

The British University in Egypt

**BUE Scholar**

---

Business Administration

Business Administration, Economics and  
Political Science

---

6-2018

## The Impact of Microfinance on Poverty Reduction in Egypt: An Empirical Study

Hala ElHadidi

hala.elhadidi@bue.edu.eg

Follow this and additional works at: [https://buescholar.bue.edu.eg/bus\\_admin](https://buescholar.bue.edu.eg/bus_admin)



Part of the [Business Commons](#), and the [Economics Commons](#)

---

### Recommended Citation

ElHadidi, Hala, "The Impact of Microfinance on Poverty Reduction in Egypt: An Empirical Study" (2018). *Business Administration*. 6.

[https://buescholar.bue.edu.eg/bus\\_admin/6](https://buescholar.bue.edu.eg/bus_admin/6)

This Article is brought to you for free and open access by the Business Administration, Economics and Political Science at BUE Scholar. It has been accepted for inclusion in Business Administration by an authorized administrator of BUE Scholar. For more information, please contact [bue.scholar@gmail.com](mailto:bue.scholar@gmail.com).

# enterprise development & microfinance

an international journal





# The impact of microfinance on poverty reduction in Egypt: an empirical study

Hala Helmy Elhadidi

**Abstract:** *Microfinance has become a critical tool in credit markets for poverty reduction and socioeconomic development. Yet its impact is still questioned and varies from one country to another and from urban to rural areas. This article examines the role of Egyptian microfinance on household income. A cross-sectional survey interviewed 780 established and new clients in Greater Cairo and rural areas in Egypt. The stratified random method was used to collect the data from urban and rural districts. The findings, using multinomial logistics, reveal that microfinance had a positive impact on the household income of women borrowers who spent three years in the scheme as compared to new borrowers.*

**Keywords:** Egypt, microfinance, poverty reduction, income, women's empowerment

## Introduction

Microfinance is widely known as a provision of financial services, such as credit, savings, deposits, insurance, and repayment services, to those who cannot access conventional financial services because they are poor and cannot offer collateral (Razavi, 1997; Robinson, 2001). The underlying logic is that through extending financial services, low-income people will have the ability to participate in the economic market and exploit entrepreneurial opportunities through start-up businesses, extending current business, or introducing new activities. Subsequently, they will manage to pull themselves out of poverty. Moreover, microfinance institutions (MFIs) can facilitate that by providing loans with relatively low interest rates and less restrictive regulations.

A large number of microfinance studies from various disciplines suggest that microfinance has a significant impact on poverty reduction as well as household well-being, such as asset acquisition, household nutrition, health, food security, children's education, women's empowerment, and social cohesion (Armendáriz de Aghion and Morduch, 2013). Recently, the effect of microfinance has been questioned and many studies argue that its impact diverges between positive, no impact and even negative impact (Angelucci et al., 2013; Ghaliba et al., 2015; Rooyen et al., 2012; Swain and Adel, 2009). The literature claims that the impact of microfinance differs from one context to another and that it is dependent on population density, attitudes to debt, group cohesion, enterprise development, financial literacy, and financial service providers, among other factors (Armendáriz de Aghion and Morduch, 2013).

The Egyptian microfinance sector plays an important role in socioeconomic development of poor and low-income people, especially women (Agnes, 2016). Despite the significant impact of Egyptian microfinance that has been highlighted by several studies, the majority of these studies were conducted in rural areas and used simple statistic tools, such as T test and Mann-Whitney, which exposes them to several weaknesses, such as bias selection and lack of controlling for the effect of demographic characteristics (Hashemi et al., 1996). The aim of this paper is to evaluate the impact of Egyptian microfinance on women's livelihoods in Greater Cairo and selected rural districts. The main reasons for selecting Greater Cairo is because it has the fastest growth urbanization ratio in the country, with more than 75 per cent of the population living in urban areas, and because over 70 per cent of microfinance clients in Egypt live in urban areas.

The aim of the microfinance institution is to extend loans and other financial services to women who are deprived of formal financial services because of the lack of collateral. The reason for targeting women is owed to the significant role that women play in their household well-being. Microfinance institutions cover approximately 82 per cent of Egyptian poor and low-income households (Al-Shami et al., 2014). According to the microfinance sector's 2013 annual report, about 346,245 women clients throughout the country benefited from microfinance (Druschel, 2016).

