

IMPROVING FINANCIAL LITERACY AND PARTICIPATION OF FEMALE ENTREPRENEURS IN CHILE¹

Jeanne Lafortune
Pontificia Universidad Católica de Chile
JPAL

José Tessada
Pontificia Universidad Católica de Chile
FinanceUC

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Abstract

We study the impact of adding a role model and the impact of offering consulting services in various formats in the context of a micro-entrepreneurship training in Chile. We find that having a role model is a very low-cost way of increasing attendance to the classes and led to some improvements in the well-being of participants. This seems to be operating not through increased knowledge but potentially through providing added motivation and a sense that participants can also become better entrepreneurs, like the role model. On the other hand, we find that individualized technical assistance, compared to one provided in the group, appears to have some effects in the short-run on business outcomes but none through improved financial or managerial techniques. However, we find some evidence that in the long-run, businesses are improved and that, simultaneously, financial concepts are better understood by those who received individual versus group assistance. Given the difference in costs, however, it is unclear whether it is a good investment for any training to include individualized assistance.

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1. Background

Chile is the most unequal country in the OECD, according to the GINI Index for income². This high level of income inequality in Chile is accompanied by a low rate of female labor participation and a gender gap of 38% in unemployment (3,4 percentage points). In fact, Chile is the country with the highest gender gap in labor participation in Latin America, and the second highest in the OECD (Mizala et al. (1999); Benveniste and Perticarà (2007)).

In recent years, consciousness about these problems has increased, so the public policy officials and other institutions in Chile are promoting programs and policies to reduce inequality and increase female labor participation (OECD, 2009).

At the same time, micro-credit programs for micro-entrepreneurs have been proliferating. Skills trainings have become a usual intervention to face the lack of human capital in micro-entrepreneurs of low qualifications and in that way contributing to reduce the high poverty and inequality levels that prevail in Latin America (BID, 2004). Moreover, as micro-entrepreneurship allows part-time dedication and flexible schedules, it can be a particularly attractive alternative for a lot of women, who commonly combine labor participation with family tasks at home, and find themselves negatively affected by the rigid schedules of traditional work. For these reasons, skills training for micro-entrepreneurs, if shown to be effective, have a high potential for increasing female labor participation and reducing poverty levels of vulnerable women in Chile.

1.1 Existing Literature

The existing literature evaluating the impact of financial and management training programs has not been uniformly positive in its conclusions.³ In general, the recent experimental evidence has shown both positive and zero effects, and most of the time the effects are heterogeneous along different dimensions, such as gender, size of the firm, etc. In spite of these less than conclusive results, there are a few lessons that can be extracted from the studies. In Table 1 we provide a summary of selected papers that evaluated training programs and that suggest some important results. First, it seems that training is effective when it is taught in simple ways, such as rules-of-thumb (Drexler et al, 2014). There is also some evidence that short programs have limited impact (as shown in Bruhn et al, 2012, for a financial training program in Mexico), while intensive programs seem to have some significant effects (see Calderon et al, 2013), thus indicating that the interventions must have enough content to really generate a change in micro-entrepreneurs' behavior. It is also observed in the literature that complementing in-class sessions with follow-up visits and technical assistance has significant positive effects in most studies, thus suggesting that a more continuous learning process might be beneficial; it is also possible that the extra personalized help makes the learning process more successful because it allows the managers to apply the tools to their business and to learn them on-site. There is also some evidence that financial support, or monetary rewards might foster entrepreneurs and could have a larger impact, as shown by Cho and Honorati (2012).

In the case of female entrepreneurs, the evidence is even more nuanced. Part of the literature shows that males have stronger response to some training programs offered to both male and women (see Berge et al 2012 for example). At the same time, female entrepreneurs also seem to benefit from personalized support and follow-up visits as evidenced by the results in Valdivia (2011) for a training program in Peru. This study also shows that the positive impacts are concentrated in the larger business, suggesting that either those managing larger business are better prepared to adopt the new tools that are being taught, or that these tools are more effective

² See <http://stats.oecd.org/Index.aspx?QueryId=26067&Lang=en>

³ See McKenzie (2010), McKenzie and Woodruff (2013), and the World Development Report 2013 for a more detailed review of the literature on the impacts of entrepreneurship training and subsidies.

for businesses of a certain size. Interestingly, other results show that the effects are heterogeneous and that women in groups that face stronger social opposition (see Field et al 2010), suggesting that fostering entrepreneurship could become a tool to empower women who are traditionally less likely to participate in business or labor markets.

Finally, the literature underlines the fact that there exists great heterogeneity in the programs offered and highlights the importance of identifying how the different components of these programs operate in order to achieve the expected results (Xu and Zia (2012), see also McKenzie (2010), McKenzie and Woodruff (2013), World Bank (2012)). In fact, although we have some sense that technical assistance and follow-up visits are useful, there is not much evidence about which kind of support (individual or group assistance for example), contents and mechanisms for imparting those courses provide effectiveness. Moreover, the cost of the programs varies greatly (see Sonobe et al 2012) so a better understanding of the components and mechanisms that explain some of the positive results could help implementing agencies, both private and publicly funded, to increase their cost effectiveness.⁴

This study contributes to the literature and to program design by presenting rigorous evidence about which teaching methods are more effective for the technical assistance portion of training courses for micro-entrepreneurs. We also innovate by introducing into the business training literature the direct use of role models as a motivating tool, thus incorporating a tool that has already been tested in the case of high school enrollment (see Nguyen 2008). With a better understanding about the components that determine success of training and the ability of it to have a real impact over micro-entrepreneurs, it will be possible to guide the design of the trainings and the allocation of resources to the more effective models.

1.2 Summary of the Project

Specifically, this study investigates the impact of two elements traditionally used in this kind of program over the effectiveness of the training. We designed these interventions based on the literature previously mentioned. The program is implemented by *Simón de Cirene*, a Chilean non-profit organization whose aim is to improve the welfare of micro-entrepreneurs through financial training.

The first element to be evaluated is the participation of role models as part of the training courses, who are successful micro entrepreneurs who were part of the program in the past and give their testimonies to the new participants. This is comparable with cases seen in education, where evidence shows that they increase effort, performance on standardized tests and attendance in primary education (Nguyen, 2008). If participants do not feel like the material imparted by the organization is useful to them, they will have limited incentive to learn and implement the techniques taught in their business. However, role models may allow them to see how useful the material being taught is and thus increase the rate of learning and eventually, the success of businesses. Role models may also simply act as a motivational speaker and increase the interest that the participant has in making their business flourish.

⁴ During the initial conversation with the NGO implementing the program under study they mentioned that on site visits were perceived as highly beneficial but at the same time represented an important part of the program's cost. Basically, the hours of work from the teachers grew significantly when they had to travel to each of the businesses and work directly with class participants.

