Research Proposal for PEP Research Network

BUSINESS DEVELOPMENT SERVICES FOR FEMALE MICROFINANCE CLIENTS IN PERU: A RANDOMIZED IMPACT EVALUATION

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Marcos Gonzales
Maggie McConnell
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1. **Abstract**

The microfinance sector grew substantially over the past two decades with the hope of helping reduce poverty. Now, it is increasingly clear that the microfinance revolution may not be enough for the task and additional innovations are required, probably with the incorporation of other services. Our study analyzes the potential for joining microfinance and business development services to the benefit of poor female microentrepreneurs in marginal urban and rural Peru. We do that through a randomized experiment on clients of village banks. We will be able to explore the effect of the intervention on different measures of the sustainability of the banks as well as on the growth of the businesses and the welfare of the clients. The last step will be to make policy recommendations based on discussions of the results with experts in the field as well as local practitioners.

2. **Main Research Questions and Objectives**

Non-regulated MFIs provide a marginal percentage of the credit supply in Peru, but they fill important gaps when reaching the most excluded populations. While regulated MFIs have a portfolio of approximately $970 million with 1.3 million loans, non-regulated MFIs, most of them NGOs, only concentrate $16.2 million and almost 94 thousand loans.

The most popular credit methodology within NGOs is village banking. Most of the Peruvian NGOs using this model are grouped under the *Mesa Interinstitucional de Bancos*
Comunales,\(^1\), which as of June 2003, accounted for more than 71,000 clients (grouped in 4,306 banks) and 63% of the total loan portfolio of non-regulated MFIs.

An important factor in the expansion of NGOs over the past decade was their tendency towards specialization. However, empirical evidence has shown that poverty alleviation objectives could best be tackled by combining financial services with other services that address additional constraints such as the lack of managerial capabilities.

In Peru, no organizations exist that offer adequate BDS training for the population under study and no such services exist in conjunction with microfinance services whatsoever.\(^2\) However, we can identify some evidence of the need for managerial knowledge. A previous exploratory study done with various FINCA Peru employees identified the need for having a business development training component incorporated into FINCA Peru’s village banking framework.

This preliminary evidence motivated the intervention that this project will analyze. The principal objective of the study is to complete a rigorous impact evaluation of complementing financial services offered by village banks with BDS training. The impact will be measured by changes at the individual, institutional, and market levels. Furthermore, the impact study will be complemented by the cost-benefit analysis of the intervention to see if an expansion can be recommended.

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\(^1\) The *Mesa Interinstitucional de Bancos Comunales* is a cooperation network of MFIs working with village banking methodology, in which FINCA Peru participates.

\(^2\) There are only some business development products being offered in Lima’s north and south cones, but only 11% of the clients in the baseline survey for Lima have previously attended to a BDS training program.
Additionally, the proposed study will analyze the nature of the demand of BDS by microfinance clients. In Ayacucho, two treatment groups have been defined with different levels of compulsion. The distinction between both groups will allow us to analyze the level of demand for the BDS, while identifying those individuals that opt to continue with the training even when they could decide not to. Also, evidence will be gathered on changes in demand for the BDS training in the localities of the intervention, since this would be an indicator of what may be expected as general equilibrium effects. It will also be observed whether other lenders in Ayacucho and Lima change their offerings in response to the FINCA program, as this is another dimension of any general equilibrium effect. Having said that, the research team perceives the partial equilibrium program evaluation as an underestimate on the general equilibrium effects one would expect, since the program is raising the level of human capital of a subset this should increase productivity of microentrepreneurs and efficiency of the lending operation.

3. Scientific Contribution

Development literature has clearly underlined the potential for reducing poverty through well-managed microfinance programs. Yet, existing programs and institutions have largely failed to satisfy even their basic objective of poverty alleviation. Morduch (1998), for example, analyzes the impact of the much-lauded Grameen Bank on its clients and finds that the credit program improved the ability of the individuals to smooth their consumption levels in the face of income fluctuations, but that the program did not help its clients escape poverty. Dealing more specifically with village banks, Painter and McKnelly (1999) demonstrate that loans from MFIs to village banks have not increased at the rate anticipated
by the models developed to support the creation of those MFIs. In part, this is because microentrepreneurs in village banks quickly reach limits to the growth of their businesses or that they may prefer to take out loans from their own savings. In any case, this limits the sustainability of MFIs that promote and support village banks.