## Literature review and hypotheses

Microfinance has been widely recognized as a crucial tool for poverty alleviation and socioeconomic well-being. It helps the poor to diversify their household income, smoothen household expenditure, and cope with economic shocks and fluctuations.

Nader's (2008) study in Cairo utilized a focus group technique to classify and interpret the opinions, perceptions, and viewpoints of microfinance clients on using credit for their microenterprises and their families. At the household level, the direct effect of accessing credit manifested in enhanced welfare, measured by persistent spending on health, education, and housing. In addition, loan borrowers mentioned that dynamics within a particular family had noticeably improved. Swain and Adel (2009) examined the performance of Malaysian MFI Amanah Ikhtiar Malaysia (AIM) on household income. Based on a survey and econometric analysis, their study found that AIM had a positive impact on the household income of women borrowers who spent three years in the scheme as compared to new women clients who had not yet borrowed.

Microlending is expanding in several eastern European countries to facilitate access to different financial benefits. This approach makes it considerably easier for the private sector to conduct many activities and, accordingly, minimizes the impact of poverty. Microlending offers a new framework to access unconventional segments of credit markets that depends on reliable pillars. It utilizes reliable tools of schedules of direct payments, direct monitoring, and adoption of non-refinancing risks. This framework provides a high probability of repayment by borrowers with

low incomes without the need to commit to joint liability contracts (Armendáriz de Aghion and Morduch, 2013).

Robinson (2001) emphasized two main approaches to microfinance. The financial systems approach concentrates on institutional self-sufficiency. Given the scale of the demand for microfinance worldwide, this would be the only probable route to meet widespread client demand for convenient, appropriate financial services. The poverty lending approach concentrates on reducing poverty through credit, often provided with complementary services, such as skills training and the teaching of literacy and numeracy, health, nutrition, family planning, and the like. Under this approach, donor- and government-funded credit is provided to poor borrowers, typically at below-market interest rates. The goal is to reach the poor, especially the extremely poor – the poorest of the poor – with credit to help overcome poverty and gain empowerment. Except for mandatory savings required as a condition of receiving a loan, the mobilization of local savings is normally not a significant part of the poverty lending approach to microfinance. Microfinance is shown to have a positive effect on poverty reduction at the macro level (Imai et al., 2012).

Microfinance plays an important role on poverty reduction and socioeconomic development in sub-Saharan African countries (Rooyen et al., 2015). Microfinance is considered to be a major tool in development processes, especially in the form of microcredit and micro-savings. The Rooyen study investigated income, savings, expenditure, and accumulated assets over time, as well as non-financial outcomes, including health, nutrition, food security, education, child labour, women's empowerment, housing, job creation, and social cohesion impacts. The conclusion was that microfinance does harm, as well as good, to the livelihoods of the poor. Microcredit can increase poverty due to several reasons: loans with high interest rates that should be paid in a timely manner; people tending not to invest their loans but using them for day-to-day expenditure; and the uncertainty of making a profit from investing the loans. Egyptian microfinance has been found to have a positive effect on economic vulnerability among extremely poor households (Al-mamun et al., 2014). A study by Ghaliba et al. (2015) emphasizes that Pakistani microfinance has a positive impact on poverty alleviation, which was manifested in household income and expenditure, especially on clothing and health. According to the findings of panel (secondary) data, Bangladeshi microfinance has a positive effect on poverty reduction and household expenditure, especially on food and non-food items (Salib, 2014). Ugandan microfinance has also been found to have a positive impact on rural clients' household income diversification and asset accumulation (Morris and Barnes, 2005). Based on retrospective data gathered from MFIs in Guatemala, India, and Ghana, the impact of microfinance was shown to be positive on borrowers' households as well as businesses (Nader, 2008; Oxaal and Baden, 1997). In India, microfinance has a positive impact on borrowers' incomes, especially in urban areas (Imai et al., 2012). Zimbabwean microfinance also has a positive effect on poverty reduction, with the average income of microfinance clients more than the average income of new clients or non-clients (Agnes, 2016).

Therefore, the hypothesis of this study is that microfinance loans have a positive effect on the household income of women borrowers.



