



**Multilateral Investment Fund**



## What is the Evidence of Microfinance Impact?

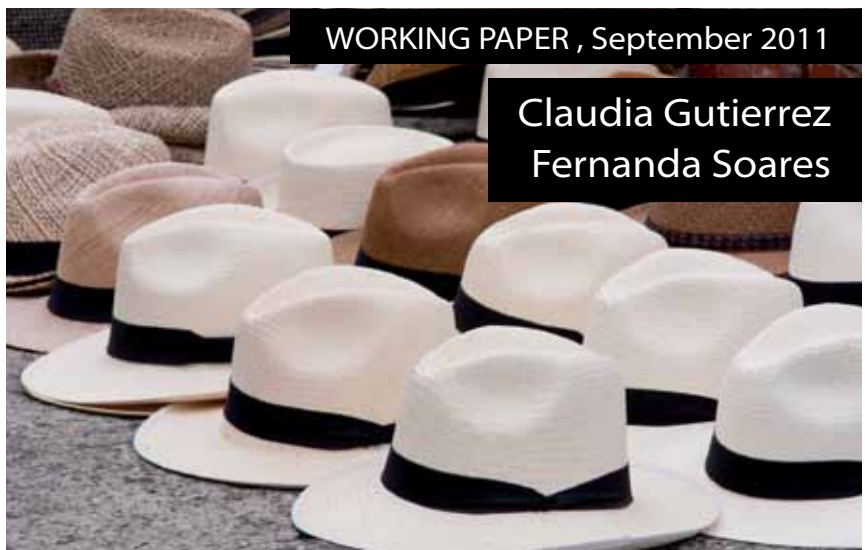
A Review of Microfinance Impact Evaluations in Latin America and the Caribbean

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## Executive Summary

Since its creation in the early 1990s, the MIF has been a leader among other multilateral and bilateral development financial institutions in supporting the growth and development of the microfinance sector in Latin America and the Caribbean (LAC). The MIF has been a crucial partner in fostering institutional development, testing new lending methodologies and products, and leveraging funds to create the foundations of a solid industry. Microfinance in LAC has successfully evolved from an NGO-led experiment to a proven, sustainable, and rapidly growing industry that serves low-income people and entrepreneurs.

This paper seeks to analyze published evidence of microfinance impact in Latin America and the Caribbean (LAC) over the past 12 years, for the direct benefit of practitioners. More specifically, the objectives of this review are: (i) to summarize the most relevant findings of impact evaluations about microcredit, savings, and new technologies used by low-income people and micro-entrepreneurs in LAC; and, (ii) to identify knowledge gaps and insufficiently substantiated theories concerning the effectiveness of financial products, in order to guide future research and evaluations.

This study comprises 20 relevant impact assessment studies; 12 evaluated the impact

of microcredit, 5 focused on microcredit plus (microcredit programs combined with other services such as training), 1 focused on savings, and 2 on new technologies. Broken down by methodology, 5 were randomized experiments, 3 entailed natural experiments, and 12 of the studies performed quasi-experiments. The studies were conducted between 1999 and 2011; of the 20 studies, 13 were published since 2007, which reflects the sector's growing interest in measuring the impact of financial services.

The types of institutions that took part in the impact evaluations vary. NGOs, specialized microfinance institutions, and banks with microfinance programs were included. The types of financial products analyzed differ between institutions, and are not always comparable with one another.

Considering that the evaluations were conducted in different countries and at different times, the macroeconomic context differs between studies as well. One must therefore exercise some caution in drawing general conclusions, since outcomes highly depend on context, characteristics of the financial product or service, the practices of the financial institution, etc. Thus, this paper summarizes the findings without making sweeping conclusions about the broad impact of microfinance throughout the entire region.

The studies reviewed do present informative results, however, concerning particular aspects of the provision of financial and non-financial services, such as the target population, types of products, effects on business performance, financial training, health education, etc. For example, Legovini (2003) found that, on average, microcredit had a positive effect on income, but for some households in the poorest deciles microcredit actually had negative effects. Regarding business outcomes, Dunn and Arbuckle (2001) conducted a study in Peru that found overall positive impacts on microenterprises, including increases in enterprise revenue, fixed assets, and transaction relationships. The authors mentioned that these results were made possible by an increase in enterprise working capital, which allowed entrepreneurs to “buy more inventory, secure lower input prices, and increase sales and profits.”

One evaluation conducted in the Dominican Republic (Drexler et al., 2010) that focused on the impact of financial training did not find any evidence of impact resulting from training beneficiaries in standard, fundamentals-based accounting principles; however, simplified, rule-of-thumb training produced significant improvements in business practices and outcomes. In Bolivia, McNelly and Dunford (1999) assessed the impact of a loan program targeting women, which included an educational component. The results showed that the synergy of access to credit with educational seminars is associated with an increase in income and savings, improved knowledge and practices concerning healthcare and nutrition, and women’s empowerment in intra-household decision-making. However, the researchers did not find an impact on the nutritional status of clients or their children. A deeper analysis revealed that children’s nutritional status correlated with the quality of education services provided. Therefore, they highlighted the importance of the quality of the educational services offered to really have an impact on health outcomes. Just a few studies were found on the impact of access to savings and new financial technologies; the results of these studies are presented in this paper.

This review has identified certain knowledge

gaps: (i) evaluations should consider the business models and practices of the MFIs that provide the products or services under study; (ii) the provision of other financial products or services besides microcredit (such as savings) has been understudied; (iii) there is a need for a more in-depth understanding of the characteristics and needs of microfinance clients; (iv) existing evaluations do not focus on women empowerment; (v) there is a lack of evidence on the macroeconomic effects; and (vi) there is a need to do more analysis on long-term impacts of microfinance.

In summary, this study has found:

▲ **Overall positive effects which seem to be dependent on the characteristics of potential clients and the constraints they face:**

Of the sample reviewed, most studies found that microfinance products had positive effects across different levels of income, education, employment, and business performance. The extent to which potential clients can gain from microfinance, however, seems to depend on their characteristics and the constraints that they face.

▲ **Importance of the quality and type of non-financial services offered:**

Some of the evaluations mention that the impact of non-financial products depends strongly on the quality and the appropriateness of the product offered.

▲ **Performance of the financial institution and differences in the services or products they offer:**

Good financial and social performance are highly important for MFIs; without meeting high standards, MFIs may not be able to have a positive impact on their clients.

▲ **The majority of evaluations reviewed were conducted ex post facto, since most microfinance programs did not incorporate an evaluation component into their design.**

Needless to say, the MFIs’ data and conclusions will be of higher quality if monitoring and evaluation are directly incorporated into programs from their earliest stages.



# 1. Introduction

Since its creation in the early 1990s, the MIF has been a leader among other multilateral and bilateral development financial institutions in supporting the growth and development of the microfinance sector in Latin America and the Caribbean (LAC). The MIF has been a crucial partner in fostering institutional development, testing new lending methodologies and products, and leveraging funds to create the foundations of a solid industry. Microfinance in LAC has successfully evolved from an NGO-led experiment to a proven, sustainable, and rapidly growing industry that serves low-income people and entrepreneurs.