Many MFIs that coordinate financial services have been under pressure from staff concerned with institutional sustainability and from members concerned with improved services, to innovate new savings and credit mechanisms. Proposed innovations include complementing financial services with health insurance, technical assistance or business services. Still, many agencies, especially large and well-established ones, distrust this mixing of objectives and the policy changes it implies. The resulting divergence of opinion makes it particularly relevant to evaluate this program, given the 15 year trajectory of FINCA Peru which makes it one of the most influential MFIs in Peru.

4. **Policy Relevance**

To our knowledge, there is no study that clearly demonstrates how to offer BDS such that they are financially sustainable and sufficiently beneficial to the clients of MFIs to raise the probability that they will rise above the poverty line. Evaluations available from Freedom From Hunger show positive impacts of their Credit with Education approach, which combines business and health education, but do not isolate the impact of BDS services for clients.

Even though the portion of the market in which the project takes place is relatively small within the microfinance context, this project is meant to be a pilot with a Peruvian
MFI which, when appropriately evaluated, will allow us to establish the conditions for success in such an intervention and the possibilities for replication with other groups, in other zones, on a larger scale.

MFIs looking to implement a similar program and grant-making organizations interested in donating to a business training intervention will be keenly interested both in the impact analysis and in the associated costs and financial sustainability of business training interventions.

Moreover, the experimental design of the impact evaluation is one of the few experiences of this kind in Peru. The hope is that the success of the intervention and this study will serve as a model for future experiences.

5. Methodology

The project started with the design and implementation of the training materials. To ensure the highest quality of the BDS intervention, we looked for the support of organizations considered to be experts in the development of business management training materials for adults. Taking into account the differences in literacy of members in Lima and Ayacucho, we developed two different sets of materials.

In Lima the development and implementation of training materials was done by Attinchik, a firm specialized in the creation of training materials for adults and with vast experience working with international organizations like the World Bank. On the other hand, the development of the materials for Ayacucho was left to Freedom from Hunger, a well-known international firm with vast experience in the development of training materials.
for illiterate adults. Working with independent local partners, Freedom from Hunger provides training in microfinance products, MFI capacity building, and adult education in health and business development. In both cases, the adaptation of materials included significant participation by FINCA and GRADE.

The business training was delivered by the bank’s promoters before or after the periodical meetings. They received 4 months of training before that. In the Ayacucho region, where many of the clients do not speak Spanish, but Quechua, the promoters worked jointly in identifying the proper words in Quechua for the concepts included in the materials.

Bank clients meet every week in Ayacucho (every two weeks in Lima) during the working period (cycle of 4-6 months) to deal with their credit and savings operations. Training started gradually as treatment banks begun a new cycle. Thus, in Lima, the course started in October 2002 for those treatment banks that were starting a new cycle during that month, and continued that way until April 2003. The baseline survey was also planned to go gradually, applying it the month previous to the beginning of the training, at least for the clients in the treatment group. In Lima the baseline survey was applied between October 2002 and May 2003. In Ayacucho, the corresponding period was March to September 2003.

In Lima, 65% of the banks have completed 70% or more of the training program. However, due to the frequency of the meetings, the training has progressed faster in Ayacucho. Therefore, the exit survey was applied earlier (November 2004), and is currently
in its final phase. In the case of Lima, the exit survey is going to be conducted by early June 2005.

About the Experimental Design and the Impact Analysis

The impact evaluation of combining BDS with microfinance services is based in an experimental design that randomly assigns the banks to control and treatment groups. In the case of Lima, treatment groups have been receiving mandatory training for all bank members, while clients in the control group of banks do not receive any type of training during the first phase of the project. In Ayacucho, three distinct groups have been defined: one control and two experimental. One treatment group consists of banks where members are required to stay and receive the training while the other treatment group consists of banks where training is offered but members need not stay for it.