## Methodology

The scientific rigour of impact assessment methodologies such as randomized control trial and quasi-experimental is important to assessing the impact of microfinance intervention. A randomized control trial (RCT) divides individuals into a control group that does not receive the treatment (or variable being tested) and a test group that does receive the treatment (Mosley, 1998). Yet these types of methods can be difficult to employ and costly (Karlan, 2012). To find a middle method that balances rigour, cost, and reliability, this study used new clients as a control group. This saved time and cost and meant the researcher did not need to go over longitudinal surveys (Karlan, 2012). Furthermore, many microfinance studies have also used new clients as a control group (Hiatt and Woodworth, 2006; Karlan, 2007; Kondo et al., 2008; Salib, 2014).

### Sample selection

A survey of 780 women was conducted. Four separate samples were drawn, using a random, multistage cluster design, from 14 districts in Greater Cairo and selected rural areas in Egypt. The four groups were: established clients from Greater Cairo (n = 360); new clients from Greater Cairo (n = 140); old clients from rural Egyptian areas (n = 180); and new clients from rural Egyptian areas (n = 100). Established clients were those who joined the microfinance scheme in 2010 and had continued to 2014, and new clients were those who joined the microfinance scheme in 2014 and had not yet used their loans. The survey contained questions related to women's household expenditure (see Table 1).

**Table 1** Demographic and socioeconomic characteristics of the survey respondents

Characteristic	Urban		Rural	
	Established clients	New clients	Established clients	New clients
N	360	140	180	100
Mean age	38.55	37.29	38.6	36.9
Household size	5.05	4.86	1.91	1.96
Have savings account	243 (67.5%)	74 (52.9%)	73 (40.6%)	23 (23%)
Access to loans before joining scheme	156 (43.3%)	74 (52.9%)	75 (41.7%)	52 (52%)
Access to business training	226 (62.8%)	73 (52.1%)	96 (53.3%)	44 (44%)
Secondary school and above	141 (39.2%)	65 (46.4%)	68 (37.8%)	41 (41%)
Middle school	184 (51.1%)	65 (46.4%)	88 (48.9%)	51 (51%)
Primary school	35 (9.7%)	10 (7.1%)	24 (13.3%)	8 (8%)
EGP < 440	41 (11.4%)	40 (28.6%)	39 (21.7%)	54 (54%)
EGP > 750	267 (74.2%)	95 (67.9%)	120 (66.7%)	40 (40%)
EGP > 2,000	52 (14.4%)	5 (3.6%)	21 (11.7%)	6 (6%)

### ***Operational definitions of survey variables***

Poverty line income is widely recommended to measure the impact of micro-finance on household level (Kabeer, 1999; Navajas et al., 2000). In this research, the dependent variable was household income, which the researchers based on the Egyptian poverty line (Nader, 2008; Rahman, 1999), categorizing households as either: extremely poor (households with monthly income equal to or below 440 Egyptian pounds); poor (households with monthly income equal to or below EGP750); or low income (household with monthly income equal to or below EGP2,000). The extremely poor group was selected as the reference category.

## **Findings**

### ***Descriptive analysis and bias selection***

Table 1 illustrates the demographic and socioeconomic characteristics of survey participants in the urban and rural areas. The analysis was based on six control variables related to these characteristics: the respondents' age (coded in single year); number of children (coded number); number of dependants in the household (coded in numbers); whether the respondent had a savings account (coded binary: 1 for those who had a savings account and 0 for those who did not); their marital status (coded binary: 1 for married women and 2 for women who were not married); and their level of education (coded ordinal, in which 1 refers to secondary and above; 2 middle school; and 3 primary school). This comparison allows for initial estimations of programme impact.

Table 1 demonstrates some selection bias, though the differences between the four groups are not significant. Established clients in urban and rural areas were one to two years older on average than new clients. There were no significant differences in the number of children and household dependants. The percentage of those who had secondary school education or above was slightly higher among new clients as compared to established clients. The percentage of those who had accessed loan services before joining the microfinance scheme was slightly higher among new borrowers in both urban and rural areas by approximately 9 per cent and 10 per cent, respectively. The percentage of those who had access to business training was higher in established clients in both urban and rural areas by approximately 10 per cent. Finally, the percentage of those who had a savings account was higher in the established clients in urban and rural areas by 14 per cent and 18 per cent, respectively.

