use (Chen and Snodgrass 2001). It is therefore important to empower clients to make informed and strategic choices about the use of these financial services. Unfortunately, the tools to empower clients to make these choices rarely do exist (Sebstad and Cohen, 2003; Gray et al, 2009).

Financial training can play a key role as a tool of empowerment as this promotes knowledge and skills diffusion to optimize the use of resources and take advantage of opportunities. Further, it can enhance the

ability of poor people and entrepreneurs to connect more effectively with the financial system – not only MFIs, but other formal and informal institutions as well. Financial trainng can play an important role in promoting savings and household asset accumulation. It will also promote the access to opportunities by the poor and reduce the risk of lending, provide a valued service, and support a client-centered approach (Stack, 2008; Cohen et al, 2008; Junior Achievement Worldwide, 2009; Cohen and Nelson, 2011).

Methodology

The objective for financial training in this study is divided into four: to support household consumption; to support micro-businesses; to support the performance of MFI; and to support urban sustainability.

Since urban BOP entrepreneurs often lack the skills or knowledge to make well informed financial decisions, financial training could prepare them to take advantage of new business opportunities and understand how to tackle challenges that come their way. This could further increase their decision making power and prepare them to cope with financial demands in their daily life.

Study area

Nairobi, the capital city of Kenya and one of the largest cities in Africa is the hub of trade and business in Eastern Africa. The city's population has grown over the years from a paltry 11,500 inhabitants in 1906 to around 3.5 million people today. With a rapid urbanization growth rate of about 4 percent, current population is projected to grow to 5 million by 2015 and to more than 8 million by 2030 (UN-Habitat, 2008). The rapid growth of Nairobi has come about with the mushrooming of slums. The government of Kenya (Kenya National of Bureau Statistics, 2010) estimates that more than 45 percent of the city's population lives in informal settlements in different areas of the city. The population in these slums makes up almost half of the city's population yet it occupies less than 1 percent of Nairobi's area and less than 5 percent of the city's residential area leading to enormous congestion.

Kibera Slum, one of the largest slums in the city of Nairobi suffers from a host of challenges that threaten the existence of humankind.

Residents in the slum live in a socially, economically and ecologically deficient environment. Access to clean water, proper sanitation, good housing, solid waste management, proper health care, security and energy are some of the most fundamental challenges faced by the slum's residents. Continued rapid urbanization has placed increasing pressure on existing services and this has led to a deficiency in the provision of public services by the government, civil society and private sector agencies in the slum. There is however a continued intervention by international organizations, local organizations, financial institutions, and the government to improve the situation in Kibera (Mutisya and Yarime, 2011).

One key way to support Kibera's development and to improve living standards is to allow the active participation of the residents in the development process. However because of poverty, many of the residents cannot actively participate in the process of development. To solve this problem, microfinance has been used as a tool of alleviation of urban poverty as well as the empowerment of the poor. There are several microfinance institutions operating in Kibera slum today. These institutions include Equity Bank, K-Rep Bank, Faulu Kenya, Jamii Bora, Umande Sacco, and Cooperative Bank of Kenya. These institutions have invested heavily in the empowerment of the poor to improve the residents' living standards. Umande Trust and Cooperative Bank of Kenya remain highly visible in different parts of the slum.

Methodology and monitoring

This paper evaluates the impact of financial training on the welfare of slum residents in Kibera using non-randomized controlled trials. Participants were grouped randomly into treatment and control groups. The treatment group got financial services plus financial training whereas the control group got financial services without financial training. The participants were followed for 12 months. 470 were assigned to treatment group and 536 were assigned to control group.

With support from Umande Trust, this study monitored the groups, following the kind of investment activities the treatment group was doing. The study also followed them to see whether they failed in their investments. The training sessions covered money and banking, market forces and business possibilities and involved two weeks of continuous training. Thereafter, further training was done on a weekly basis by group

leaders and center managers and this training focused on business expansion, savings and loan repayment. Although this study focused on the impact of financial training on social welfare, it also investigated other aspects like prior business knowledge/experience. Experiments have shown that financial training does not really lead to an increase in per capita after deducting operational costs. Karlan and Valdivia (2010) argue that if operational costs are adjusted for, many ventures will show economic losses. According to de Mel et al (2008) considerable heterogeneity exists, with many micro-entrepreneurs earning negative returns on capital from their business.