Regulators, networks, owners and other stakeholders have worked since the sector's early days to share methodologies, lessons learned, and best practices. This collaboration has contributed to LAC's success and increasing integration. The sector has registered constantly positive growth rates despite the sluggish growth that accompanied the global financial crisis. In 2010, microfinance institutions (MFIs) in LAC registered an average

increase of 15.9% in their loan portfolios, and 23.3% in deposits. Similarly, the number of clients grew both in terms of borrowers (12.2%) and depositors (17.4%)<sup>1</sup>. According to the latest MIF microfinance data survey, as of December 2010, the number of clients reached was 12.5 million, and the total loan portfolio of the LAC microfinance industry was an estimated US\$15.2 billion.

Despite the growth and magnitude of the microfinance industry in the region, little information has been gathered about its impact on the lives of the low-income people and micro-entrepreneurs that access microfinance programs. Until recently, there was a widespread belief that microfinance had a positive impact; this view was based primarily on client testimonials. Rigorous quantitative evidence of the impacts of microfinance in LAC is limited. This lack of evidence can be partially attributed to the methodological challenges of measuring impact and establishing causality. A number of impact evaluations have been conducted in Asia and Africa, but the evaluations in LAC are scarce.

<sup>1</sup> *Microfinance Market Trends in Latin America and the Caribbean 2005-2010*, MIF.

Microfinance in LAC has some defining characteristics that distinguish it from microfinance in Asia, Africa, or the transition economies of Eastern Europe. Most of the LAC region's pioneers began as private, non-profit institutions, working in urban markets. At the beginning, MFIs focused on credit as the primary service offered, but some years ago they started to develop savings programs and expanded their product lines into areas such as housing and remittances. Although most of the pioneers did target the poor, low income people still form the majority of microfinance customers, an exclusive focus on the poor is not the defining characteristic of LAC microfinance, as it is for many Asian and African institutions. In LAC, the emphasis has been on providing services to enterprises with insufficient access to financial services, and to the unbanked in general (Berger et al., 2006).

To the authors' knowledge, there have been three recent major reviews of microfinance impact assessments: one of microcredit and savings worldwide (Odell 2010), which was a follow-up of Goldberg's (2005) review, one of microcredit and savings in Sub-Saharan Africa (Stewart et al. 2010); and one of microcredit and microcredit plus (microcredit programs combined with other

services such as training) worldwide (Duvendack et al. 2011). None of these reviews is focused on microfinance in LAC. This paper intends to address this gap in the literature, summarizing published evidence of microfinance impact in LAC. The main audience of this paper is practitioners. Hence, the objectives of this review are two-fold: (1) to summarize the most relevant findings of impact evaluations of microcredit and other financial services such as savings and new financial innovations used by low-income people and micro-entrepreneurs in LAC; and (2) to identify knowledge gaps and areas lacking evidence of the effectiveness of financial products to guide future projects and evaluations.

The remainder of this paper is organized as follows: the second section reviews the impact evaluation literature on microfinance and the main challenges associated with these evaluations. The third section describes the methodological approach that guided the research process. The fourth section summarizes the most relevant findings of available evidence on the impact of microfinance. The fifth section addresses the main knowledge gaps identified and draws directions for future research. Finally, the last section provides some general conclusions.





## 2. Impact Evaluation

### Methodologies and Microfinance

**Microfinance impact evaluations** are important tools for understanding “what works” in the field of microfinance. To achieve this objective, impact evaluations attempt to answer the question: “*How are the lives of participants different relative to how they would have been had the financial product or service not been implemented?*” Essentially, evaluations aim to assess what would have happened in the absence of the microfinance program and determine if the changes in the outcomes measured can really be attributed to the intervention. Thus, there is a need to measure the impact of participating in a microfinance program versus the counterfactual of not participating (Karlan and Goldberg, 2007). As a result, impact evaluations require the identification of a *comparison group/control group* to estimate what would have happened to microfinance clients had they not elected to participate.

The literature on program evaluation describes several different methods of identifying adequate comparison groups. Overall, these methods can be classified as randomized control trials, natural experiments, and quasi-experimental studies.

*Random Control Trials* (RCTs) randomly assign eligible individuals to a treatment group (e.g., those that receive a loan from a MFI) and a control group (e.g., those who do not receive a loan from a MFI) prior to initiation of a treatment program. The assignment process has the potential to create a perfect counterfactual, meaning that there is no difference between the treatment and control groups besides the fact that the treatment group participated in the program. RCTs are not without their limitations, however. For example, treatment and control groups created through randomized assignment are ideally suited to capturing program impacts in a single period, but measuring impacts of long-term microfinance participation through randomization may be unfeasible. In addition, RCTs may capture the marginal impacts of particular programs versus the alternatives rather than the impact of having a microfinance product versus having nothing at all, because individuals may seek treatment from other sources.

*Natural experiments* occur when one group is randomly assigned to the treatment group and

another group is randomly assigned to the control group as a result of a natural occurrence and not for the purposes of the experiment itself.

In *quasi-experimental methods*, the element of random assignment is lacking. In the place of randomized assignment, assumptions are made regarding the process by which some individuals decide to participate in a microfinance program (or are selected to do so) and others do not<sup>2</sup>. Quasi-experimental studies sometimes incorporate aspects of randomization, such as the random assignment of eligibility for microfinance or randomly choosing a group of persons or firms to receive an extra incentive for participation in a microfinance program. The problem with quasi-experimental studies is that selection bias may still remain, as systematic differences between

the treatment and comparison groups may persist (Odell 2010). Evaluations following a quasi-experiment can be conducted after a program is in place, but in order to have a strong research design it is preferable to incorporate them in the initial stages of the program. As Meyer and Fienberg (1992) point out, complex statistics cannot compensate for a weak research design and poor data.

The discussion about the pros and cons of experimental versus quasi-experimental methods is still in progress. However, many agree that no single method dominates and the type of methodology to be used will depend, amongst other things, on the evaluation questions and the feasibility for its implementation<sup>3</sup>.



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**2** For example, propensity-score methods assume that all factors correlated with participation in microfinance and the outcomes for which we would like to measure impacts of microfinance can be observed. Given this assumption, a randomized experiment can be mimicked by forming a group of individuals without microfinance that are observationally equivalent to the group of microfinance participants, and then comparing outcomes in the two groups. Other methods, such as instrumental variables and latent-variable selection models, do not assume that all factors affecting participation and outcome are observed. Instead, they make (sometimes quite strong) assumptions about the statistical distribution of these unobserved factors. More details of these methods and others can be found in Imbens and Wooldridge (2008).

**3** For a detailed discussion on the different methods please see Ravallion, Martin (2008) "Evaluating Anti-Poverty Programs," edited by Paul Schultz and John Strauss, *Handbook of Development Economics Volume 4*, Amsterdam: North-Holland.