Table 1. Summary of Selected Studies of Business and Financial Training

	Year	Country	% with a business	% Women	Type of participant	Intervention	Impact
Berge et al.	2012	Tanzania	100	65	Regular group meetings for clients of microfinance and banks	Comparison between training and subsidies for investment in the business	Training increased profits through increased sales for male entrepreneurs only. Subsidies have no impact. No impact for female entrepreneurs
Calderon et al.	2013	Mexico	100	100	Offer training to a representative sample taken from a population of micro entrepreneurs	Training program	Large impact on revenue, number of clients, profits, and having formal accounting is observed 7 to 8 months after intervention
Drexler et al.	2012	Dominican Republic	100	90	1200 microfinance clients	Comparison between traditional training programs and "rules-of-thumb" training	Rules-of-thumb is more effective in fostering the use of separate account for home and business resources, the use of a log, and the practice of computing monthly revenue compared to traditional training. Rules-of-thumb are also associated with higher sales in bad weeks.
Field et al.	2010	India	24	100	Microfinance clients including those without a business	Two-day training program on business management and finance	Positive effect on credit applications and revenue for hindi women who face stronger social opposition. No effect for muslim women, who face even more social opposition.
Mano et al.	2012	Ghana	100	0	Firms within a sector	Training program on entrepreneurship, production, quality control, and simple accounting.	Positive impact on business practices and performance, magnitudes are very heterogeneous
Valdivia	2011	Peru		100	Volunteers	Three-month training for all women. Half of them also receive an offer to have personal assistance during three months	Women with training made some progress in business management. Those with personalized support were more likely to plan and introduce improvements, and to increase association with peers and use informal credit. All in all, they increased sales by 18%. Effects are concentrated on larger businesses.
Bruhn et al.	2014	Mexico		47	People who express interest in participating after being contacted through one of several channels	Treatment group was invited to attend a financial training program. Then they received an extra treatment: second invitation (phone call as the first one), \$32 gift card for completing program, \$72 gift card for completing program, \$36 gift card delivered a month after completing program, free transportation to class, CD with reinforcing testimonies from previous participants	Repeated invitations and monetary incentives increase attendance, while free transportation and recorded message from previous participants generate no effect on attendance. Program has some impact on financial knowledge and self-reported savings, but no effect on indebtedness. Effects are likely short lived. Authors conclude the programs has minimal impact for marginal participants, and people likely made the right decision not attending.

The second element evaluated is the way of delivering the technical assistance which is part of the course. Personalized assistance has been recognized in a number of papers (Karlan and Valdivia, 2011; Bruhn, Karlan and Shoar, 2013) as potentially increasing significantly the value-added of the training. However, it is also one of the costliest forms of interventions implemented. Specifically, in our case, offering personalized technical assistance, whether in the business or in the classroom, costs per class about \$4,000 while the technical assistance in group costs about 10% of that price, around \$400. The costs related to the personalized sessions are different in both cases, however, since the visit to the business involves particularly high travel cost of the monitor while the one-on-one session in the classroom is costly because the room where the class is being held must be leased for a longer period of time. The purpose of our experiment is thus to evaluate potential alternatives that would give the same type of assistance but in a less costly way. Specifically, we contrast these two personalized technical assistance (when given individually in class, individually in the location of the business) to receiving it in groups in class. With the purpose of evaluating the cost-effectiveness of each of these strategies, this study investigates if the place and way of the delivery affect the effectiveness of the technical assistance given.

To study the impact of the elements previously mentioned in the courses, this investigation uses experimental methodology, extensively recognized in academia as the most rigorous method for evaluating social programs (Duflo et al. (2008)). The compliance of assignment treatments was relatively high in this case and pre-characteristics of participants are relatively balanced across treatment groups. Our hypothesis is that these two interventions will increase the knowledge of business practices during the class and through that, improve business outcomes in the longer-run. We measure business outcomes immediately after the class ends through a paper survey in class and also one year after it started through a phone survey. In these, we measure the probability of having a business and its health as well as whether they use techniques taught in the class. To check whether whatever impact we may find depends on increased knowledge, we also measure their attendance to class and their learning through their performances on evaluations performed by ourselves (performance on exams performed by the organization are not yet available).

We find so far evidence that role models may incentivize the attendance of participants to class following their visit. In the short-run, we find small but significant effects of role models and personalized technical assistance on business outcomes but not on financial knowledge or business practices, suggesting that they are operating through a different channel than the one we had initially anticipated. Our preliminary results in the long-run suggests some long lasting effects of both interventions although again limited impact on business practices. So far, we do find that personalized assistance could even increase financial literacy in the long-run. More interestingly, we find evidence that the role model appears to have larger effects in students who had previously less dedication to their business and those with lower financial knowledge while the opposite is true for personalized technical assistance that appears to be complementary to experience and knowledge of participants. This appears to remain valid in the long-run as well suggesting that both interventions may be useful for a different type of beneficiaries.

This rest of the paper is organized as followed. In the second part, the training program and its components are described. The third section presents the methodology of the research, including research questions, experimental design and empirical strategy. The fourth section describes the data collection procedure. The fifth shows the results of the study, using the data from four cohorts that were are part of the research, except for the one year follow-up which is available for the first two. The sixth section concludes the paper with final comments.

2. Program Description

We will measure the impact of the use of role models and different kinds of technical assistance in a set of training courses delivered by the non-governmental organization *Simón de Cirene*. This entity conducts training courses aimed at supporting and strengthening micro entrepreneurs in managing and handling of their businesses, with the overall objective of increasing the level and quality of employment in Chile. The classes are financed by social subsidies of the Training and Employment National Service (SENCE), as part of a program for informal micro-entrepreneurs of the first and second income quintiles. Even though the program is targeted to both genders, the participants are mostly women (92% in year 2011).

The program evaluated was delivered mainly in the Metropolitan Region of Santiago in the years 2013 and 2014. However, the program is also delivered in some areas of the Valparaíso and Los Lagos Regions. The call for participants is sent through municipalities, who invite micro-entrepreneurs that submit applications to join the training. Although the majority of the invited individuals have a micro-business, the courses are also open to participants that have an interest in developing a micro-business but do not have an enterprise yet. In fact, even though the courses share common elements, there are two types of courses: a first basic course named Assessment Workshop and a second more advanced one named Coaching I for students that already went through the first one. Each class has a maximum of 26 participants. The course comprises of 12 to 14 4-hour sessions.

Course participation is free and provides financing for out of pocket expenses in transportation (Ch\$ 3.000 or US\$ 6 per session). In the first cohort a total of 16 courses were delivered in 11 municipalities of Valparaíso, Los Lagos and Metropolitan regions. The program is given by a business degree professional, who has experience in working with companies, and accompanies the participants through the whole process. There is also a teaching assistant, usually a business degree senior student, who is responsible for the technical assistance.

While the basic program is limited to the series of classes, the evaluation proposes measuring two additional components. The first one is to include the participation of a role model as a testimony for the peers. The role model is a former student that has succeeded in her or his business. It is a one hour session approximately and takes place between classes number 5 and 7, after the break, which is the period with the highest level of assistance. In this visit, the micro-entrepreneur shares his/her experience with the participants and explains how the knowledge acquired during the course contributed to the success of his business project. More so, in many cases, the former student gives out information on how to apply for seed capital funds for micro-entrepreneurs. Before his/her session with the class, the role model is coached by the teacher on how to give a significant testimony that is directed to the subject of interest. The exposure to success stories from peers from similar backgrounds has the potential of making an impact on the participants, who could be inspired and stimulated in their challenges as micro-entrepreneurs and students. In other words, the interaction with the role model can stimulate the adoption of proper management practices by improving the perception of the returns on investment of their businesses and projects.

The other main component of the course is the delivery of technical assistance where the individuals develop individually the following analysis: i) costs, margins and breakeven point analysis, ii) SWOT Analysis (Strengths, Weaknesses, Opportunities y Threats), and iii) commercial strategy of each participant, considering the case and context of each business.

This study evaluates the impact of three different ways of delivering the technical assistance, which have relevant implications for the cost of the program: individual assistance in the same place where the micro-entrepreneur develops her business, individual assistance before or after classes in the class location, and group assistance before or after classes. It is relevant to highlight that technical assistance is delivered to all course participants, including those that do

not have a business at the time of the course. In these cases, the people designated to receive assistance in their business place do so at their homes. The assistant teacher gives the technical assistance between classes number 10 and 14. The schedule and date of the technical assistance is agreed upon between the teacher and the participant, to whom alternative dates and hours are offered for the session. To prevent that participants miss the technical assistance session, when a participant does not show to an agreed meeting, the teaching assistant makes a second and third attempt to set a time and date for the session.