### ***Household income in urban areas***

The distribution reveals that the probability of the model chi-square 60.17 is  $0.000 < 0.05$ . The null hypothesis that states there is no difference between the model without independent variables and the model with independent variables was rejected. The deviance statistic here demonstrates that the model is a good fit of the data ( $p = 0.524$ , which is significantly higher than 0.05). The Nagelkerke

**Table 2** The effect of exposure to microfinance loans on urban and rural household income

Variables	Urban household income				Rural household income			
	Model 1		Model 2		Model 1		Model 2	
	Sig.	Exp(B)	Sig.	Exp(B)	Sig.	Exp(B)	Sig.	Exp(B)
Established clients (treatment group)	0.002	2.508	0.04	2.307	0	3.32	0.008	4.2
Age	0.161	1.031	0	1.103	0.718	1.007	0.419	1.02
Household members	0.036	1.299	0.001	1.859	0.014	1.386	0.225	1.31
Secondary school	0.244	1.724	0.176	2.595	0.955	0.974	0.845	1.16
Middle school	0.27	1.661	0.242	2.251	0.792	1.127	0.889	1.11
Primary school	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Have savings account	0.02	0.489	0.039	0.432	0.844	0.944	0.443	1.45
Access to loans before joining scheme	0.843	1.058	0.419	0.734	0.119	0.643	0.624	0.79
Business training	0.01	2.092	0.01	2.733	0.418	0.778	0.873	0.92
Intercept	0.108		0		0.06		0.005	
Chi-square		60.17***				34.6***		
Pearson		0.524				0.56		
Deviance		1				0.945		
Cox Snell R <sup>2</sup>		0.113				0.116		
Nagelkerke R <sup>2</sup>		0.145				0.138		
Classification		73%				61.4%		

R<sup>2</sup> value of 0.145 shows the model is useful in predicting household income. Finally, the classification of the effect of microfinance on household income, as shown in Table 2, suggests a 73 per cent correct prediction, which is well above the criteria for chance accuracy of 57.4 per cent.

This indicates that the criteria for classification accuracy are satisfied for the analysis. As illustrated in Table 2, Model 1 shows the relationship between access to a microfinance loan and the household income of low-income women (those whose household income equals or is less than EGP750) in urban areas. The odds ratio (Exp(B)) demonstrates that the treatment group (established clients) is 1.5 per cent more likely, as compared to new clients, to experience an increase in household income. Model 1 also shows other control variables that have positive significant effects on household income. For example, the odds ratio of 1.3 indicates that an increase in the size of the household by one person leads to an increase in household income by 0.3. The odds ratio of 2.1 denotes that access to business training leads to increased household income by 1.1 per cent. However, the odds ratio of 0.489 suggests that having a savings account leads to decreased household income by 0.51 per cent. This implies that women who had a savings account put their surplus in savings rather than contributing to household income. In addition, Model 2 shows the relationship between access to a microfinance loan and the



household income of women borrowers whose household income equals or is less than EGP2,000. The odds ratio (Exp(B)) of 2.3 indicates a 2.5 per cent higher likelihood of the household income of the treatment group (established clients) to increase as compared to new clients. Model 1 also shows other control variables that have positive significant effects on household income. For example, the odds ratio of 1.1 suggests that an increase in age leads to increased household income by 0.1 per cent. The odds ratio of 1.85 in Model 2 demonstrates that increase in the size of the household by one person leads to increased household income by 0.85 per cent. The odds ratio of 2.7 indicates that access to business training leads to increased household income by 1.7 per cent.

### *Household income in rural areas*

The distribution reveals that the probability of the model chi-square 34.61 is  $0.000 < 0.05$ . The null hypothesis that states there is no difference between the model without independent variables and the model with independent variables was rejected. The deviance statistic here demonstrates that the model is a good fit of the data ( $p = 0.945$ , which is significantly higher than 0.05). The Nagelkerke  $R^2$  value of 0.138 indicates the model is useful in predicting household income. Finally, the classification of the effect of microfinance on household income, as shown in Table 2, suggests a 61 per cent correct prediction, which is well above the criteria for chance accuracy of 43.47%.