### 3. Methodology

This research was guided by a protocol that establishes a comprehensive research strategy and a two-stage screening process to effectively review the available body of empirical studies on the impact of microfinance. The research strategy encompassed four main components aimed at identifying all relevant literature. The first component included a search of published literature in numerous economic and microfinance journals and online bibliographic databases. The second component consisted of a search on relevant portals and websites of different institutions focused on microfinance and/or microfinance impact evaluations. This included, but was not limited to, the following organizations: Microfinance Gateway; Consultative Group to Assist the Poor (CGAP); Abdul Latif Jameel Poverty Action Lab (J-PAL); Financial Access Initiative (FAI); Innovations for Poverty Action (IPA); and International Initiative for Impact Evaluation (3ie). To supplement this research and as a part of the third component, various microfinance experts and professionals within the Inter-American Development Bank (IDB), World Bank (WB), and other relevant institutions were consulted for referrals to literature that they believed should be included in this study. As a final step, emails were sent to 245 institutions that provide microfinance services and operate in

LAC, requesting impact evaluations that have been conducted by them or by an outside institution that evaluated their programs. However, it is important to mention that, despite this research protocol, there might have been literature that was not identified and included in the review. The comprehensive research strategy was guided by a first stage screening process. During this phase of the research, evaluations have been included according to the following criteria:

- ▲ **Region:** Evaluations conducted in Latin America and the Caribbean (LAC).
- ▲ **Intervention:** Microfinance interventions focused on credit, training, savings and new technologies provided by all types of providers.
- ▲ **Outcomes:** All outcomes measured in impact evaluation of microfinance which include, but are not limited to, social, economic, empowerment, and microenterprise outcomes.
- ▲ **Study design:** Quantitative analysis of microfinance impact, which includes randomized experiments, quasi-experiments, natural experiments, and regression-based approaches.
- ▲ **Time frame:** No restriction in terms of time frame was established.

The first-stage screening process resulted in a database consisting of 39 evaluation studies categorized by country, microfinance provider, type of financial product or service, outcomes measured and evaluation design. Subsequently, a second-stage screening criteria (described in Table 1) was applied to select evaluations to be included in this review.

The second-stage screening criteria aimed to ensure the review would only include evaluations of specific microfinance interventions focusing on the impact on the lives of low-income people and micro-entrepreneurs that benefit from microfinance interventions. Studies focusing on microfinance impact on institutional outcomes, such as repayment rates, retention rates, MFI profitability, etc.; were excluded.

**Table 1: Second stage screening criteria to select studies for the review**

1. Does the study report a specific microfinance intervention?	No/Yes/Can't tell IF NO THEN STOP
2. Does the study evaluate a specific microfinance product (credit, savings, training, insurance, etc)?	No/Yes/Can't tell IF NO THEN STOP
3. Does the study focus on client outcomes (income, profits, consumption, etc)?	No/Yes/Can't tell IF NO THEN STOP
4. Is the sample size bigger than 100 (control and treatment combined)?	No/Yes/Can't tell IF NO THEN STOP
5. Does the study/intervention construct a counterfactual?	No/Yes/Can't tell IF NO THEN STOP

The scope of this paper does not include a quality appraisal of the evaluations collected. However, to ensure minimum quality standards, additional criteria were applied during this second stage of the screening process. First, only evaluations with a sample size larger than 100, which is often the threshold recommended by the statistics literature, were included. In addition, only studies that construct a counterfactual were reviewed. This criterion can entail physical or statistical control groups defined prospectively or retrospectively, as well as evaluations focusing on the impact before and after the intervention.





## 4. What Have We Learned

The two-stage screening process resulted in a database containing 20 impact assessment studies. These included studies from 11 LAC countries: Argentina, Bolivia, Brazil, Chile, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, and Peru. Of the 20 studies, 12 evaluated the impact of microcredit; 5 of microcredit plus, 1 of savings, and 2 of new technologies. The studies were conducted between 1999 and 2011. Of the 20 studies, 13 were published since 2007, which reflects the growing interest of the sector in studying the impact of financial services.

Various types of institutions took part in the impact evaluations, including NGOs, specialized institutions in microfinance, banks with microfinance programs, and so on. The types of financial products analyzed are also different and non-comparable between institutions. The macroeconomic context differs as well, considering that the evaluations were conducted in different countries and at different points of time. This section reviews and summarizes the most relevant findings of these impact assessments by the type of financial product or service being evaluated.

### 4.1. MICROCREDIT

This review has found 12 studies that focus on the impact of microcredit on a broad range of social, economic, and microenterprise outcomes. Of these 12 studies, 10 are quasi-experiments and 2 are natural experiments. There are currently no RCTs that assess the impact of microcredit in LAC. Furthermore, the majority of microcredit evaluations included in this review were conducted ex post facto, as most microcredit programs did not incorporate an evaluation component in their design. This sub-section reviews the available evidence of microcredit impact according to the type of outcome measured.

#### *Income*

Dunn and Arbuckle (2001), when comparing a group of clients in Peru with a group of non-clients with similar characteristics, found that households receiving microcredit were estimated to have US\$1,200 more in household

annual income and US\$226 more in per capita income compared to control households. These results are consistent with those of Bruhn and Love (2009), who analyzed changes in outcome variables before and after a financial

institution in Mexico opened over 800 branches simultaneously across municipalities. According to their findings, income increased as a result of the opening of a new branch.

A separate analysis by type of occupation revealed that these results were primarily driven by those not employed before the opening of

the branch. **Aroca and Hewings (2009)** found a positive impact of microcredit on income when analyzing the data from Brazil. They assessed the impact of bank and NGO programs separately; the results showed a high positive impact of microcredit programs on income, especially for those administered by banks.

**Table 2: Impact of Microcredit on Income**

Study	Country	Impact on Income
Aroca, P and Hewings, G. (2009)	Brazil, Chile	(-) (on income in Chile) / (+) (on income in Brazil)
Bruhn, M. & Love, I. (2009)	Mexico	(+) (on income)
Dunn, E. and Arbuckle, G. (2001)	Peru	(+) (on income)
Legovini, A. (2003)	Nicaragua	(+) (on average income) / (-) (on income of the poorest)
Niño-Zarazúa, M. and Mosley, P. (2009)	Mexico	(no effect) (on income for PROMUJER and CAME) / (+) (on income for Fincomun)

There is, however, some evidence that the impact of microcredit on income may depend on the initial level of income among clients. **Legovini (2003)** found that, on average, microcredit had a positive effect on income, but for some households in the poorest deciles microcredit had a negative effect.

**Niño-Zarazúa and Mosley's (2009)** study in Mexico, provides an estimate of the impact of microcredit on income as well as on poverty

levels. According to their findings, there is a strong relationship between the initial level of income and the magnitude of poverty impact. One study found negative or no effect on income of a microcredit program in Chile.

**Aroca and Hewings (2009)** found that an NGO-based microcredit program in Chile had a negative impact on average income among loan recipients, while bank microcredit based programs had no impact at all.

### Consumption Smoothing

Two studies found that households that received microcredit were more likely to cope with shocks by liquidating assets (**Dunn and Arbuckle, 2001; Mosley, 2001**).

Although it is uncommon for households to cope with shocks by liquidating productive assets, the evidence suggested that households that received microcredit were more likely to cope with shocks in this way. These results suggest that poor people have fewer options for coping with

shocks when they are obligated to repay a loan. These findings are not consistent with the results of **Ruiz (2010)**, who utilized a consumption-smoothing index to analyze if households are better able to smooth consumption in the face of income fluctuations when credit is available. This study found that as a result of access to credit, households were better able to maintain consumption levels when income fell.