Although the provision of a more personalized support, individual technical assistance, and more specifically, assistance delivered at the entrepreneur’s location, have the potential to be more effective, these methodologies are more costly so it is fundamental to know if receiving the technical assistance at the business site and individually makes the assistance more effective and in which magnitude.

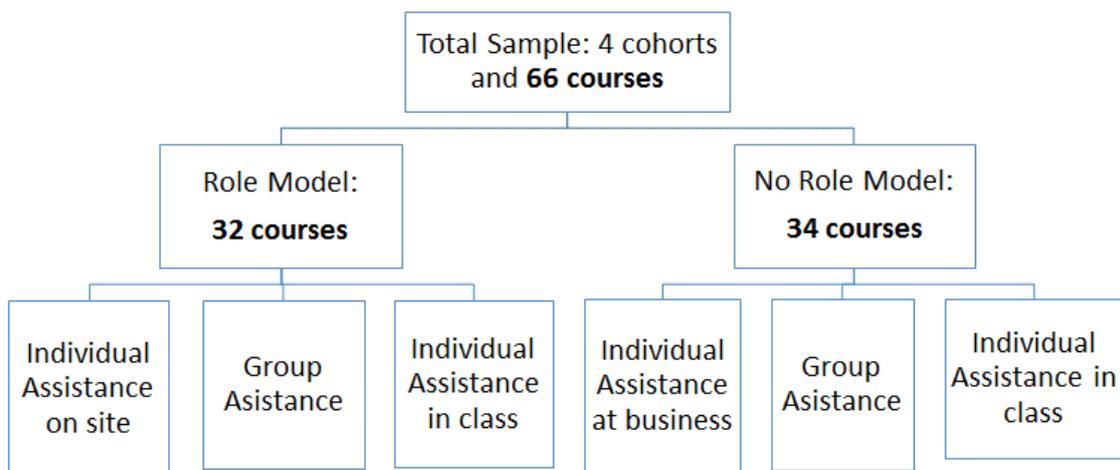
3. Methodology

3.1 Experimental Design

To evaluate these programs, we must design of way of measuring what would have been the outcomes of the participants had they received a different type of intervention. To solve this problem, many evaluations use a counterfactual or control group, to be able to compare the results of the intervention with what would have happened without intervention. To make sure treatment and control groups are comparable, this study uses experimental design, which consists in randomly assigning a group of individuals to one of the groups. Randomization of a sample that is big enough guarantees that the groups are comparable and the differences between them after the intervention are attributable to the program. Experimental design is widely recognized as the most rigorous methodology for impact evaluation of social programs (Duflo et al. 2008).

In this study, we make a double randomized assignment of participants to the different components of the program that are being evaluated: sessions with the role model and different ways of delivering technical assistance. The purpose of this double randomized assignment is to guarantee the comparability of the participants who receive the role model with the ones who do not, on one side, and between the ones who receive each kind of technical assistance.

Figure 1: Randomization scheme



In the above figure, we present in detail the way in which the assignment of participants was developed. We first randomly assign half of the courses to receive a session of role model, and

the other half as control groups. Moreover, in order to increase the power of the sample, before randomizing, we stratified the courses according to their county and region. In this way, we made sure that if there is more than one course on a certain county, half of them go to treatment and half to control groups.

Overall, the study will include the randomization of 66 different courses with 1.705 participants, half of which will receive a role model session and half who will be used as control group for this component. Assuming a 80% power, an ICC of 0,05, attrition rate of 10%, a compliance rate with the treatment assigned of 95% and a correlation between base line and follow-up of 0.5⁵, the power estimations reveal that the available sample allows us to detect with enough statistic confidence a minimum detectable effect (MDE) of 0.267 standard deviations.

The randomized assignment of the courses to role models was made between classes 3 and 4, before applying the Base Line 1 survey. It is important to point out that the participants did not know the program that is being assigned to other groups (if they had or did not have a role model), so their answers were not affected by gratefulness or dissatisfaction related to receiving or not receiving the role model experience.

Within each class, we then randomly allocate one third of the participants to group assistance, other third to individual assistance and the last third to individual assistance on location. Additionally, to improve the power of the sample and avoid misbalances inside a classroom, the randomized assignment is done stratifying by class, ownership of an actual business and provision of an informed consent (as long as the information is available). For the technical assistance analysis, the study includes randomization of 53 courses and 1.371 participants divided in three equal groups who receive the different modalities. This is a smaller sample because Cohort II (Bono) does not have technical assistance since they are senior participants who graduated from the basic training and received the assistance in that occasion. Assuming a power of 80%, an ICC of 0.05; attrition rate of 10% and a compliance rate with the treatment assigned of 90%, the power estimations reveal that the available sample allows us to detect with enough statistic confidence a minimum detectable effect (MDE) of 0.206 standard deviations.

We have updated these calculations using our actual data so far to update these values, which we present in Table 2. They indicate that our initial calculations were a bit too optimistic for the technical assistance given the attrition rates we have faced. We can realistically expect to identify an effect of 0.30 standard deviations for differences in technical assistance and of around 0.2 standard deviations for the role model.

Table 2: MDE for each category of variables

Variables Category	Role Model		Technical assistance	
	N	MDE	N	MDE
Socioeconomic	1803	0.448	1337	0.349
Access to credit and banking	1803	0.179	1337	0.360
Entrepreneurship	1803	0.247	1337	0.350
Financial and managerial techniques	1803	0.220	1337	0.353
Evaluation of technical assistance	-	-	1337	0.365

Note: The calculations were realized for a 80% power using base line-following correlations and desertion and compliance rates. MDE for technical assistance is calculated as average between An-Ag and Ai-Ag.

⁵ This are the parameters commonly used for estimations of ex-ant power rates in social programs experiments.

One may be concerned that our role models are unique individuals and as such, each “treatment” may differ from one class to another. Table 3 presents the characteristics of the role models in our experiment, weighted by the size of the classes to which they presented. We can see that on average, role models are similar to participants in terms of age and gender but they are more successful as demonstrated by their business income of about US\$4,000 per month and the fact that they are more involved in the production of goods than in sales or services.

Table 3: Role model characteristics

Variable:	N	mean	standard deviation	min	max
Age	625	47.92	9.97	26.00	63.00
Women	677	0.93	0.26	0.00	1.00
Income	522	2,017,195	3,385,331	150,000	16,000,000
Manufacturing	581	0.61	0.49	0.00	1.00
Services	581	0.34	0.47	0.00	1.00
Stores	581	0.04	0.21	0.00	1.00

3.2 Empirical Strategy

If the sample size is big enough, the randomized assignment of the different components of the program guarantees that, on average, the participants assigned to each different treatment or non-treatment groups are comparable. In limited sample size contexts, it is possible that besides the random assignment, there will be differences between groups with respect to some variables. In order to increase the statistical power of the estimation and correct the pre-existing differences that could exist between the groups before the program, the study proposes identifying the impact of the program on outcomes of interest through an OLS regression which includes controls for the baseline indicator and for the strata used for assignment. The specification of the regression is the following:

$$Y_t = \alpha + \beta_{ITT}T_t + \delta Y_{t-1} + \tau X_t + \epsilon_t$$

Where Y_t is the outcome variable of reference in the follow-up, T_t is a vector of dichotomic variables that has value 1 if the participant was assigned to the treatment and 0 if not, Y_{t-1} is the value of the reference indicator in baseline, X_t is a vector of control variables including strata dummies, age, gender and education and ϵ_t is the error term. The impact of the training course component over the reference category is given by the parameter β_{ITT} . It must be pointed out that the impacts of the program presented in this study are known as Intention To Treat effects. In other words, β_{ITT} indicates the impact of being assigned to a relevant treatment. In an imperfect compliance context as ours, the estimation of impact of the program over those individuals who comply with the treatment assigned can be obtained using Instrumental Variables, where the instrument is the assignment of the program and the instrumented variable is the effective reception of the treatment. However, we will here present only the ITT estimates.