This indicates that the criteria for classification accuracy are satisfied for the analysis. Model 1 shows the relationship between access to a microfinance loan and the household income of low-income women (those whose household income equals or is less than EGP750) in rural areas. The odds ratio (Exp(B)) of 3.3 indicates the likelihood of the household income of the treatment group (established clients) to increase is 2.3 as compared to new clients. Model 1 also points to other control variables that have positive significant effects on household income. For example, the odds ratio of 1.38 indicates that increasing the size of the household by one person leads to increased household income by 0.38 per cent. Model 2 illustrates the relationship between access to a microfinance loan and the household income of women borrowers whose household income equals or is below EGP2,000 in rural areas. The odds ratio (Exp(B)) of 4.27 indicates a 3.27 per cent likelihood of the household income of the treatment group (established clients) to increase as compared to new clients.

MFI that are not allowed to offer savings accounts would only be focusing on credit habits and not savings habits. Having a savings account for urban households would significantly increase the household income compared to rural households. It should be taken into consideration that the savings level is mainly based on the Egyptian system of regulation, not only the ease of access to the several savings products available. It should also be mentioned that MFIs would probably prefer to offer credit than savings in case there is no clear motivator for savings. That could be due to the lack of available savings products in the Egyptian market or physiological factors that are quite difficult to be measured.

## Discussion

Table 2 demonstrates the results of multinomial logistic regression on the effects of access to microcredit on women's household income in urban and rural provinces in Egypt. The findings of Table 2 indicate that access to microcredit has a positive impact on established clients' household income as compared to new clients. The literature suggests that microfinance enables women to participate in the economic market through forming and extending their micro and small businesses and to generate independent income that allows them to contribute to their household income. The literature also indicates that access to microfinance enables poor and low-income borrowers, especially women, to diversify their livelihood and alleviate their vulnerability. For example, microfinance has a positive effect on poverty reduction and household income (Al-mamun et al., 2014), household expenditure (Ghaliba et al., 2015), food and non-food expenditure (Nader, 2008), and income diversification and asset accumulation (Morris and Barnes, 2005). This study demonstrates that Egyptian microfinance has a positive impact on poverty reduction and women's household income, especially in rural areas.

The results of this study highlight the importance of control variables that potentially have a positive impact on women's household income. For instance, access to business training has a positive impact. This indicates that women with knowledge about business are more able to make a profit and enhance their business revenue. The findings of this study are in line with Nader (2008) in the importance of extending non-financial services, such as business development and entrepreneurship training, to women clients before providing them loans (Anderson et al., 2002; Drolet, 2015).

## Implications of the research and conclusion

The findings of this study have several major implications for researchers, microfinance institutions and policymakers. For the researcher, it added new evidence on the impact of microfinance on the socioeconomic development of low-income households, especially women who cannot access financial services due to their poverty. Microfinance helps them to diversify their household income and alleviate their poverty. This study also gives an insight into the role of microfinance on women's empowerment in urban and rural areas of a developing country, in this case Egypt. The findings suggest that microfinance should be included in economic policy and modelling because it has been shown to enhance the socioeconomic well-being of poor and low-income people, especially women. It also plays a central role in creating jobs for women, especially those with low education. Therefore, microfinance opens opportunities for women borrowers to play a significant role in economic development. Despite the significant impact of microfinance on household income, a large number of established clients have not graduated from the scheme and become financially self-sufficient. This issue should be addressed by Egyptian policymakers in how to transform the reliance on credit as a source of income to not only enhance socioeconomic well-being,

but also to build individuals' capacity. Future research should pay attention to how to improve the sustainability and growth of micro and small businesses that are financed by microfinance.