Empirical analysis and evaluation

This research used data from Umande Sacco and Cooperative Bank of Kenya in addition to the surveys conducted for the 12 months that included baseline survey before randomization and post-survey after 12 months. In addition, the institutions also provided financial transaction data which included financial reports and client information since 2010. The data also included information on the loan cycles, loan payment, interest rates, savings, and contributions to cover default of other members. This information was compiled by the two institutions when the clients became members of the institutions.

The baseline and follow-up surveys included a variety of questions on the socio-demographic characteristics and other general information about the client's household and business. Expected outcomes are divided into four categories: household outcomes; business outcomes; financial institutional outcomes; and urban sustainability outcomes including access to improved sanitation, clean water, solid waste management and energy. All the clients in the baseline survey were reached and surveyed for the follow-up survey. In total, 1006 surveys were completed.

For the empirical analysis, this paper compared the impact of financial training on household, business, institutional and sustainability outcomes. The study analysis did not take into consideration what kind of businesses the treated groups invested in, and follow-up repayment interventions by the institutions to avoid selection bias (Karlan and Zinman, 2009).

In estimating the impact of micro credit financial training participation, this study uses a combination of double difference (DD) and

propensity score matching (PSM) methods. These approaches vary by their underlying assumptions on how to resolve selection bias in estimating the treatment effect (Khandiker et al, 2010). The DD method compares samples of participants and non-participants before and after the intervention. This approach calculates the difference between the "before" and "after" values of the mean outcomes for each of the treatment and comparison groups and the impact estimate is the difference between these two means. Due to the first and second comparisons, biases between the treatment and control group that could be the result from permanent differences between those groups, as well as biases from comparisons over time in the treatment group that could be the result of trends are removed (Abadie et al, 2001).

Using the DD approach, the DD estimator gives the mean treatment effects on the treated for the period. The single difference estimator comes from: $X_{ij1} = \alpha + \beta_3 K_j^T + \beta_4 X_{ij0} + \varepsilon_{ij1} \quad (t = 0,1; ij = 1, \dots, n)$ (i)
And the double difference estimator comes from the following expression:
$X_{ijt} = \alpha + \beta_1 T_t + \beta_2 K_j^T + \beta_3 T_t K + \varepsilon_{ijt} \quad (t = 0,1; ij = 1, \dots, n)$ (ii)
Where; X_{ijt} is the outcome variable for client i in bank j at time t, K_j^T is a dummy variable that takes the value one if the client belonged to a treatment group, T_t is a binary variable equal to 1 if the observation corresponds to the post-treatment time, and ε_{ijt} denotes the error term. Then β_3, in both specifications is the treatment estimate of the program's impact on the outcome. That is, β_3 measures the differences between the treatment and control groups overtime to outcome *X*, and is an unbiased estimate of the average impact of being assigned to a treatment group on the outcome variable *X* (Karlan and Valdivia, 2010). The DD approach has a weakness in that other factors not related to the depended variables may have an impact on the outcome (Karlan and Valdivia, 2010). The upshot of these observations is that controlling for initial heterogeneity is crucial to the credibility of DD estimates.

Combining DD and PSM approaches refines weaknesses of the DD method. In this case, PSM is used with the baseline data to make certain the comparison group is similar to the treatment group and then applying double differences to the matched sample as this takes care of the observable heterogeneity in the initial conditions (Abadie and Imbens, 2009). In addition, PSM used with the baseline data reduces bias attached to the DD estimates (Rosenbaum and Rubin, 1983; Ravallion and Chen, 2007). It is important to note that PSM is criticized because it only performs matches based on observed variables leaving the unobserved variables

unmatched. Therefore, combining DD and PSM refines the results to a reliable level.

Results and Discussions

The results of access to financial training are divided into four aspects: a) impact on social welfare, b) business outcomes, c) microfinance institutional outcomes, and d) sustainability impact.

a) Impact on household social welfare

In Table 1, the results of the impact of financial training to BOP households are presented. Under household impact, the results focused on per capita income. There is positive impact on household per capita income. The results show that financial training participation increases per capita income by around Ksh. 805.9 as shown in the OLS double difference column (columns 8). When DD and PSM approaches were combined, the impact on per capita income is about Ksh. 858.3 (column 9). Both impacts are significant at less than 1 percent level.