**Table 3: Impact of Microcredit on Consumption Smoothing**

Study	Country	Impact on Income
Dunn, E. and Arbuckle, G. (2001)	Peru	(-) (borrowers more likely to liquidate productive assets)
Mosley, P. (2001)	Bolivia	(-) (borrowers more likely to sell assets)
Ruiz, C. (2010)	Mexico	(+) (households better able to smooth their consumption)

### Savings

Only one study in the database reported the impact of microcredit on savings outcomes. **Ruiz (2010)** analyzed the expansion of a bank in new municipalities in Mexico as a natural experiment to compare municipalities with and without a branch. In municipalities where the bank opened a branch, the overall proportion of households that saved

went down by 5.8 percent. Before the bank opening, households would save to counter the effect of future economic shocks. When formal credit became available, however, the use of savings as a buffer on income fluctuations declined. Furthermore, this effect was greater among the poorest households, which experienced an even sharper decline in savings rates.

**Table 4: Impact of Microcredit on Savings**

Study	Country	Impact on Savings
Ruiz, C. (2010)	Mexico	(-) (decrease in the proportion of households that save)

### Business Performance

The database includes only one study that focuses on the impact of microcredit on business performance. **Dunn and Arbuckle (2001)** conducted a comprehensive evaluation in Peru to assess the impact of microcredit on businesses, households, and individuals. The evaluation used a quasi-experimental design to compare clients of a financial institution with a group of non-clients with similar characteristics. The results indicated positive impacts on enterprise revenue, fixed assets, and transaction relationships. In addition, households receiving microcredit earned over US\$1,000 more in net revenue than households in the control group. The authors mentioned that these results were made possible

due to an increase in enterprise working capital, which allowed entrepreneurs to “buy more inventories, secure lower input prices, and increase sales and profits.” Furthermore, microenterprises in the treatment group accumulated US\$500 more in enterprise fixed assets than did microenterprises in the control group. As a result of access to credit, client enterprises were also more likely to have changed their main source of supplier from retailers to wholesaler, which made it possible for them to save money by buying inputs in bulk at lower prices. Finally, their results indicated that microcredit helped micro-entrepreneurs gain ownership of their business premises.

**Table 5: Impact of Microcredit on Business Performance and Outcomes**

Study	Country	Impact on Business Performance
Dunn, E. and Arbuckle, G. (2001)	Peru	(+) (on enterprise revenue, fixed assets, transaction relationships)

## Work and Time Allocation

There is some evidence that microcredit has positive effects on work and time allocation. This is consistent across the three studies reviewed here that analyzed the impact of microcredit on some measure of work. **Dunn and Arbuckle (2001)**, for example, found a positive impact when measuring the amount of time spent employed by households receiving microcredit in Peru, compared to non-recipient households; this held true both for household members and for those

employed by the recipient household. Compared to households that did not have access to credit, those that did experienced 9 more days of total employment per month for household members and 3.25 more days for those employed by the household.

Along the same line results, **Legovinis (2003)** indicated that access to credit increased the probability of a household head being self-employed by 12 percent.

**Table 6: Impact of Microcredit on Work and Time Allocation**

Study	Country	Impact on Work and Time Allocation
Dunn, E. and Arbuckle, G. (2001)	Peru	(+) (on days of total employment)
Bruhn, M. and Love, I. (2009)	Mexico	(+) (on total employment)
Legovini, A. (2003)	Nicaragua	(+) (on self-employment)
Niño-Zarazúa, M. and Mosley, P. (2009)	Mexico	(+) (indirect effect on labor expenditure)

**Bruhn and Love (2009)** also found a positive impact on employment when analyzing the effect of access to credit provided by a bank in Mexico.

Total employment (including informal business owners and wage owners) increased by 1.4 percent as a result of the opening of a bank's branch. A further analysis, separated by gender, revealed that the increase in wage earners was primarily driven by females, while the increase in informal business owners was driven by males.

**Niño-Zarazúa and Mosley (2009)** did not find a direct impact of microcredit along the lines of those measured by other studies.

Their paper provides an estimate of the impact of microcredit on expenditure in labor hiring.

Although they found no direct impact of access to credit on this variable, their results show that an increase in household income results in an increase in labor expenditure.

This suggests an indirect impact of credit through a rise in income. More specifically, a 1 percent increase in the level of household income was predicted to give rise to a 7.8 percent in labor expenditure.

However, these effects were only observed for households with incomes well above the poverty line.



## Housing improvements

McIntosh et al. (2008) found an increase in the probability of housing improvement after credit provision in the village. The authors pointed out that in Guatemala, housing is a measure of prestige, and thus improvements in houses and lands are typically among the first changes rural households make when household income increases. Dunn and Arbuckle (2001) found no evidence of microcredit impact on spending in housing improvements. They suggest that “the growing availability of home improvement loan products may imply little additional impact from microenterprise credit.”

**Table 7: Impact of Microcredit on Housing Improvements**

Study	Country	Impact on Housing Improvements
McIntosh et al. (2011)	Guatemala	(+) (increase in the probability of housing improvement)
Dunn, E. and Arbuckle, G. (2001)	Peru	(no effect) (on spending on housing improvements)

## Education

There is evidence that microcredit may have a positive impact on children’s education. The four studies reviewed here that assess the impact of microcredit on education all found a positive and significant effect.

Maldonado and Gonzalez-Vega (2008) compared old MFI clients to new clients in rural Bolivia. They found that children of old clients have about half to a quarter of a year less of a schooling gap than children from new client households. Niño-Zarazúa and Mosley (2009) also found a positive effect on education: an increase in the amount of credit borrowed led to a decrease in the probability of children of microcredit clients dropping out of school.

Although both studies indicate that participation in a microcredit program significantly influences education outcomes, the impact is small.

In addition, the apparent positive effect has to be interpreted with caution, as some authors pointed out that this relationship is not always unequivocally positive. Becchetti and Conzo (2010), for instance, showed that microfinance generates positive effects on child schooling only when parent income is above a certain threshold. Wydick (1999) concluded that the overall positive impact of microcredit on education can be offset if hired labor may require intensive supervision, in which case families may prefer to use children’s labor.

**Table 8: Impact of Microcredit on Education**

Study	Country	Impact on Education
Becchetti, L. and Conzo, P. (2010)	Argentina	(+) (increase in child schooling)
Bruce Wydick (1999)	Guatemala	(+) (decrease in the probability of children’s dropout)
Maldonado, J. and Gonzalez-Vega, C. (2008)	Bolivia	(+) (decrease in schooling gap)
Niño-Zarazúa, M. and Mosley, P. (2009)	Mexico	(+) (decrease in the probability of children’s dropout)

<sup>4</sup> Schooling gap refers to the gap between actual and expected schooling outcomes (grade for age).

## Women's Empowerment

In the sample studies, there was no available evidence of microcredit's possible impact on women's empowerment. There was, however, one experiment that may shed light on a common concern among practitioners, i.e., that microcredit targeted at women may increase intra-household conflict<sup>5</sup>. An experiment conducted by [Allen et al. \(2010\)](#) in Peru allowed women to invite their husbands into their microfinance borrowing

group. By having the option to invite their husbands, women faced a trade-off between reducing household frictions on the one hand and a loss of autonomy over borrowing decisions on the other. The results indicated a very low take-up rate, suggesting that the value of autonomy for women outweighed any reduction in intra-household conflict.