## References

- Agnes, Y. (2016) 'Engendering microfinance services: beyond access', presented at the Women's Empowerment or Feminisation of Debt? Workshop, London, March.
- Al-mamun, A., Mohammad, N., Huda, M. and Malarvizhi, C.A. (2014) 'Measuring the effect of amanah ikhtiar Malaysia's microcredit programme on economic vulnerability among hardcore poor households', *Progress in Development Studies* 1: 49–59.
- Al-Shami, S., Samer, A., Izaidin, B.M., Nurulizwa, A. and Mohd, S.R.B. (2014) 'Conceptual framework: the role of microfinance on the wellbeing of poor people case studies from Malaysia and Yemen', *Asian Social Science* 10(1): 230–42.
- Anderson, L., Locker, L. and Nugent, R. (2002) 'Microcredit, social capital, and common pool resources', *World Development* 30(1): 95–105.
- Angelucci, M., Dean S.K. and Jonathan, Z. (2013) 'Win some lose some? Evidence from a randomized microcredit program placement experiment by compartamos banco', working paper No. 7439, Institute for the Study of Labor (IZA).
- Armendáriz de Aghion, B. and Morduch, J. (2000) 'Microfinance beyond group lending', *Economics of Transition* 8(2): 401–20.
- Armendariz De Aghion, B and Morduch, J. (2013). Understanding the impact of a microfinance-based intervention. *American Journal of Public Health* 3(4): 344–349.
- Drolet, J. (2015) 'Women, microcredit and empowerment in Cairo, Egypt', *International Social Work* 5: 23–35.
- Druschel, K. (2016) 'State of the microcredit summit campaign report', working paper, Washington, DC: Microcredit Summit Campaign Secretariat.
- Ghaliba, A.K., Issam, M. and Katsushi, S.I. (2015) 'Microfinance and household poverty reduction: empirical evidence from rural Pakistan', *Oxford Development Studies* 23(2): 84–104.
- Hashemi, S.M., Schuler, S.R. and Riley, A. (1996) 'Rural credit programs and women's empowerment in Bangladesh', *World Development* 24(4): 635–53.
- Hiatt, S.R. and Woodworth, P.W. (2006) 'Alleviating poverty through microfinance: village banking outcomes in Central America', *The Social Science Journal* 43(3): 471–77.
- Imai, K.S., Raghav, G., Ganesh, T. and Samuel, K.A. (2012) 'Microfinance and poverty – a macro perspective', *World Development* 40(8): 1675–89.
- Kabeer, N. (1999) 'Resources, agency, achievements: reflections on the measurement of women's empowerment', *Development and Change* 30(3): 435–64.
- Karlan, D. (2007) 'Cross sectional impact analysis: bias from dropouts', *Microfinance Journal* 3(2): 343–66.
- Karlan (2012). Teaching entrepreneurship: Impact of business training on microfinance institutions and clients. *The Review of Economics and Statistics. MIT Press* 93(2): 510–527.
- Kondo, T., Aniceto, O.J., Clarence, D. and Christine, I. (2008) 'Impact of microfinance on rural households in the Philippines', *IDS Bulletin* 39(1): 51–70.

- Morris, G. and Barnes, C. (2005) 'An assessment of the impact of microfinance', *Journal of Microfinance* 7(1): 39–54.
- Mosley, P. (1998) 'The use of control groups in impact assessments for microfinance', working paper no. 19, Geneva: International Labour Organization.
- Nader, Y. (2008) 'Microcredit and the socio-economic wellbeing of women and their families in Cairo', *The Journal of Socio-Economics* 37(2): 644–656.
- Navajas, S., Schreiner, M., Meyer, R.L., Gonzalez-vega, C. and Rodriguez-meza, J. (2000) 'Microcredit and the poorest of the poor: theory and evidence from Bolivia', *World Development* 28(2): 333–46.
- Oxaal, Z. and Baden, S. (1997) 'Gender and empowerment: definitions, approaches and implications for policy', report no. 40, *BRIDGE (development – gender)*, Brighton: Institute of Development Studies.
- Rahman, A. (1999) 'Micro-credit initiatives for equitable and sustainable development: who pays?', *World Development* 27(1): 67–82.
- Razavi, S. (1997) 'From rags to riches: looking at poverty from a gender perspective', *IDS Bulletin* 28(3): 49–62.
- Robinson, M. (2001) *The Microfinance Revolution Sustainable Finance for the Poor*, Washington, DC: World Bank.
- van Rooyen, C., Stewart, R. and de Wet, T.D. (2012) 'The impact of microfinance in Sub-Saharan Africa: a systematic review of the evidence', *World Development*, 40: 2249–62.
- Salib, S., (2014) 'FORA's impact among migrants: primary findings', *Opportunity International Network*, 3: 56–82.
- Swain, R.B. and Adel, V. (2009) 'Does self help group participation lead to asset creation?', *World Development*, 37: 1674–82.