In general, one of the most commonly used indicators for measuring the impact of an intervention program on a determined variable is the double difference, obtained from comparing changes in the objective variables between treatment and control groups. The inclusion of control groups is necessary because changes due to the intervention occur as time goes by, and additional changes not connected directly to the implementation of the program could take place. The principal challenge to the double difference estimator is demonstrating that the control group is effectively equivalent to the treatment group except for the fact that it hasn’t been affected by the program. One common problem is the danger of selection bias associated with the participation of the individuals in a determined
program, because participation is associated with unobservable characteristics in individuals (innate ability, pre-existing conditions, etc.) that can bias the results.

However, the randomized nature of the selection of control and treatment groups in this intervention controls for this. Banks were assigned to control and treatment groups through a multi-stage randomization that took into account key observable characteristics (repayment rate, average loan size, and average savings)\(^3\). In this sense, the results shown in Table 1 confirm similarities for these variables while also shows that randomization also worked for other observable variables such as average age and education of the clients. Therefore, an evaluation of the impact of the training can be done by comparing the control and treatment groups through a follow-up survey of the same people initially surveyed. Any statistical differences in the objective variables are likely the results of the treatment.

Several measures were undertaken to reduce the risk of biases in the implementation, especially from promoters. As long as these women have been directly working with the members of the banks for a long time, they have developed a personal relationship with the members. In this sense, the greater concern was that promoters extended the training to clients of control groups. The promoters were initially hesitant to cooperate with a program that prohibited them from training everyone, but major efforts were made to gain their full support. They now understand that the only way to know if the training is valuable is by maintaining a binary of good training or no training.

\(^3\) The research team was responsible for conducting the randomization and assigning the groups to treatment or control. The research team also has conducted ongoing internal control monitoring for the past year and a half to observe that the experimental protocols were adhered to (and the results indicate that they were indeed maintained).
Table 1: Differences between clients in Lima and Ayacucho, before the program of intervention

<table>
<thead>
<tr>
<th></th>
<th>Treatment</th>
<th>Control</th>
<th>Difference</th>
<th>T-stat</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Duration in FINCA (Cycles)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lima</td>
<td>5.2</td>
<td>5.2</td>
<td>0.0</td>
<td>0.03</td>
</tr>
<tr>
<td>Ayacucho</td>
<td>6.0</td>
<td>5.8</td>
<td>-0.2</td>
<td>-1.22</td>
</tr>
<tr>
<td><strong>Years of Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lima</td>
<td>3.7</td>
<td>3.7</td>
<td>0.0</td>
<td>-0.05</td>
</tr>
<tr>
<td>Ayacucho</td>
<td>2.8</td>
<td>2.9</td>
<td>0.1</td>
<td>1.07</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lima</td>
<td>42.2</td>
<td>42.0</td>
<td>-0.3</td>
<td>-0.44</td>
</tr>
<tr>
<td>Ayacucho</td>
<td>37.5</td>
<td>37.9</td>
<td>0.4</td>
<td>0.92</td>
</tr>
<tr>
<td><strong>Loan Size from Ext Account a/</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lima</td>
<td>293</td>
<td>308</td>
<td>15</td>
<td>1.09</td>
</tr>
<tr>
<td>Ayacucho</td>
<td>173</td>
<td>167</td>
<td>-6</td>
<td>-0.85</td>
</tr>
<tr>
<td><strong>Accumulated Savings a/ b/</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lima</td>
<td>212</td>
<td>206</td>
<td>-7</td>
<td>-0.56</td>
</tr>
<tr>
<td>Ayacucho</td>
<td>356</td>
<td>369</td>
<td>12</td>
<td>0.81</td>
</tr>
<tr>
<td><strong>Default Rate b/</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lima</td>
<td>4.0%</td>
<td>3.3%</td>
<td>-0.7%</td>
<td>-0.63</td>
</tr>
<tr>
<td>Ayacucho</td>
<td>0.7%</td>
<td>0.7%</td>
<td>-0.0%</td>
<td>-0.13</td>
</tr>
<tr>
<td><strong>Exit Rate b/</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lima</td>
<td>22.5%</td>
<td>23.3%</td>
<td>0.8%</td>
<td>0.37</td>
</tr>
<tr>
<td>Ayacucho</td>
<td>22.8%</td>
<td>23.4%</td>
<td>0.7%</td>
<td>0.47</td>
</tr>
</tbody>
</table>