4. Data Collection

4.1 Survey description

The data collection of this experiment included the application of three survey instruments in different moments in time. Together with the application form, a short survey on analytic abilities and financial knowledge was applied (this is referred to as LB0). This survey includes four mathematic questions to capture the analytic abilities of the participant before the training and an additional question that measures the level of financial alphabetization. In the fourth class, before the role model session or the technical assistance are provided, a second baseline survey was applied (LB1). The objective was to characterize the households in terms of their economic situation, labor supply, entrepreneurship, access to credit and banking and adoption of financial and management techniques. Once the training was concluded, a follow-up survey was applied (SEG0) to obtain information, right after the end of the course, about the participants in terms of socioeconomic condition of their households, business situation, access to credit and banking, adoption of financial and management techniques, evaluation of the technical assistance received and evaluation of the role model if applicable. This survey was collected in three different instances. First, the participants who were present in the last class answered the survey there. Second, those who were not present in the last class but who did successfully graduate from the program were asked to answer the survey in their “graduation ceremony.” Finally, the rest of the participants were surveyed by phone. The last part of the data collection process is currently underway and includes a similar set of questions as SEG0 on socioeconomic conditions, business situation and techniques but it is undertaken exclusively by phone one year **after** the class was initiated.

All the surveys collected during the course were answered by the students in class and supervised by the teachers and assistants of each class. In order to make sure the instrument was correctly applied and answered, we prepared detailed instructions with the steps they should follow and the protocols of the application of the instrument, which had to be read in advance by the instructors. In addition, an informed consent was attached to the survey and it was read out loud before starting the application. Before starting the survey, participants were requested to sign their consent to participate in the study. For the follow-up survey, this was complemented with the supervision of a member of the JPAL team in order to improve the quality of the data. Pollsters were hired by JPAL, chosen from a group of pollsters with significant experience in phone surveys from JPAL projects, and were specifically trained by the field team to carry out the telephone surveys. The interviews, including the informed consent, were recorded to ensure quality and accuracy of the reports.

In addition to the surveys, this project uses administrative data about the participants and the classes, all collected by *Simón de Cirene* as part of their internal procedures for attendance. This data includes the results of two math tests applied during the course, attendance and application forms, which include information about history, business performance of their microenterprise and basic demographic information. Finally, the teachers complete a form with process indicators with information about the quality of the role model session, characteristics of the teacher giving the technical assistance and compliance of the treatments assigned. All this information was used in the analysis for a better understanding of the mechanisms of impact of the project.

4.2 Data collection results

The results of the application of the different instruments can be seen in Table 4. The table shows, for each instance of data collection (LB0, LB1, SEG0 and SEG1), the total amount of effective surveys (number of people who answered and signed the informed consent) and the attrition rate, in comparison to the number of students officially signed up for each course from the beginning of the program (includes students that may have abandoned the course any time after the survey).

Table 4: Summary of applied surveys and response rates

Cohort	N	LB0	LB1	SEG0	SEG1
1 (BECA I)	409	0.582	0.743	0.892	0.709
2 (BONO)	277	0.834	0.635	0.931	0.718
3 (BECA II)	387	0.605	0.801	0.786	0.638
4 (BECA III)	767	0.748	0.638	0.662	0.000*
Total	1,840	0.694	0.695	0.780	0.400

Note: * Correspond to cohorts where SEG1 has not been applied yet.

The response rates vary between 78% in the follow up survey and 70% in the analytic abilities and financial knowledge survey. The main reason for this is the absence of participants at the moment of applying the first survey, which could happen because they joined the course later (so did not participate in the first two data collection instances), missed a specific class or abandoned the training before the end. Another important reason is given by the cases where informed consent form were not filled. The last cohort of the SEG1 is yet to be completed, which explains their 0% response rate. We are achieving relatively good levels of response rates for SEG1, only slightly below 70% for the cohorts where we have already completed the survey. The last cohort will be interviewed in March-April 2015.

The best results in the data collection were on the follow up, where more efforts were made to recover surveys. After the first cohort, actions were taken in order to minimize attrition, for example, by asking the Corporation to emphasize the importance of assisting to class the days where surveys would be applied, increasing the presence of J-PAL team members in the surveying instances, increasing the number of occasions for presence and telephonic surveying and insisting on the confidentiality of the data to diminish the rejection of consents.

4.3 Data Sample Description

In table 5 we present a socio-economic characterization of the participants. We can see that women represent 92% of the participants. Average age of participants is 45 years, but a considerable variability is observed, with participants from 19 to 89 years of age. Most program participants have no professional or formal education at the tertiary level (only 30% of have tertiary education and only 8% some university formation) and a significant fraction has not completed secondary education. Average per capita household income in the last month is CLP\$142.000 (US\$260). This income level is similar to the per capita income of the first quintile of autonomous income according to the CASEN 2011 poll, which corresponds to the quintile where 58% of participants classify themselves.

In terms of occupation, 83% of participants are self-employed, while 13% don't work. Regarding access to the financial system, 65% of participants have a bank account, and 46% has debt with a bank or retail company. It is important to note that while 41% of participants applied for a bank loan in the last two years, 31% of them had at least one application rejected.

Table 6 presents a description of the businesses of the participants. First we can note that 86% of participants declare to have a business. Amongst participants who declare having a business, the average business age is approximately 4.4 years. In general, 94% of the participants are the owners of these businesses, and the ones who have additional employees, have on average one person employed besides themselves. Around 31% of them are formal businesses, as they declare paying the value-added tax.

Table 5: Socioeconomic description of participants

Variable:	N	mean	standard deviation	min	max
<i>General:</i>					
Women	1,405	0.92	0.27	0.00	1.00
Age	1,375	45.15	11.09	19.00	89.00
Household size	1,137	3.65	1.93	1.00	16.00
Number of household members working	1,069	1.63	0.97	0.00	10.00
<i>Educational level:</i>					
No education	1,164	0.03	0.16	0.00	1.00
Elementary	1,164	0.16	0.36	0.00	1.00
High School	1,164	0.52	0.50	0.00	1.00
Technical-tertiary	1,164	0.22	0.41	0.00	1.00
University	1,164	0.08	0.27	0.00	1.00
<i>Income:</i>					
Household income last month	1,071	387,244	402,679	0.00	5,800,000
Household income 2 months ago	1,096	385,518	384,619	0.00	6,000,000
Income per capita	963	142,070	163,770	0.00	1,650,000
<i>Labor supply:</i>					
Not working	1,204	0.13	0.34	0.00	1.00
Employed	1,204	0.04	0.19	0.00	1.00
Self-employed	1,204	0.83	0.37	0.00	1.00
Hours per week in main occupation	1,301	28.28	22.00	0.00	110.00
Previously not employed	797	0.21	0.40	0.00	1.00
Previously employed	797	0.30	0.46	0.00	1.00
Previously self-employed	797	0.49	0.50	0.00	1.00
<i>Credit and banking:</i>					
Has bank account	1,209	0.65	0.48	0.00	1.00
Has bank credit	1,213	0.46	0.50	0.00	1.00
Has asked bank for credit in last 2 years	1,197	0.41	0.49	0.00	1.00
Has been rejected for bank credit in last 2 years	848	0.31	0.46	0.00	1.00

In the second section of this same table, businesses are classified according to their activities. We can see that most part of the activities are concentrated in services; followed with similar percentages by manufacturing (production of a good, artisanal production) and commerce ("stores"). Finally, we can observe that a 65% of the participants work where they live, while 19% work at the clients' house. In lower proportions, they work in mobile locations (15%), stores different from their homes (11%) and a permanent or semi-permanent location on public places (10%).