Table 1: Impact of Financial Training on BOP Households

	Summary statistics: Mean, standard errors and differences							OLS	Propensity score matching and DD
		Baseline			Follow-up			Double	Combined
Dependent variable	No of clients	Treatment	Control	Diff	Treatment	Control	Diff	difference	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Double difference estimates									
Per capita income	1004	15563.2	13898.1	1665.1 (338.9)	16598.0	14127.3	2471.0 (351.8)	805.9 (105.57)***	858.3 (168.75)***

Notes: Each coefficient reported in the table is from a separate regression. The regressions include OLS with MFI fixed effects and standard errors clustered by MFI.
[1]Dependent variables are defined as: household per capita income which is the monthly income in Kenya shillings as reported by the respondent.
[2]The covariates include age, gender, marital status, size of household, religion, hometown (whether born in Nairobi city or in the countryside), number of years the client has lived in Kibera.

b) Business outcomes

The results of the business aspect of this study are presented in Table 2. This research focused on business skills to evaluate the impact of financial training on business performance. The results show a strong and significant impact of financial training on business skills. In column 8, the OLS double difference results show business skills improved by a probability of 2 percent. When a consideration of the preferred specification in column 9 is done, the impact is 5 percent and significant.

Table 2: Impacts of Financial Training on Business Outcomes

		Summary statistics: Mean, standard errors and differences						OLS	Propensity score matching and DD
		Baseline			Follow-up			Double difference	Combined
Dependent variable	No of Clients	Treatment	Control	Diff	Treatment	Control	Diff		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Double difference estimates									
Business skills	1004	0.5466	0.2222	0.3244 (0.0484)	0.8516	0.4062	0.4454 (0.0300)	0. 1200 (0.0275)**	0.1391 (0.0502)**

Notes: Each coefficient reported in the table is from a separate regression. The regressions include OLS with MFI fixed effects and standard errors clustered by MFI.
[1]Dependent variables are defined as: Business skills: a binary variable equal to one if the client has had entrepreneurial experience (has ran a business entity).
[2]The covariates include age, gender, marital status, size of household, religion, hometown (whether born in Nairobi city or in the countryside), number of years the client has lived in Kibera.

Table 3: Impact of Access to Financial Training on Financial Institutions

		Summary statistics: Mean, standard errors and differences						OLS	Propensity score matching and DD
		Baseline			Follow-up			Double	Combined
Dependent variable	No of clients	Treatment	Control	Diff	Treatment	Control	Diff	difference	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Double difference estimates									
Loan repayment	1004	0.8992	0.9107	-0.0115 (0.0280)	0.9851	0.9565	0.0286 (0.0121)	0.3670 (0.426)	0.4260 (0.0510)
Client retention	1004	0.6453	0.3891	0.2562 (0.0478)	0.7626	0.5742	0.1884 (0.0316)	0.0100 (0.0320)	-0.1571 (0.0712)

Notes: Each coefficient reported in the table is from a separate regression. The regressions include OLS with MFI fixed effects and standard errors clustered by MFI.
[1]Dependent variables are defined as: Loan repayment: a binary variable equal to one if the client was able to repay his/her loan on time since the beginning of the loan cycle; client retention: a binary variable equal to one if the client does not dropout (does not leave the bank he/she got the loan from).
[2]The covariates include age, gender, marital status, size of household, religion, hometown (whether born in Nairobi city or in the countryside), number of years the client has lived in Kibera

a) Microfinance institutional impact

In Table 3, the results on MFIs outcomes are presented. Here, the focus was on loan repayment and client retention. The results show that financial training has no impact on loan repayment and client retention as shown in columns 8 and 9.

The lack of impact of financial training on repayment rate and client retention can be explained by the complexities of the urban BOP business environment and also the length of period this research was conducted. The support from the MFIs provided by credit officers on a bi-weekly basis in the form of business discussions therefore had no impact during the 12 months of field study. Improved repayment rate and client retention is supposed to have an impact on institutional profitability. The lack of impact on client retention rate in this research could imply that the businesses did not perform well enough.

b) Urban sustainability impact

Table 4 presents the impact of financial services on urban sustainability. This research divides urban sustainability into access to clean water, improved sanitation, improved solid waste management and access to energy. The preferred specification in column 9 shows no statistically significant impact. For the OLS double difference as shown in column 8, there was also no impact of financial training on urban sustainability.