Source: FINCA Peru database. Averages were calculated for the cycle before the BDS program started.

a/ In US $.

b/ At the end of the cycle

A secondary potential source of bias is the transmission of training material by word of mouth from members in treatment groups to members in control groups. It is impossible to completely control this manner of diffusion, but our baseline and exit surveys are designed to collect all possible information about family networks of FINCA members. We hope to correct the bias as much as possible insofar as the statistical analysis is concerned.
Impact will be measured by changes at the individual (business and household), institutional and market levels:

i. **Client’s business results and practices:** Sales of the business and improvements/changes/innovations (increased variety of products or services, improvement of the presentation of the store/product/service, increased stocks, promotions/sales/gifts, seasonal supply, better treat to clients).

ii. **Welfare of the clients:** bargaining power of the female client within the household, and saving habits.

iii. **Sustainability of the banks:** Loan size, savings, default and dropout rates.

Additionally, to test whether our intervention design is a viable model, we will conduct a cost-benefit analysis, having in mind that the benefits include the positive impacts demonstrated at the individual, institutional and market levels.

6. **Data Requirements and Sources**

This project is currently in the final data collection phase. One of the advantages of the study is that it does not have to rely on questionable sources of data. As indicated above, we have applied a baseline survey and are in the process of applying the follow up survey in both localities, Ayacucho and Lima.

The baseline survey database includes 100% of the members involved in the study from 99 banks (1,326 clients) in Lima and 140 banks (3,265 clients) in Ayacucho. It collects information about individual, household, and business characteristics as well as information on the businesses run by other members of the household. Financial
information on each member on savings, loan size, and repayment will be collected from FINCA’s institutional database.

7. **Dissemination Strategy**

The hope of those involved with this study is that there will be successful replication of the project design on a larger scale. To achieve this goal, the results of the study must be made available and distributed to a wide and diverse audience of academics, policy-makers, and potentially less-educated staff members of local institutions and organizations. To target as many audiences as possible, the research team will produce a technical working paper as well as a less technical presentation of findings upon completion of the data analysis stage.

Upon completion of the study, a technical paper detailing the statistical significance of the training on various variables will be drafted. This paper will be published as a working paper in GRADE and Princeton University. Availability on the web will allow researchers the world over to provide comments on the further improvement and development of the methodology for future impact analyses.

Moreover, GRADE’s institutional visibility will greatly increase the circulation of the results in Peru. As the most widely-respected development think-tank in the country, GRADE has links to numerous government ministries and a number of local NGOs. Therefore, a paper focusing on policy recommendations will be drafted and developed as a presentation. Using GRADE’s connections, this presentation will be taken to government institutions and NGOs alike in a seminar style.
All drafts would later be developed into a paper that would be published in a peer-reviewed journal, and the policy recommendations would be extended beyond the local environment to the worldwide development community.

8. **List of Team Members:**

This project counts with four team members:

i) **Verónica Frisancho**

*Age:* 23 (under 30)

*Sex:* Female

*Prior Training/Experience:*


- Tuition award. Attended the course “Population and Development with Emphasis on Reproductive Health”. Asociados para la Población y el Desarrollo (PARTNERS), Hidalgo, México, May 2003.

- Research experience with poverty issues at university. The bachelor paper assessed the impact of income fluctuations on child nutrition and the importance of social protection networks as a mechanism of consumption smoothing for Peruvian families.