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## 4.2. MICROCREDIT PLUS

Five evaluations included in this review measure the impact of "microcredit plus". Common examples of microcredit plus are business/financial training or health-education modules combined with credit. Of these evaluations, three used an experimental design, and two were quasi-experiments. Microcredit-plus programs take various forms -this section reviews the available evidence by type of outcome measured.

### Business Practices and Results

There is evidence that business and financial training may have a positive impact on business practices and outcomes. [Karlan and Valdivia \(2011\)](#) conducted a RCT measuring the marginal impact of adding business training to a group lending program for female entrepreneurs in Peru. Pre-existing lending groups were randomly assigned to either the treatment group (which received training) or to the control group (which received only credit). The authors measured the impact on a broad range of indicators, which included business results and business practices. In terms of business results; clients in the treatment group experienced an increase in sales and were able to reduce the downward fluctuations in their sales. No impact was found on the number of workers (family or hired) employed by the microenterprise or on the profit margins of businesses within the treatment group. When measuring impacts on business performance, they found statistically significant effects for the following indicators: keeping records of withdrawals from the business, an index of business knowledge questions, the proportion of treated businesses that invest profits back into the business, and implementation of

innovations in business. There was no evidence of impact on formal business registration, number of sales locations, level of diversification, allowing sales on credit, keeping records of payments to workers, starting a new business, proportion of clients who face problems with business, and proportion of clients who planned innovations in their business. Based on these results, the authors concluded that the business training program led to limited improvements in business knowledge, practices, and revenues.

A study by [Drexler et al. \(2010\)](#) assessed the impact of financial training on enterprise- and individual-level outcomes for micro-entrepreneurs in the Dominican Republic using a RCT. The evaluation also tested if the type of program determined the effectiveness of the training by randomly assigning existing microfinance clients to two different accounting training groups: one received a standard financial accounting training, and the other received training based on simple rules of thumb. There was no evidence of impact from a standard, fundamentals-based accounting training, but a simplified, rule-of-thumb training produced significant improvements in business practices and

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<sup>5</sup> *Intra-household conflict may arise if male household heads perceive their exclusion from microfinance as unfair and turn themselves against their female counterparts, or if women reduce the time they spend in household-related activities (Allen et al. 2010).*



outcomes. Specifically, individuals who received rule-of-thumb training were more likely to keep accounting records, calculate monthly revenues and separate their books for the business and the home. Additionally, they experienced large improvements in the level of sales during difficult weeks. This study found that the rule-of-thumb treatment had a larger effect on the business practices of those individuals who did not express an interest in the

training program. The financial accounting training had no impact in any of the business indicators. [Drexler et al. \(2010\)](#) clarified that the difference in outcomes observed when measuring the effect of both types of trainings could “stem from either the rule-of-thumb techniques being more effective once implemented or from individuals being more likely to implement these techniques, even conditional on understanding.”

**Table 9: Impact of Microcredit Plus on Business Practices and Results**

Study	Country	Impact
Dean Karlan and Martin Valdivia (2011)	Peru	(+/-no effect) (business results indicators) (+/-no effect) (business practices indicators)
Alejandro Drexler, Greg Fischer and Antoinette Schoar (2010)	Dominican Republic	(+) (of rule-of-thumb training on business practices and outcomes)

### Social Outcomes

[Karlan and Valdivia \(2011\)](#) also analyzed the impact of adding business training to group lending in Peru, with respect to empowerment in decision-making and child labor. They found no effect on changes in household decision making that could lead to female empowerment. They suggested that the lack of

impact may result from the fact that women who participated in the program were already operating a business and managing loans, and thus probably already exercised a great deal of influence within the household, limiting the potential impact of the program on indicators of empowerment. The authors also found no impact on use of child labor.

**Table 10: Impact of Microcredit Plus on Social Outcomes**

Study	Country	Impact on Social Outcomes
Dean Karlan and Martin Valdivia (2011)	Peru	(no effect) (household decision-making) (no effect) (child labor)

### Health Outcomes

Our sample included three studies that assess the impact of microcredit plus health education programs on health outcomes. [Hamad et al. \(2011\)](#) conducted a study in Peru that randomly assigned pre-existing loan groups to receive a health education module based on the World Health Organization’s Integrated Management of Childhood Illness (IMCI). As a result of the intervention, individuals in the treatment group demonstrated more knowledge about child health, but there were no changes in anthropometric measures or child health compared to the control.

The authors proposed a few explanations as to why increased parental knowledge did not translate into improved child-health outcomes. They believe that the IMCI component in isolation was not sufficient to promote health improvements, as the local healthcare infrastructure remained unchanged and possibly inadequate. Additionally, loan officers who carried out the education sessions expressed frustration from educating clients about information with which they were not very familiar, which also had an impact on the quality of the sessions being conducted. Based on these

findings, the authors questioned whether MFIs are a promising platform for delivering supplemental services and state that more rigorous evidence is needed.

McNelly and Dunford (1999) assessed the impact of a credit-with-education program in Bolivia that targeted women. They compared the difference in means between the baseline and follow-up outcomes for participants and nonparticipants in program communities, and residents in control communities. The results showed that credit-with-education services are associated with an increase in

income and savings, improvements in knowledge and practices concerning health and nutrition, and women’s empowerment in intra-household decision-making. Similarly to the findings of Hamad et al. (2011), McNelly and Dunford did not find an impact on the nutritional status of clients or clients’ children. A deeper analysis revealed that children’s nutritional status was positively associated with the quality of education services provided. Both studies also highlighted the fact that the quality of the educational services offered has a large impact on health outcomes.

**Table 11: Impact of Microcredit Plus Health Education Programs on Health Outcomes**

Study	Country	Impact on Education
Hamad et al. (2011)	Peru	(+) (increased knowledge about child health) (no effect) (anthropometric measures) (no effect) (child health status)
McNelly and Dunford (1999)	Bolivia	((+) (increased health knowledge and practice) (+) (increase in women’s empowerment) (no effect) (child health status)
Smith and Jain (1999)	Ecuador, Honduras	(-) (decrease in childhood diarrhea in Honduras) (+) (higher probability of cancer screening in Honduras) (no effect) (in any indicator in Ecuador)

Another study conducted by Smith and Jain (1999) in Ecuador and Honduras compared conventional village banking with HOPE’s health bank model to assess the impact of health education on children’s and women’s health. The evaluation compared participants in village banks receiving only microcredit to those receiving microcredit plus a health-education-and-services component. In Honduras, clients who had access to the additional health-education component

showed a decrease in childhood diarrhea and had a higher probability of undergoing cancer screening. In Ecuador, banking-only clients experienced a reduction in childhood diarrhea occurrence, but the authors found no difference in the incidence of clients who received the health-education component. The researchers concluded that the results support the additional health-education component in urban and peri-urban Honduras, but not for rural Ecuador.