Table 4: Impact of Financial Training on Urban Sustainability

		Summary statistics: Mean, standard errors and differences						OLS	Propensity score matching and DD
		Baseline			Follow-up			Double	Combined
Dependent variable	No of clients	Treatment	Control	Diff	Treatment	Control	Diff	difference	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Double difference estimates									
Access improved to sanitation	1004	0.3986	0.2926	0.1060 (0.0448)	0.6587	0.6417	0.0171 (0.0320)	-0.0889 (0.0647)	0.0608 (0.108)
Access to clean water	1004	0.3986	0.2926	0.1060 (0.0448)	0.6745	0.6237	0.0254 (0.0321)	-0.0806 (0.0626)	0.0869 (0.1145)
Improved solid waste management	1004	0.3986	0.2926	0.1060 (0.0448)	0.3006	0.2159	0.0847 (0.0284)	-0.0213 (0.0474)	0.0434 (0.0819)
Access to energy	1004	0.3986	0.2926	0.1060 (0.0448)	0.5769	0.4933	0.0836 (0.0334)	-0.0224 (0.0651)	0.1304 (0.1152)

Notes: Each coefficient reported in the table is from a separate regression. The regressions include OLS with MFI fixed effects and standard errors clustered by MFI.
[1]Dependent variables are defined as: access to improved sanitation: a binary variable equal to one if the client uses improved sanitation for human waste disposal (focuses on the ability to use toilets and affordability of sanitation facilities); access to clean water: a binary variable equal to one if the client is able to access clean drinking water; improved solid waste management: a binary variable equal to one if the client practices proper solid waste disposal; access to energy: a binary variable equal to one if the client can afford renewable sources of energy for lighting (solar energy- panels and lanterns) as opposed to the use of kerosene.
[2]The covariates include age, gender, marital status, size of household, religion, hometown (whether born in Nairobi city or in the countryside), number of years the client has lived in Kibera.

The lack of impact of financial training on urban sustainability could be explained by the lack of focused training that incorporates socio-economic and environmental aspects of the urban BOP segment especially sustainability problems common in slums. This is an indication that more

customized financial literacy teaching materials with a clear focus on the functionality of markets in slums should be introduced in the microfinance training area and should incorporate a sustainability component. These teaching modules should outline socio-economic and environmental challenges that a micro-entrepreneur is likely to face while doing business in slums and how to take care of them for the success of their investments.

Conclusion

For the impact of financial training, this research raised the question: does financial training lead to an improved social welfare, better performance of micro-enterprises, microfinance institutions and support of sustainable urban development? The results show that financial training of urban BOP microfinance clients has a positive impact on household outcomes and business performance but has mixed results on microfinance institutional performance and urban sustainability.

To the microfinance clients, financial training helps them understand how markets work and how to make informed financial and investment decisions and use microfinance services to their best advantage. With business skills, entrepreneurs can create a balance between business costs and gains. This reduces the risks associated with running businesses and helps clients to plan ahead. Business skills can open up new opportunities to work, to build assets, and to expand horizons (Greenspan, 2002; Sebstad and Cohen, 2003) in entrepreneurship. In addition, training promotes household management skills. The results show that financial training to the poor leads to an improvement in per capita income and business skills. This can be attributed to the increase in knowledge by the poor on how to plan their business activities and solve business problems through proper understanding of how markets in slums work. Micro-entrepreneurs with strong business skills understand well how to approach the markets and how to run their businesses as they are well prepared for any eventualities. Karlan and Valdivia (2010) support these results in their findings that financial training is a vital aspect for the success of micro-entrepreneurs as this enlightens them to separate money transactions between the business and their household, reinvest profits in the business, maintain records of sales and expenses, and plan proactively on business development.

To microfinance institutions, financial training is expected to promote good business practices and performance. This should improve the clients' ability to repay loans and support their participation in microfinance. Financial training also enables MFIs' staff to understand well the needs of the poor when running their businesses. This can lead to reduction of portfolio risks, stimulation of competition, and contribute to the growth and development of MFIs (Greenspan, 2002; Sebstad and Cohen, 2003). However, this research does not find any significant impact of financial training on repayment and client retention.

For urban sustainability, microfinance training is expected to support improved service delivery through increased investments and creation of awareness on improved sanitation, clean drinking water, and solid waste management. This could come from expanded training that cover the challenges facing the urban poor and especially in slums. In this research, there is no impact of financial training on urban sustainability. For financial training to have impact on urban sustainability, the trainings offered could incorporate the challenges that businesses face in slums and the potential contribution of micro-entrepreneurs to sustainability. To promote sustainability in the future, policies and institutional designs on microfinance should therefore incorporate a financial training component that is customized to the needs of slums' dwellers and the inherent sustainability challenges in the urban BOP segment. This calls for the development of teaching modules that takes into consideration urban sustainability as core requirement to the success of business development.

References

Abadie, A. and G.W. Imbens (2009). Matching on the Estimated Propensity Score. *NBER* October 2009.