- Research experience at GRADE since 2000, in the Health, Nutrition and Human Development Area. Expertise in database management (household surveys, census, among others) and in econometric tools such as linear regression, probit models, survival analysis, panel data, etc. Also experience in survey instrument design, surveyor training and data collection due to the work on the past baseline surveys in Lima and Ayacucho and the on-going exit surveys.
ii) Maggie McConnell

Age: 23 (under 30)

Sex: Female

Prior Training/Experience:

- Research assistant at the Federal Reserve Bank of New York
- Program Manager for a micro-credit project involving a new sponsor-based credit program designed to capture the benefits of trust as social capital.
- Coordinating impact evaluation with FINCA-Peru’s local headquarters.

iii) Marcos Gonzales

Age: 22 (under 30)

Sex: Male

Prior Training/Experience:

- Previous stint as a research assistant with FINRURAL, a Bolivian NGO that conducts impact analyses in the La Paz region.
- Undergraduate senior thesis at Princeton University dealt with an impact analysis of Pro Mujer-Bolivia’s empowerment programs.
- Deeply involvement in the monitoring of FINCA-Peru’s progress with the training modules. Maintaining databases of progress by village bank and by attendance of each bank member.
iv) **Martin Valdivia (Advising senior researcher)**

Age: 42

Sex: Male

_Prior Training/Experience:_

- Grupo de Análisis para el Desarrollo (GRADE), Lima, Peru: Senior Researcher since 1993. Areas of interest: Poverty and social inequality, Microeconometrics, Rural Development, Health Economics.
- International Society for Equity in Health (ISEQH): Board Member (2004-2006)
- Partnership for Health Equity in Peru: General Coordinator since 2002
- Health Equity Gauges Initiative, Rockefeller Foundation: Advisory Committee on Measurement Issues since 2001
- Centro de Investigación y Docencia Económicas (CIDE), División de Economía, Mexico D.F.: Professor-Researcher and Academic Director of the Master in Health Economics (2000)

_Recent International Seminars, Workshops And Conferences:_

9. **Research Capacity Development & Division of Labor**

If the intervention has a positive impact at a reasonable cost, we expect the combination of BDS and microfinances services to be expanded within FINCA and also adopted by other MFIs. Moreover, as a consequence of this particular intervention, FINCA Peru’s staff has become familiar with the notion of trying innovation with careful design so that an impact evaluation can help learn about its implications. In that sense, we hope FINCA will follow similar procedures for future innovations. But the FINCA experience will be shared with other MFIs and other NGOs, so we can expect that such institutions may get interested in following the same kind of innovation approach. Actually, this diffusion is already happening as we are already working with the network of village banks in another study that seeks to evaluate the impact of the development of credit bureaus on the microfinance sector.

_The division of the labor between all project members will be as follows:_

1. Monitoring of the Continuing Training and Status of the Village Banks (Marcos Gonzales - MG)

   (Verónica Frisancho Robles - VFR & MG)

3. Processing of Institutional Information. (VFR, MG, & Maggie McConnell - MM)

4. Processing of Follow-Up Survey Data. (VFR, MG, & MM)
5. Analysis of all Databases. (VFR & MM)

6. Analysis and Discussion of Results. (VFR, MG, MM, & Martin Valdivia - MV)


8. Preparation of Final Document. (VFR, MG, MM & MV)

We should note that Martin Valdivia, as the senior researcher, will serve in an advisory role throughout all phases of the project. However, his direct input will be counted on more heavily in the latter stages.

A timeline for the progress of all project work is detailed below by month:

<table>
<thead>
<tr>
<th>Work Timeline</th>
<th>Months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>1. Continual Monitoring</td>
<td>x x x x x x x</td>
</tr>
<tr>
<td>2. Follow-Up Survey</td>
<td>x x x</td>
</tr>
<tr>
<td>3. Processing of Institutional Information</td>
<td>x x</td>
</tr>
<tr>
<td>4. Processing of Follow-Up Survey Data</td>
<td>x x</td>
</tr>
<tr>
<td>5. Analysis of Databases</td>
<td>x x</td>
</tr>
<tr>
<td>5.1 Institutions Database</td>
<td>x x</td>
</tr>
<tr>
<td>5.2 Follow-Up Survey Database</td>
<td>x x x</td>
</tr>
<tr>
<td>6. Analysis and Discussion of Results</td>
<td>x</td>
</tr>
<tr>
<td>Preliminary Results</td>
<td>x</td>
</tr>
<tr>
<td>7. Evaluation of Policy Recommendations</td>
<td>x</td>
</tr>
<tr>
<td>8. Preparation of Final Document</td>
<td>x x</td>
</tr>
</tbody>
</table>
10. **Ethical, Social, Gender, or Environmental Issues or Risks**