## 4.3. SAVINGS

### *Savings Rates*

The database includes only one evaluation that assesses the impact of savings instruments on savings rates. A study conducted by **Aportela (1999)** evaluated the impact of increasing access to savings on the financial health of low-income clients. The evaluation was based on a natural experiment: the expansion of a Mexican savings institution, targeted to low-income people. As a result of the expansion, the average savings rate of affected households increased by more than 3 to almost 5 percentage points across regions. The effect was higher for the poorest households

(their savings rate increased by more than seven percentage points), and no effect was found on high-income households.

The study found no evidence to support the presence of crowding-out of informal savings instruments, which suggests that the observed increase in savings rates could have come from new savings. The evaluation focuses only on the impact of savings on savings rates. Thus, no evidence on the impact of savings on a broader range of socio-economic outcomes was identified.

## 4.4. NEW TECHNOLOGIES

### *Financial Education and Financial Practices*

Two studies evaluated the impact of adding an additional component on financial education and practices to a pre-existing microfinance service.

**Karlan et al. (2010)** analyzed the impact of adding a reminder component on savings practices to existing savings instruments.

The authors designed field experiments in Bolivia and Peru to test two theoretical predictions: "(i) reminders increase savings; and (ii) reminders mentioning a particular planned future expenditure will increase savings more than reminders that do not mention the expenditure."

Clients were randomly assigned to receive a monthly reminder via text message or letter, while a control group received no reminder.

The authors found that reminders increase saving, and are more effective when they highlight the importance of a specific expenditure.

Chong et al. (2010) evaluated the effect of an

innovative video and radio-based financial-literacy program on financial education in Peru.

Communal banks were randomly assigned to two different treatment groups one that received a financial education module with Information and Communication Technology (ICT) innovations, and the other, a financial education module with no ICT component.

A comparison group received education on other topics such as healthcare and self-esteem. The researchers found that the program had no impact on the treatment groups, and suggested that the lack of evidence could be partially attributed to low completion levels and partial compliance.

Due to the low program implementation levels, however, the evaluation could not draw any statistically significant conclusion about the impact of the financial education program or the value of adding specific ICT components.

**Table 12: Impact of New Technologies for Microfinance on Financial Education and Practices**

Study	Country	Impact
Karlan, D., McConnell, M., Mullainathan, S., Zinman, J. (2010)	Bolivia Peru	(+) (reminders increase savings)
Chong, A., Karlan, D., Valdivia, M. (2010)	Peru	(no effect) (video- and radio-based financial education)

## 5. Knowledge Gaps and Directions for Future Research

Certain knowledge gaps were identified based on the review of the impact evaluations included in this study. We highlight these knowledge gaps with the intent of providing direction to guide future research.

- 1** **Evaluations should consider the business models and practices of the MFIs that provide the products or services under study.** In general the studies reviewed briefly mentioned the specific characteristics of the financial services or products under study. The impact of the financial services also depends on the performance of the MFI and the particularities of the services or products offered. Only when microfinance is done right can we expect positive impact. In some cases, low impact or no impact could result from the product design.
- 2** **Compared to other regions in the world, microfinance in LAC has been under-studied. The provision of other financial products and services besides microcredit (such as savings) is even less studied.** Only 20 evaluations were included in this review, with the oldest conducted in 1999 and the majority of studies conducted in 2010 and 2011. Microfinance in LAC has unique characteristics that distinguish it from other regions in the world such as Asia and Africa. These characteristics should be taken into account in the studies. With only one study about savings and few on new technologies, the sector lacks evidence to determine how to improve the provision of other financial services. Several microfinance institutions in LAC are offering very innovative services/instruments. However, impact evaluations are not extensively tracking the expansion of these new products in the region.
- 3** **There is a need for a more in-depth understanding of the characteristics and needs of the microfinance client.** Clients are different not only from one country to another, but also within the same country. There are many client characteristics that should be taken into account for the provision of financial services, such as poverty levels, location, gender, occupation, etc. Evaluations should be designed to increase knowledge about client needs. Understanding how financial products or services impact different sectors of the population can be important to improve program design and effectiveness.

- 4 Existing evaluations do not focus on women.** It has been argued that by increasing female income, women are better able to position themselves and influence intra-household decisions and resource allocation. While microfinance in LAC is less female-targeted than in other parts of the world, such as Asia and Africa, women still account for a large proportion of total clients. It is thus surprising that there are so few evaluations conducted in LAC that focus on these services' impact on women. Future studies should determine, among other things, the extent to which microfinance leads to women's empowerment.
- 5 There is a lack of evidence of the macroeconomic effects of microfinance.** In some countries in the LAC region, the growth of the microfinance sector has been so robust that MFIs have been gradually integrated into the mainstream financial sector. Despite the growth and magnitude of microfinance in these countries, and despite its importance in academic and policy circles, quantitative evaluations of the impact of microfinance are scarce and almost exclusively limited to micro-evaluations.
- 6 Long-term effects of microfinance have not been studied.** The available evidence focuses on the impact of microfinance in the short term. It is possible that significant impacts on education, health, or women's empowerment emerge after a longer time, when the investment impacts have translated into higher total expenditure for more households.



## 6. Conclusion

The studies reviewed were conducted in different countries with different financial institutions following different methodologies. Since the results cannot be generalized, as they are highly dependent on context, characteristics of the financial product or service, practices of

the financial institution, methodology issues, and other factors, this paper does not make general conclusions about the impact of microfinance in the region.

However, in summary the available evidence shows:

- ▲ **Overall positive effects which seem to be dependent on the characteristics of potential clients and the constraints that they face.** Of all of the studies reviewed, most found that micro-financial products positively affected variables such as income, education, employment, and business performance. The extent to which potential clients can gain from microfinance seems to depend on their characteristics and the constraints they face. The initial level of an individual's income can be a determinant of a program's impact. When this occurs, there is a need to think carefully about the characteristics of the target population and to adapt financial products to best fit the needs of potential clients.
- ▲ **Importance of the quality and type of the non-financial services offered.** Some evaluations mentioned that the impact of non-financial products depends highly on the quality and the appropriateness of the product offered. Therefore, the ability of MFIs to deliver high-quality complementary services is an issue that could limit microfinance plus programs. Furthermore, the type of financial training program determines the effectiveness of the training. Drexler et al. (2010) found that there was no evidence of impact from a standard, fundamentals-based accounting training, but a simplified, rule-of-thumb training produced significant improvements in business practices and outcomes. The comparison of different types of programs for training applying impact evaluations techniques could help the sector to improve non-financial services.
- ▲ **Performance of the financial institution and differences in the services or products offered.** The role of MFIs is under-analyzed in most of the evaluations, despite the fact that they are the main actors delivering the products and services of interest. Good financial and social performance of these institutions is highly important, and may be the first step to ensure a positive impact on clients. The impact of a financial product or service also depends on the particularities of the products (e.g., term, interest rate, collateral, loan size, etc.). If the product is not adapted to the needs and repayment capacity of the individuals, then the impact of the product will have a higher probability of being negative rather than positive.
- ▲ **The majority of evaluations reviewed were conducted ex post facto, as most microfinance programs did not incorporate evaluation into their design.** Collecting data following the rollout of a program greatly complicates evaluation. It rules out randomization, and it makes it more difficult to defend the assumptions upon which quasi-experimental methods rest. In addition, data quality will often be higher if monitoring and evaluation are directly incorporated into programs from their earliest stages. The net result of focusing on ex-post evaluation is lower quality evidence.