Table 6: Business description

Variable:	N	mean	standard deviation	min	max
<i>General:</i>					
Has business	1,116	0.86	0.35	0.00	1.00
Business age	945	51.61	64.85	0.00	660.00
Number of employees last month	356	1.04	2.02	0.00	26.00
Number of employees month before	618	0.80	1.55	0.00	20.00
Pays VAT	1,084	0.31	0.46	0.00	1.00
Owner	1,015	0.94	0.24	0.00	1.00
Family of the owner	1,015	0.05	0.21	0.00	1.00
Other	1,015	0.01	0.12	0.00	1.00
<i>Business sector:</i>					
Manufacturing	997	0.19	0.39	0.00	1.00
Services	997	0.29	0.45	0.00	1.00
Retail	997	0.16	0.37	0.00	1.00
Other	997	0.35	0.48	0.00	1.00
<i>Business location:</i>					
Moving location	1,030	0.15	0.36	0.00	1.00
Permanent location in public space	1,030	0.10	0.29	0.00	1.00
Client's residence	1,030	0.19	0.39	0.00	1.00
Residence	1,030	0.65	0.48	0.00	1.00
Commercial property	1,030	0.11	0.32	0.00	1.00

5. Preliminary Results

This section presents the main results of the analysis of baseline and follow-up data gathered.

5.1 Balance

As mentioned before, the main advantage of the experimental methodology is that it allows to estimate a valid counterfactual by the conformation of a control group that is, on average, statistically the same as the treatment group. In this section we present an analysis of the balance of the sample to observe to which extent the studied groups are statistically comparable.

We will begin this analysis by studying the balance of the different characteristics of the participants between the class groups assigned a role model and the control groups. Appendix Tables 1 through 5 shows this analysis divided by families of variables. In each table, we show the number of observations and the average for each variable in the treatment group and control group. Additionally, we show the difference between both averages and the p-value of a regression of the variable on the assignment of treatment, controlling for strata and correcting for robust standard errors.

Appendix Table 1 shows that there is a significant difference in age and slightly significant differences in proportion of participants who are not working and employed as well as in the average income per capita and the average hours in the main occupation. We find statistically

significant differences in 22% of our variables, only slightly higher than it would be expected, given a 10% significance level. We will nevertheless control for these baseline characteristics in all regressions to make sure that our results are not driven by these differences.

In the next tables, we present in detail the results of the balance in terms of access to banking (Appendix Table 2), business characteristics (Appendix Table 3), financial techniques (Appendix Table 4) and analytic abilities (Appendix Table 5). As the assignment process is stochastic, it is expected that a proportion of these variables will be unbalanced.

The individuals randomly assigned to the role model appear to be slightly more bankarized than the ones in the control group (significant at 5%). There are almost no differences in the characteristics of the business, the financial techniques they employ and their analytical abilities and financial knowledge.

We then turn to the analysis of ex-ante balance for the technical assistance. The following results include only three out of the four cohorts analyzed in this research, given that Cohort II (Bono) does not receive technical assistance, since participants in this class have already received the technical assistance in the past.

The same appendix tables mentioned above are analyzed for the different modalities of technical assistance treatment. In this case, the “benchmark” will be group technical assistance in the class, and we will present, for each variable, the difference between this group and the other two (individual assistance in class and individual assistance at the workplace) and their statistical significance.

Appendix Tables 6 to 10 present the balance for the different families of variables. In these tables we find very few statistically significant differences between the three groups, which is what one would expect in a randomization. The fewer number of statistically significant differences in this case is also to be expected since we were able to stratify by individual characteristics in the randomization of the technical assistance but not of the role model.

5.2 Compliance with Randomized Assignment

Even if the experimental groups are comparable, the possibility of identifying impacts depends on the level of compliance of the random assignment, meaning that those assigned to treatment effectively received the treatment. In this case, there are two reasons why this could not hold; the participant may abandon the course before the role model session or the technical assistance occurs, or the corresponding technical assistance not be received by the participant.

Table 7 shows the level of compliance of the random assignment for the role model and for the technical assistance. On average, 85.7% of the participants assigned to role model receive the treatment. None of the controls received it. On the other hand, only about 70% of the participants received the technical assistance they were assigned to. The highest rate of accomplishment was registered for the technical assistance in the business location (77%), followed by the individual technical assistance in class (71%) and finally, the group technical assistance in class (67%).

It is important to mention that, contrary to the case of the role model, an important amount of the incompliance with the assigned treatment in technical assistances is due to the fact that the assistance was not given or that they received a different technical assistance than the one they were assigned to. This is particularly true for group assistance when the absence of other classmates transformed the session from a group one to an individual session for some of the groups.

Table 7: Compliance with Randomized Assignment

	Role model		Technical Assistance								
	N	Compliance	N	A_g	Compliance	N	A_c	Compliance	N	A_n	Compliance
Cohort I (Beca 1)	204	0.84	128		0.56	138		0.64	138		0.68
Cohort II (Bono)	124	0.91
Cohort III (Beca II)	173	0.88	120		0.73	129		0.75	130		0.81
Cohort IV (Beca III)	380	0.84	173		0.71	189		0.74	192		0.80

Note: Cohort II (Bono) is an advanced level class so did not receive technical assistance.

5.3 Impact Evaluation in the short-run

Table 8 presents the impact of being randomly assigned to a class with a role model on class attendance. To fully utilize the data at hand, we estimate a fixed effect model where each individual is allowed to have her own average attendance. We then contrast class attendance initially (when the role-model had not yet visited the class) to later classes in groups that received the role model compared to those who did not receive it. We also separate the classes where the role model visited in case attendance was particularly high for that visit. This table shows that individuals in classes where role models visited are significantly more likely to attend to classes but only so after the visit of the role model. Receiving the visit of a role model increases the probability of a participant of assisting a class after the visit of the role model by 1.5 to 2 percent. Given an average assistance of 76%, this means that with a visit from the role model, assistance increases to 78% over each class. The effect is stronger if we exclude cohort II (advanced level participants) that has a lower assistance than the first level ones. Thus, it seems like the intervention of the role model increased the probability that a student attends later classes where he could learn more elements that will be useful for his or her business. We found no evidence of such an effect for the different modalities of the technical assistance.

Table 8: Attendance impact of role models

	Approximation by date ranges	Exact Dates
Classes 5-7	0.011 (0.010)	
Classes 8+	0.019** (0.008)	
Role model class		0.003 (0.009)
Classes after role model		0.005 (0.008)
R^2	0.011	0.011
N	22,392	22,392

Notes: Standard errors in parenthesis. Regressions includes class level fixed effects.

We now turn directly at the impact we find on outcomes as measured immediately at the end of the class. Table 9 shows the impact of the session with the role model and of different modalities of technical assistance, over economic variables, including performance and activity of the business, access to credit and banking, household income and labor situation.

The results show that being assigned to receive the visit of the role model increases wage-bills in the month prior to this follow-up and diminishes the purchase of capital goods. It also significantly increases the probability of having applied to governmental seed funding, something that many of the “successful” past students of the organization have done. These results are generally robust to adding additional controls.

On the other hand, technical assistance, when received individually, reduces the probability that the person is employed in another business by the end of the class, compared to the assistance in group. We can observe a significant increase in self-employment only for the individual assistance in class as compared to the group assistance. For the individual assistance in the business there is a slightly significant increase in participants not working. Individual assistance in class also slightly increases the probability of asking for bank credits and purchasing a computer. This last impact is highly significant for the individual assistance in the business location. Overall, we thus observe modest impact in the short-run over socio-economic variables, maybe most importantly the fact that individualized attention appears to encourage more self-employment.