Since this study targets women entrepreneurs, the results may not be applicable to male entrepreneurs with otherwise similar characteristics. While most of the material being used is gender-neutral, some aspects certainly deal more closely with the reality that women face in Latin America. Although the study will produce results that will be useful to the international community, the results cannot necessarily be extrapolated for, or directly applied to, other populations.

Another issue is the morality of maintaining a control group. FINCA Peru was initially highly resistant to running a study with a control group. The administrators and the staff felt that it was wrong to deny the women an opportunity to improve their businesses results and their household conditions purely for the purposes of maintaining a rigorous statistical experimental design. Once the long-term goal of promulgating efficient combination of microfinance and business development services for the poor was agreed by all parties, FINCA Peru accepted to randomly choose treatment groups as to allow a rigorous analysis of the impact of the BDS program.

11. **Past, Current, or Pending Projects in Related Areas Involving Team Members**

1) **Project Name:** Today for you... tomorrow for me? The restrictive effect of intergenerational transfers on provisional savings in Peru

   - Funding Institution: The Consortium of Economic and Social Research (CIES) and the International Development Research Centre (IDRC).
   - List of Team Members Involved: Verónica Frisancho
   - Status: Ongoing
2) Project Name: Business Development Services for Female-owned Microenterprises in Communal Banks: An Impact Evaluation
   - Funding Institution: Niles Foundation
   - List of Team Members Involved: Verónica Frisancho, Martín Valdivia
   - Status: Ongoing

3) Project Name: Credit Reporting Bureaus and the Deepening of Financial Services for the Rural Poor in Latin America
   - Funding Institution: BASIS project
   - List of Team Members Involved: Verónica Frisancho, Martín Valdivia
   - Status: Ongoing

4) Project Name: Microentrepreneurs and the Decisions They Make Regarding Access to Credit in Various Risk Scenarios
   - Funding Institution: Princeton University
   - List of Team Members Involved: Marcos Gonzales, Martin Valdivia
   - Status: Ongoing

5) Project Name: Trust in Social Networks
   - Funding Institution: Russell Sage Foundation
   - List of Team Members Involved: Maggie McConnell
   - Status: Ongoing

6) Project Name: The Relationship between Fertility and Investment in Human Capital as a Determinant of Intergenerational Transmission of Poverty
   - Funding Institution: Research Center of Universidad del Pacífico (CIUP)
   - List of Team Members Involved: Verónica Frisancho
   - Status: Past

7) Project Name: Child Health, Poverty and the Role of Social Policies in Peru
   - Funding Institution: IADB Regional Research Network
   - List of Team Members Involved: Verónica Frisancho, Martín Valdivia
8) Project Name: Mobilizing Microsavings in Peru: Empowering the Poor Through their Financial Agents and Local Assets Markets
   -Funding Institution: Ford Foundation
   -List of Team Members Involved: Verónica Frisancho, Martín Valdivia
   -Status: Past

   -Funding Institution: IADB Regional Research Network
   -List of Team Members Involved: Verónica Frisancho, Martín Valdivia
   -Status: Past

10) Project Name: Household Behavior and Public Transfers: Guidelines for the Impact Evaluation of Poverty Alleviation Public Programs
    -Funding Institution: Research Network on Best Practices for Poverty Alleviation Programs, sponsored by CIES-IDRC
    -List of Team Members Involved: Martín Valdivia
    -Status: Past

11) Project Name: How Well do Mother-Child Public Health Programs Reach the Poor in Peru
    -Funding Institution: World Bank
    -List of Team Members Involved: Martín Valdivia
    -Status: Past

12. Bibliography