Although the evidence is scarce, evaluations could generally benefit from more involvement by practitioners. Impact evaluations should serve as a tool for practitioners to help them understand the effects of the services and products that they provide. Without proper evaluations, MFIs will be unable to improve their financial products or tailor them to the needs of their clients.

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## Appendix I:

### Overview of Microfinance Impact Evaluations

Country	Authors (year)	Financial Product	Evaluation Objective	Data	Evaluation design / Method(s)	Outcome Variables(s)	Main Findings
<b>Argentina</b>	Leonardo Becchetti, Pierluigi Conzo (2010)	Microcredit	Assess the impact of microcredit on child schooling.	Final sample consists of 150 PROTAGONIZAR existing clients in treatment group; 150 non-clients in control group and former borrowers who dropped out from the program.	Quasi-experiment. Conducts a reconstruction of detailed time series from a cross sectional survey with retrospective data.	Child schooling	Microfinance generates positive effects on child schooling, but only when parent income is above a certain threshold.
<b>Bolivia, Peru<sup>6</sup></b>	Dean Karlan, Margaret McConnell, Sendhil Mullainathan, Jonathan Zinman (2010)	New Technologies	Test the author's model predictions about reminders in field experiments.	Total sample for Bolivia included 9,652 observations and total sample for Peru included 2,968 observations.	Randomized experiment. Randomly assigned clients from CAJA DE ICA (Peru) and ECOFUTURO (Bolivia) to receive to receive a monthly reminder via text message or letter, while a control group received no reminder.	Savings rates	Reminders may increase saving, and will be more effective when they increase the salience of a specific expenditure.

<sup>6</sup> The evaluation also included one experiment in Philippines. However, as the focus of the present research relies on Latin America and the Caribbean, only results for Bolivia and Peru are reported.



Country	Authors (year)	Financial Product	Evaluation Objective	Data	Evaluation design / Method(s)	Outcome Variables(s)	Main Findings
<b>Bolivia</b>	Jorge H. Maldonado, Claudio Gonzalez-Vega (2008)	Microcredit	Evaluate the impact of microcredit on human capital by looking at children at children schooling gap.	Municipality of Batallas: sample includes 130 households CRECER clients in five departments: sample includes 427 households.	Quasi-experiment. Compares old clients, with more than one year in the program, to new clients with one year or less of participation.	Schooling gap	Children of old clients have about half a year (in the case of Batallas) or a quarter of a year (in the case of CRECER) less schooling gap than children from new client households.
<b>Bolivia</b>	Paul Mosley (2001)	Microcredit	Assess the impact of microcredit on poverty using a range of poverty indicators, such as income, assets and measures of vulnerability.	BANCO SOL: 45 randomly chosen borrowers PRODEM; SARTAWI; PROMUJER: between 15 and 40 borrowers randomly chosen.	Quasi-experiment. The control group is formed by accepted borrowers who had not taken a loan. Uses test to calculate the difference in means between control and treatment.	Income Asset holdings and diversity Management quality Response to risk	Positive impacts on income and asset levels. Poor households choose to invest in low risk, low-return assets. Microfinance may augment vulnerability.
<b>Bolivia</b>	Barbara McNelly, Christopher Dunford (1999)	Microcredit plus	Test hypotheses of positive program impact on children's nutritional status and on mothers' economic capacity, empowerment and adoption of key child survival health/nutritional practices.	Baseline data collected in 1994/1995 included 77 baseline participants of CRECER, 80 baseline non-participants and 93 residents in control communities. Follow up data included 71 participants, 86 non-participants, 96 residents in control communities.	Quasi-experiment. Program impact is evaluated by comparing the difference between the baseline and follow-up results for participants and nonparticipants in program communities and residents in control communities.	Children's nutritional status Mothers' economic capacity Empowerment Adoption of key health/nutrition practices	Credit with education can increase income and savings, improve health/nutrition knowledge and practice, and empower women. No impact on the nutritional status of clients.

Country	Authors (year)	Financial Product	Evaluation Objective	Data	Evaluation design / Method(s)	Outcome Variables(s)	Main Findings
Brazil, Chile	Patricio Aroca, Geoffrey J.D. Hewing (2009)	Microcredit	Assess the effects of providing microcredit on individuals' income	Brazil: 198 individuals in the treatment group (from MICROCRED, SOCIALCRED, CEAPE and BANCRI) and 34,887 in the control group from PNAD (Brazilian National Survey on Households) Chile: 81 individuals in treatment group (from BANDESARROLLO and PROPEAS) and 715 in control group from CASEN (the Chilean survey of national socio-economic characterization)	Quasi-experiment. Uses propensity score matching	Income	Brazil: a high positive impact of microcredit programs on income, especially for those administered by banks. Chile: negative impact of NGO based microcredit programs on income.
Dominican Republic	Alejandro Drexler, Greg Fischer, Antoinette Schoar (2010)	Microcredit plus	Assess the impact of financial training on firm level and individual outcomes for micro-entrepreneurs	The sample consisted of 1,193 existing ADOPEM business or personal clients; 402 were assigned to accounting treatment, 404 to the rule of thumb treatment and 387 to control group.	Randomized experiment. Randomly assigned ADOPEM clients to two accounting training treatment groups or a control group	Business practices Business performance Personal outcomes Personal financial practices	No significant effect from a standard, fundamentals-based accounting training. A simplified, rule-of-thumb training produced significant improvements in business practices and outcomes



Country	Authors (year)	Financial Product	Evaluation Objective	Data	Evaluation design / Method(s)	Outcome Variables(s)	Main Findings
<b>Ecuador, Honduras</b>	Stephen C. Smith, Sanjay Jain (1999)	Microcredit plus	Assess the impact of Project HOPE's Village Banks on child and women's health	Sample includes a total of 981 observations for Honduras and 963 for Ecuador.	Quasi-experiment: Compares participants in village banks both with and without a health education and services component.	Different indicators for child health Different indicators for women's health Expenditures	Honduras: Decreased in childhood diarrhea and higher probability of cancer screening for clients who received an additional health education component. Ecuador: Banking-only clients experienced a reduction in childhood diarrhea but find no difference in incidence for clients who received health education.
<b>Guatemala<sup>7</sup></b>	Craig McIntosh, Gonzalo Villaran, Bruce Wydick (2008)	Microcredit	Examines housing improvements and purchases of large consumer durables among households who gained access to microcredit.	Sample includes 262 households surveyed in 2005 and 2007 in partnership with FE Y ALEGRIA	Quasi-experimental. RETRAFACT methodology: creates a retrospective panel data based on "fundamental" events in the history of surveyed households. Uses a linear probability model with village level fixed effects.	Housing improvements	Probability of housing improvement has increased after credit provision in the village.
<b>Guatemala</b>	Bruce Wydick (1999)	Microcredit	Analyzes how access to credit by household enterprises can affect the child-schooling decision.	Sample consists of 236 clients of FUNDAP.	Quasi-experiment: Uses an instrumental variable approach: carry a two-stage estimation, first using exogenous instruments to obtain estimated values for credit access and then using estimated values to ascertain program impact.	Probability of a child being withdrawn from school	Overall access to credit increases investment in children schooling. Potential to moral hazard exists within household's enterprises, families may prefer to use children's labor.