A key question is then whether this response occurs because the participants in the program use financial and managerial methods they have learned more extensively or because of other impacts the different interventions have had on their business. Table 10 shows the impact of the different treatments on the adoption of financial techniques. The results show that the assignment of role models has limited impact on the use of formal techniques, with only the register of credit sales increasing significantly in response to the visit of the role model. Adding more controls from the baseline to this regression eliminates the statistical significance of these impacts. Thus, despite the fact that students attended classes more regularly after the visit of the role model, they do not seem to have better put in practice the teachings they received.

We also find no statistically significant impact of the version of the technical assistance received on techniques employed by entrepreneurs. These results are, in general, unchanged by the inclusion or exclusion of control variables. Overall, however, it seems like the impact on financial techniques is not overwhelming, suggesting that the interventions influenced only mildly the adoption of better financial and managerial methods. We directly tested the students in their knowledge of 2 financial questions at the end of the class and if anything, the visit of the role model or the individualized technical assistance lowered the score of the individuals in responding to these questions. The changes in business outcomes we presented above thus appear to stem from other changes than those measured in our survey.

Finally, Table 11 shows that the way in which the technical assistance was provided had limited bearing on the self-reported perception of the experience by the students. There are no statistically significant differences between those who received it individually (in class or at their business) and those who received it in a group except for an indication that individualized technical assistance provided in class increased the self-perception that entrepreneurs better identified their weaknesses.

Table 9: Impact Evaluations – Economic Variables

Variables:	Role Model			Technical Assistance			
	N	β - rm	se - rm	β - Ac	se - Ac	β - An	se - An
<i>Income:</i>							
Income (\$) last month	1,085	-39,723	(44,566)	47,459	(62,204)	-4,476	(36,219)
Income main occupation (\$) last month	1,014	42,751	(40,816)	-18,511	(33,305)	7,809	(38,241)
<i>Employment:</i>							
Not employed	1,170	-0.02	(0.02)	-0.00	(0.02)	0.04*	(0.02)
Employed	1,170	0.01	(0.01)	-0.04**	(0.02)	-0.06***	(0.02)
Self-employed	1,170	0.00	(0.02)	0.04*	(0.02)	0.02	(0.02)
<i>Credit and banking:</i>							
Has bank account	1,227	0.00	(0.02)	0.01	(0.03)	-0.01	(0.03)
Has asked bank for credit	1,236	-0.03	(0.02)	0.04	(0.03)	0.03	(0.03)
Has obtained credit	1,229	-0.01	(0.03)	0.06	(0.04)	0.02	(0.03)
<i>Entrepreneurship:</i>							
Has business	1,163	-0.01	(0.02)	-0.03	(0.03)	0.01	(0.03)
Has a business idea	1,079	0.00	(0.03)	0.08**	(0.04)	0.04	(0.04)
Hours dedicated to the business	353	0.68	(0.58)	-1.00	(0.99)	-0.41	(1.29)
Registered with the tax authority	541	0.04	(0.04)	-0.03	(0.06)	-0.03	(0.06)
Number of employees last month	356	0.33	(0.23)	0.02	(0.35)	0.13	(0.28)
Wagebill (\$) last month	260	92,716**	(42,878)	-144,508	(96,269)	-81,169	(88,178)
Sales (\$) last month	942	63,491	(61,313)	-86,085	(61,988)	40,856	(81,901)
Costs (\$) last month	808	33,327	(30,073)	-25,735	(35,847)	58,026	(41,617)
Desired sales level (\$)	834	7,413,884	(6,694,127)	-551,581	(571,327)	-697,032	(634,348)
Probability of achieving desired sales level (1-5)	1,125	0.02	(0.06)	-0.03	(0.09)	0.04	(0.09)
Applied for seed fund	1,189	0.07**	(0.03)	0.06*	(0.04)	0.04	(0.04)
<i>Assets:</i>							
Computer	1,056	-0.03	(0.02)	0.05*	(0.03)	0.07**	(0.03)
Cell phone	1,057	-0.06**	(0.03)	0.03	(0.03)	0.08**	(0.04)
Stove, oven or microwave	1,056	-0.06***	(0.02)	-0.03	(0.03)	0.02	(0.03)
Furniture	1,062	-0.06***	(0.02)	0.00	(0.03)	0.01	(0.03)
Car	1,053	-0.01	(0.01)	-0.03	(0.02)	-0.03	(0.02)
Traction vehicle	1,051	-0.03**	(0.01)	0.01	(0.02)	-0.01	(0.02)
Balance	1,052	-0.02	(0.02)	0.01	(0.02)	0.00	(0.02)
Refrigerator, freezer, etc	1,052	0.02	(0.02)	-0.01	(0.02)	0.00	(0.02)
Machines	1,059	-0.03	(0.02)	-0.04	(0.03)	0.01	(0.03)
Real state	1,055	-0.03*	(0.02)	-0.01	(0.02)	0.03	(0.02)

Notes: Standard errors in parenthesis. Regressions control for stratos and estimate standard errors robust to heteroscedasticity.

We then turn to evaluating how each of the treatment arms may have impacted beneficiaries heterogeneously. If the role model works mostly as a motivational tool, we may think that it would be most effective at changing the behavior of individuals who have lower motivation but not those who lack skills or preparation. On the other hand, we may think that the individualized technical assistance may be more useful for those who have already a business and are better able to apply the advice that is given to them. We explore this in the following tables.

Table 10: Impact Evaluations – Financial Techniques

Variables:	Role Model			Technical Assistance			
	N	β - rm	se - rm	β - Ac	se - Ac	β - An	se - An
Visited competition to see prices	1,037	-0.01	(0.02)	-0.02	(0.03)	0.02	(0.03)
Visited competition to see products	1,037	0.04	(0.03)	0.00	(0.04)	-0.06	(0.04)
Asked customers for the possibility of new products	1,037	0.00	(0.03)	-0.01	(0.04)	0.01	(0.04)
Asked suppliers for products most sold	1,037	0.01	(0.03)	-0.05	(0.04)	-0.03	(0.05)
Asked ex-clients why they stopped buying	1,036	-0.02	(0.03)	-0.02	(0.04)	0.02	(0.04)
Made special offers (last 3 months)	813	0.03	(0.02)	0.05	(0.03)	0.02	(0.04)
Made publicity	745	0.01	(0.03)	0.05	(0.04)	0.04	(0.04)
Business inventory	1,127	-0.00	(0.03)	-0.03	(0.04)	0.02	(0.04)
Register of sales and purchases	1,142	-0.04	(0.02)	0.02	(0.03)	-0.01	(0.03)
Clarity of register	1,160	0.00	(0.02)	0.04	(0.02)	0.01	(0.02)
Budget for expenditures	1,131	-0.00	(0.03)	0.05	(0.04)	-0.01	(0.04)
Sells on credit	837	-0.01	(0.04)	-0.06	(0.05)	0.02	(0.05)
Register of credit sales	257	0.10**	(0.05)	0.02	(0.08)	-0.06	(0.07)
Frequency of business planning	1,112	0.04	(0.08)	0.12	(0.11)	0.03	(0.11)
Profit or loss balance	964	0.03	(0.03)	-0.01	(0.04)	0.01	(0.04)
Cash flows	964	0.00	(0.03)	0.01	(0.04)	-0.04	(0.04)
Balance sheet	964	-0.02	(0.02)	-0.03	(0.03)	-0.03	(0.03)
Income and expenses	964	-0.04	(0.03)	-0.00	(0.05)	-0.04	(0.05)
No document prepared	962	0.02	(0.03)	0.04	(0.05)	0.03	(0.05)
Quantity of \$in petty cash	901	12,714	(9,984)	9,828	(15,033)	-4,308	(15,092)
Savings	953	0.02	(0.03)	0.04	(0.04)	0.01	(0.04)
Credit card	953	0.03	(0.02)	-0.00	(0.03)	-0.01	(0.03)
Credit line	953	0.01	(0.01)	-0.02	(0.02)	0.02	(0.02)
Bank loan	953	-0.03	(0.02)	-0.01	(0.03)	0.01	(0.03)
Family loan	953	-0.05*	(0.03)	-0.04	(0.04)	0.02	(0.04)
Moneylender loan	953	0.01	(0.01)	0.00	(0.02)	-0.00	(0.02)

Notes: Standard errors in parenthesis. Regressions control for stratos and estimate standard errors robust to heteroscedasticity.