Abadie, A., D. Drukker, J.L. Herr and G.W. Imbens (2001). 'Implementing Matching Estimators for Average Treatment Effects in Stata, *Stata Journal* 4 (3), 290-311.

Ashenfelter, O. and D. Card (1985). Using the Longitudinal Structure of Earnings to Estimate the Effect of Training Programs. *Review of Economics and Statistics* 67(4), 648–60.

Austrian, K., C. Ngurukie and C. Sakwa (2009). Integrating financial education and savings opportunities into health interventions for adolescent girls in the Kibera slum of Nairobi, Kenya'. Paper

presented at the Proceedings of the *International Conference on Urban Health*, Nairobi, Kenya.

Barnes, C. (2001). 'Microfinance Program Clients and Impact: An Assessment of Zambuko Trust, Zimbabwe'. AIMS paper. Management Systems International, Washington DC, USA.

Chen, M. A. and D. Snodgrass (2001). Managing Resources, Activities, and Risk in Urban India: The Impact of SEWA Bank. AIMS paper. Management Systems International, Washington DC, USA.

Cohen, M., D. Hopkins and J. Lee (2008). Financial education: A bridge between branchless banking and low-income clients. Microfinance Opportunities. *Working Paper* (4). Washington DC, USA.

Cohen, M. and C. Nelson (2011). Financial literacy: A step for clients towards financial inclusion. Draft paper. Washington DC, USA.

De Mel, S., D. McKenzie and C. Woodruff (2008). Returns to capital in microenterprises: evidence from a field experiment. *Quarterly Journal of Economics* 123 (4), 1329-1372.

Gray, B., J. Sebstad, M. Cohen and K. Stack (2009). Can financial Education change behaviour? Lessons from Bolivia and Sri Lanka. Microfinance Opportunities, Washington DC, USA.

Greenspan, A. (2002). 'Financial Literacy: A Tool for Economic Progress'. *The Futurist* 36 (4), 37-41.

Junior Achievement Worldwide (2009). Financial literacy—Foundation for success: A global perspective. Colorado Springs, CO, USA: JA Worldwide, www.ja.org/files/save_usa/Finacial-Literacy-POV-Final.pdf (accessed 15 January 2012).

Karlan, D. and M. Valdivia (2010). Teaching Entrepreneurship: Impact of Business Training on Microfinance Clients and Institutions. Yale University Press, Yale University, USA.

Karlan, D. and J. Zinman (2009). Expanding Microenterprise Credit Access: Using Randomized Supply Decisions to Estimate the Impacts in Manila. New Haven, Connecticut, USA.

Khandiker, S.R., Koolwal G.B. and Samad H.A. (2010). Handbook on Impact Evaluation: Quantitative Methods and Practices. The World Bank, Washington DC, USA.

Kenya National Bureau of Statistics (2010). Kenya 2009 Population and Housing Census. Nairobi, Kenya.

Lund, F. and S. Srinivas (2000). Learning from experience: A gendered approach to social protection for workers in the informal economy. International Labour Office Social Security Department, Strategies and Tools against Social Exclusion and Poverty (STEP) and

Women's Informal Employment Globalizing and Organizing (WIEGO), Geneva, Switzerland.

Mutisya, E. and M. Yarime (2011). Understanding the grassroots dynamics of slums in Nairobi: The dilemma of Kibera informal settlements. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies* 2 (2), 197-213.

Ravallion, M. and S. Chen (2007). "China's (uneven) progress against poverty," Journal of Development Economics, *Elsevier*, vol. 82(1), pages 1-42.

Rosenbaum, P.R. and D.B. Rubin (1983). The Central Role of the Propensity Score in Observational Studies for Causal Effects. *Biometrika* 70(1), 41-55.

Sebstad, J. and M. Cohen (2003). Financial Education for the poor. *Working Paper* (1). Microfinance Opportunities. Washington DC, USA.

Stack, K. (2008). Adult learning principles and curriculum design for financial education. Microfinance Opportunities. Washington DC, USA.

Tentena, P. (2010). Financial literacy should be priority to Ugandans. New Vision online-www.newvision.co.ug/D/8/220/732477 (accessed 1 February 2012).

Tower, C., E. McGuinness and J. Sebstad (2010). Savings and financial education for girls in Mongolia: Impact Baseline Study. Microfinance Opportunities, Washington DC, USA.

UN-HABITAT (2008). The state of African cities: A framework for addressing urban challenges in Africa. Un-Habitat, Nairobi, Kenya.