**7** The evaluation also assesses the impact of access to credit on housing improvements in Ghana and India. However, as the focus of the present research relies on Latin America and the Caribbean, only results for Guatemala are reported.

Country	Authors (year)	Financial Product	Evaluation Objective	Data	Evaluation design / Method(s)	Outcome Variables(s)	Main Findings
<b>Mexico</b>	Claudia Ruiz (2010)	Microcredit	Examines the effects of relaxing credit constraints on households' saving and credit choices.	Sample consists of 3,483 households in municipalities with BANCO AZTECA and 2,156 households in municipalities without BANCO AZTECA. Total of 136 municipalities.	Natural experiment. Uses difference-in-difference estimators.	Savings rates Consumption (household owns physical possessions) Consumption smoothing	As a result of the entrance of BANCO AZTECA, households were better able to smooth their consumption and on average accumulate more durable goods. Poorest households experienced a decline in savings rates.
<b>Mexico</b>	Miriam Bruhn, Inessa Love (2009)	Microcredit	Examines the effects of providing financial services to low-income individuals on entrepreneurial activity, employment, and income.	Final sample includes 576 municipalities, of which 249 had a BANCO AZTECA branch and 327 did not.	Natural experiment. Uses difference-in-difference estimators.	Informal business owners Employment Income	The opening of BANCO AZTECA led to an increase in the number of informal business owners by 7.6 percent. Total employment also increased, by 1.4 percent, and average income went up by about 7 percent.
<b>Mexico</b>	Miguel Niño-Zarazúa, Paul Mosley (2009)	Microcredit	Assess the impact of microcredit on labor and human capital.	Includes 148 households where three organizations operate: FINCOMUN, CAME, PROMUJER.	Quasi-experimental. Employ different equivalence scales to measure intra-household impact. Uses instrumental variable and Heckman procedure to test for endogeneity and self-selection.	Labor expenditure Child Schooling	No direct impact of credit on labor expenditure Increase in household income leads to increase in labor expenditure Participation in a microcredit program has a significant impact, although small, on the probability of children's dropout.

Country	Authors (year)	Financial Product	Evaluation Objective	Data	Evaluation design / Method(s)	Outcome Variables(s)	Main Findings
<b>Mexico</b>	Miguel Niño-Zarazúa (2007)	Microcredit	Assess the impact of credit on income poverty.	Includes 148 households where three organizations operate: FINCOMUN, CAME, PROMUJER.	Quasi-experimental. Employ different equivalence scales to measure intra-household impact. Uses instrumental variable and Heckman procedure to test for endogeneity and self-selection.	Income Poverty	FINCOMUN: small poverty impacts at the upper limits of the poverty line, where the moderate poor are located. CAME and PROMUJER: reduce poverty gap but report insignificant impact on overall incidence.
<b>Mexico</b>	Aportela (1999)	Savings	The paper assesses the impact of increasing access to savings instruments on low-income people savings.	1992 and 1994 National Surveys of Income and Expenditures. The 1992 survey includes observations of 10,530 households; the 1994 survey has 12,815 households.	Natural experiment. Uses the expansion of a Mexican savings institute (PAHNAL), targeted to low-income people, as a natural experiment.	Savings rates	Expansion increased the average saving rate of affected households by more than 3 to almost 5 percentage points. The effect was higher for the poorest (their saving rate increased by more than 7 percentage points) and had no effect on high-income households.

Country	Authors (year)	Financial Product	Evaluation Objective	Data	Evaluation design / Method(s)	Outcome Variables(s)	Main Findings
<b>Nicaragua</b>	Arianna Legovini (2003)	Microcredit	Evaluate the impact of microcredit on poverty, household well-being and business outcomes.	Panel data from EMNV survey. The 1998 survey includes observations of 5,352 households; the 2001 survey has 4,191 households. The author uses 2,994 observations from the panel.	Quasi-experiment. Uses propensity score matching.	Consumption per capita Income per capita Assets Number of employees Business outcomes Poverty	On average, microcredit has a significant positive effect on household well-being and business outcome. A heterogeneity-of-impact analysis reveals that households in the poorest deciles are in worst condition after the intervention and the richest deciles in better condition.
<b>Peru</b>	Rita Hamad, Lia CH Fernald, Dean Karlan (2011)	Assess the impact of health education for microcredit clients.	Assess the impact of health education for microcredit clients.	Baseline data collected in Feb 2007 from PRISMA clients (n = 1,855) and their children (n = 598). Follow-up collected in Feb 2008.	Randomized experiment. Uses multivariate regressions – ordinary least squares (first-difference estimator).	Caregiver health knowledge Child anthropometric measures Reported child health status	Individuals in the treatment group demonstrated more knowledge about child health, but there were no changes in anthropometric measures or child health status.
<b>Peru</b>	Dean Karlan, Martin Valdivia (2011)	Microcredit plus	Measure the marginal impact of adding business training to a group lending program for female micro-entrepreneurs.	Baseline data collected from FINCA Ayacucho (n=3,265) and in Lima (n=1,326). Follow-up data was collected before the ending of the training.	Randomized experiment. Uses a difference-in-difference estimator.	Institutional outcomes Business results Business practices Empowerment in decision-making Child labor	Clients increased business income by smoothing fluctuations between good and bad periods Clients engaged in the activities taught in the program.



Country	Authors (year)	Financial Product	Evaluation Objective	Data	Evaluation design / Method(s)	Outcome Variables(s)	Main Findings
<b>Peru</b>	Alberto Chong Dean Karlan, Martin Valdivia (2010)	New Technologies	Evaluate the effect of an ICT-based financial literacy education program that follows best practices on financial literacy and financial behavior.	666 ARAPIWA's selected banks were used to determine the administrative sample frame and survey sample frame.  The sample included 4991 clients in the treatment group.	Randomized experiment.	Savings rates Repayment rates Retention rates	The program has no impact on the intended to treat, which can be partially attributed to low completion levels.
<b>Peru</b>	Elizabeth Dunn, J. Gordon Arbuckle (2001)	Microcredit	Assess the impact of microcredit at enterprise, household, and individual levels.	The 1997 baseline survey included 701 households, with the 1999 survey resulting in a sample of 529 households: 305 in the treatment group; 175 in the control group; and 38 in the new entrant group.  Data from existing clients comes from ACCION COMUNI-TARIA DE PERU (currently MIBANCO).	Quasi-experiment. Compares clients of ACP/MIBANCO with a group of non-clients with similar characteristics.  Uses an analysis of covariance (ANCOVA) to measure impact.	A range of indicators at enterprise, household, and individual levels.	Find positive impacts on microenterprises, including positive impacts on enterprise revenue, fixed assets, employment, transaction relationships, formalization, household income and diversification of income.  Microcredit was associated with reductions in household expenditures and with the probability of coping with shocks by selling productive assets.



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