Table 11: Impact Evaluations – Technical Assistance Valuation

Variables:	Technical Assistance			
	β - Ac	se - Ac	β - An	se - An
Identification of my weakness (1-5)	0.12*	(0.07)	0.06	(0.08)
Identification of solutions to my problems (1-5)	0.04	(0.07)	0.00	(0.07)
Changes to business management (1-5)	-0.02	(0.07)	0.00	(0.07)
Is useful for my business (1-5)	0.04	(0.07)	0.02	(0.07)
Was too short	0.03	(0.03)	0.04	(0.03)
Was adequate	-0.05	(0.04)	-0.05	(0.04)
Was too long	0.02	(0.03)	0.01	(0.03)

Notes: Standard errors in parenthesis. Regressions control for stratos and estimate standard errors robust to heteroscedasticity.

We first start by contrasting the impact that the role model had on beneficiaries depending on how knowledgeable they were before starting the class in terms of entrepreneurship. For this, we use the number of hours that were dedicated to the business before the class started, whether the individual had a business before the class started and the score the individual obtained in our financial literacy test in the baseline. Table 12 contrasts the impact of the role model by these

factors, presenting only the interaction term in order to save space. We find that while the role model had limited impact in aggregate on income measures, this impact differed significantly by group. The visit of the role model appears to have increased in the short run the income of those with an existing business and decreased that of those who only had a business idea. On the other hand, it seems to have had a more negative impact on individuals who dedicated more hours previously to their business and those who had more financial knowledge. The overall negative impact the role model had on asset purchases seemed to have been concentrated in those with only an idea of a business while the role model appears to have increased the dedication and the formalization of those who didn't have a business previously. Finally, the role model appears to have increase the costs and sales of existing firms more than those who had only an idea and of those who dedicated less hours previously to their business. We find limited differential impacts on techniques and financing of inputs. This seems to suggest that the role model can mostly influence individuals who are not already very dedicated to their firm or very knowledgeable. This is consistent with motivation as being one of the channels through which the role model would have an impact.

We repeat this analysis but this time for the technical assistance in Table 13. This table suggests that the impact of the different forms of technical assistance were much less dependent on the degree of business/financial sophistication than the role model. The main difference that we can observe in that section is that the decrease in working as wage worker that was observed in aggregate is most marked for individuals who were previously spending more hours in their business and who had a higher financial literacy score. It was, however, also larger among individuals who only had an idea and no existing business before the class started. The same results are found for the change in the ownership of a computer which is larger for those who dedicated more hours to their business before the class and those who did not have an existing business. This suggests that the technical assistance works potentially through a different channel and is complementary to the entrepreneurs' skills and dedication. However, it also seems to be useful for those who wish to become entrepreneurs and not only for those who have already chosen that path.

We then turn to interacting our interventions with age and education. The effects of the role model by age and education categories are presented in Table 14. We use as a reference (omitted) category those individuals younger than 40 and those with less than high school. Thus, the coefficients should be interpreted as how different was the impact of the role model on individuals of a given age category compared to those younger than 40 and of a given educational category compared to those without high school. This table suggests that the effect the role model had in the short-run was concentrated in those younger than 40. For example, all the decrease in assets that we documented in aggregate appears to be reversed for older age groups. On the other hand, the role model appears to have increased the use of some techniques more strongly in the 40-50 age group than in those younger than 40. But overall, the differences are limited when we explore how the role model impact may have differed by age. It is even more marked when looking at differences by education where we find limited evidence that the role model differentially affected individuals of distinct educational backgrounds. We see this as being consistent with this particular intervention not operating through learning but potentially through something else like motivation. We did not report the interactions by gender since too few of the participants are male to make this comparison valid.

We then study how technical assistance impacted individuals depending on their age and education, as reported in Table 15. The interpretation of the coefficients is the same as in Table 14. We find here much more evidence that the individualized assistance particularly impacted individuals who were older and more educated, at least in so far as decreasing working for a wage and increasing unemployment and self-employment right at the end of the class. The aggregate positive impact of personalized assistance (in either form) on the purchase of computers and cell phones is concentrated among the oldest and the most educated participants. The application to seed funds is most marked for individuals who are older and those with at

least high school but not necessarily for university-educated beneficiaries. The differential impacts on use of techniques and financing of inputs are less clear as sometimes they are more marked for some age groups and then for others. But overall, it seems to be that in the short-run, personalized assistance, in both formats, had a stronger impact on the choices of older and more educated individuals.

Table 12: Interaction between the effect of the role model and previous knowledge

Variables	Hours devoted		Had a business		Financial knowledge	
	β	se	β	se	β	se
<i>Income:</i>						
Income (\$) last month	-1,110	(1,399)	176,769*	(96,659)	-143,527*	(78,342)
Income main occupation (\$) last month	-2,597*	(1,495)	228,423**	(112,844)	-19,756	(84,255)
<i>Employment:</i>						
Not employed	-0.00	(0.00)	0.00	(0.04)	-0.01	(0.03)
Employed	-0.00	(0.00)	0.01	(0.03)	0.01	(0.02)
Self-employed	0.00	(0.00)	-0.03	(0.05)	0.00	(0.03)
<i>Entrepreneurship:</i>						
Has business	0.00	(0.00)	-0.07	(0.05)	0.00	(0.05)
Has a business idea	0.00	(0.00)	-0.07	(0.06)	-0.03	(0.06)
Hours dedicated to the business	0.00	(0.02)	-1.70*	(1.01)	0.78	(1.13)
Registered with the tax authority	0.00	(0.00)	-0.20**	(0.08)	0.03	(0.07)
Number of employees last month	-0.01	(0.01)	0.93	(0.72)	2.32**	(1.05)
Wagebill (\$) last month	-973.40	(1,277)	22,308	(67,780)	30,825	(47,734)
Computer	0.00	(0.00)	0.08*	(0.04)	-0.02	(0.03)
Cell phone	-0.00	(0.00)	0.11**	(0.05)	-0.11**	(0.05)
Stove, oven or microwave	-0.00	(0.00)	0.09**	(0.04)	0.01	(0.04)
Furniture	-0.00	(0.00)	0.05	(0.04)	-0.07*	(0.03)
Car	-0.00	(0.00)	0.05**	(0.03)	-0.01	(0.02)
Traction vehicle	-0.00	(0.00)	0.03	(0.03)	-0.01	(0.02)
Balance	-0.00*	(0.00)	0.08**	(0.03)	0.04	(0.03)
Refrigerator, freezer, etc	-0.00	(0.00)	0.04	(0.03)	0.02	(0.03)
Machines	-0.00	(0.00)	0.06	(0.05)	-0.03	(0.04)
Real estate	-0.00	(0.00)	0.01	(0.03)	-0.04	(0.02)
Sales (\$) last month	-6,425**	(2,896)	280,939*	(150,123)	20,772	(91,877)
Costs (\$) last month	-3,896***	(1,287)	177,863**	(85,699)	44,342	(49,998)
Applied for seed fund	0.00	(0.00)	-0.06	(0.06)	-0.06	(0.04)
<i>Financial Techniques:</i>						
Visited competition to see prices	-0.00	(0.00)	0.09*	(0.05)	0.02	(0.04)
Visited competition to see products	-0.00	(0.00)	0.03	(0.06)	0.02	(0.05)
Asked customers for the possibility of new products	-0.00	(0.00)	0.00	(0.06)	0.09*	(0.05)
Asked suppliers for products most sold	-0.00	(0.00)	0.11*	(0.07)	0.02	(0.06)
Asked ex-clients why they stopped buying	-0.00	(0.00)	0.04	(0.06)	-0.07	(0.05)
Made special offers (last 3 months)	0.00	(0.00)	-0.03	(0.05)	-0.03	(0.03)
Made publicity	0.00	(0.00)	-0.06	(0.06)	-0.01	(0.05)
Business inventory	0.00***	(0.00)	-0.07	(0.06)	-0.05	(0.05)
Register of sales and purchases	0.00	(0.00)	-0.07	(0.05)	-0.03	(0.05)
Clarity of register	0.00	(0.00)	-0.03	(0.04)	0.03	(0.03)
Budget for expenditures	-0.00	(0.00)	-0.01	(0.06)	0.02	(0.05)
Sells on credit	-0.00	(0.00)	0.06	(0.07)	-0.11*	(0.06)
Register of credit sales	0.00	(0.00)	-0.00	(0.10)	0.12	(0.08)
Frequency of business planning	0.00	(0.00)	-0.05	(0.17)	0.29**	(0.13)
Profit or loss balance	-0.00	(0.00)	0.03	(0.05)	0.02	(0.04)
Cash flows	-0.00	(0.00)	-0.03	(0.06)	0.06	(0.05)
Balance sheet	0.00	(0.00)	-0.05	(0.05)	0.04	(0.04)
Income and expenses	0.00	(0.00)	-0.04	(0.07)	0.07	(0.06)
No document prepared	-0.00	(0.00)	0.03	(0.07)	-0.08	(0.06)
Quantity of \$ in petty cash	-942.87**	(401.08)	65,318***	(24,888)	11,905	(19,788)
<i>Financing of inputs:</i>						
Savings	-0.00	(0.00)	-0.02	(0.05)	0.06	(0.05)
Credit card	-0.00	(0.00)	0.10**	(0.04)	0.00	(0.04)
Credit line	0.00	(0.00)	-0.00	(0.03)	-0.02	(0.03)
Bank loan	-0.00	(0.00)	0.03	(0.04)	-0.06	(0.04)
Family loan	-0.00	(0.00)	-0.01	(0.06)	-0.06	(0.05)
Moneylender loan	0.00	(0.00)	-0.02	(0.02)	-0.03	(0.02)

Notes: Standard errors in parenthesis. Regressions control for stratos and estimate standard errors robust to heteroscedasticity.

Table 13: Interaction between the effect of technical assistance and previous knowledge

Variables	Hours devoted		Had a business		Financial knowledge	
	β_{AC}	se	β_{AV}	se	β_{AC}	se
<i>Income:</i>						
Income (\$) last month	871.40	(1,122)	678.78	(978.34)	55,869	(83,366)
Income main occupation (\$) last month	680.45	(1,183)	481.17	(1,107)	16,521	(42,324)
<i>Employment:</i>						
Not employed	0.00	(0.00)	0.00**	(0.00)	0.01	(0.02)
Employed	-0.00**	(0.00)	-0.00**	(0.00)	-0.03	(0.02)
Self-employed	0.00	(0.00)	0.00	(0.00)	0.02	(0.03)
<i>Entrepreneurship:</i>						
Has business	-0.00	(0.00)	-0.00	(0.00)	-0.05*	(0.03)
Has a business idea	0.00	(0.00)	0.00	(0.00)	0.08	(0.05)
Hours dedicated to the business	-0.01	(0.02)	-0.01	(0.03)	-0.42	(1.19)
Registered with the tax authority	-0.00	(0.00)	-0.00	(0.00)	-0.03	(0.07)
Number of employees last month	-0.00	(0.01)	-0.00	(0.01)	0.28	(0.44)
Wagebill (\$) last month	-3,434	(2,915)	-2,308	(3,035)	-141,774	(115,707)
Computer	0.00*	(0.00)	0.00**	(0.00)	0.05	(0.03)
Cell phone	0.00	(0.00)	0.00**	(0.00)	0.03	(0.04)
Stove, oven or microwave	-0.00	(0.00)	0.00**	(0.00)	-0.04	(0.03)
Furniture	-0.00	(0.00)	0.00**	(0.00)	0.01	(0.03)
Car	0.00	(0.00)	-0.00	(0.00)	-0.02	(0.04)
Traction vehicle	0.00	(0.00)	-0.00	(0.00)	-0.03	(0.02)
Balance	0.00	(0.00)	0.00	(0.00)	0.01	(0.02)
Refrigerator, freezer, etc	0.00	(0.00)	0.00	(0.00)	-0.02	(0.03)
Machines	-0.00	(0.00)	0.00	(0.00)	-0.03	(0.03)
Real estate	-0.00	(0.00)	0.00	(0.00)	-0.03	(0.04)
Sales (\$) last month	-1,313	(2,235)	2,180	(3,630)	-76,189	(75,323)
Costs (\$) last month	-29,72	(1,454)	1,554	(1,359)	5,523	(45,184)
Applied for seed fund	0.00	(0.00)	0.00	(0.00)	0.09**	(0.05)
<i>Financial Techniques:</i>						
Visited competition to see prices	0.00	(0.00)	0.00	(0.00)	-0.01	(0.04)
Visited customers to see products	0.00	(0.00)	-0.00	(0.00)	0.00	(0.05)
Asked customers for the possibility of new products	-0.00	(0.00)	0.00	(0.00)	-0.04	(0.05)
Asked suppliers for products most sold	-0.00	(0.00)	-0.00	(0.00)	-0.05	(0.05)
Asked ex-clients why they stopped buying	-0.00	(0.00)	0.00	(0.00)	-0.01	(0.04)
Made special offers (last 3 months)	0.00	(0.00)	0.00	(0.00)	0.04	(0.04)
Made publicity	0.00	(0.00)	0.00	(0.00)	0.06	(0.05)
Business inventory	-0.00	(0.00)	0.00	(0.00)	-0.03	(0.04)
Register of sales and purchases	0.00	(0.00)	0.00	(0.00)	0.04	(0.04)
Clarity of register	0.00	(0.00)	-0.00	(0.00)	0.02	(0.03)
Budget for expenditures	0.00	(0.00)	0.00	(0.00)	0.07	(0.05)
Sells on credit	-0.00	(0.00)	-0.00	(0.00)	-0.06	(0.06)
Register of credit sales	-0.00	(0.00)	-0.00	(0.00)	0.00	(0.10)
Frequency of business planning	0.00	(0.00)	-0.00	(0.00)	0.06	(0.13)
Profit or loss balance	0.00	(0.00)	0.00	(0.00)	0.01	(0.04)
Cash flows	0.00	(0.00)	-0.00	(0.00)	0.04	(0.05)
Balance sheet	-0.00	(0.00)	-0.00	(0.00)	-0.00	(0.04)
Income and expenses	0.00	(0.00)	-0.00	(0.00)	-0.04	(0.04)
No document prepared	0.00	(0.00)	0.00	(0.00)	0.04	(0.06)
Quantity of \$ in petty cash	416.40	(454.95)	381.06	(412.34)	295.41	(16,834)
<i>Financing of inputs:</i>						
Savings	0.00	(0.00)	-0.00	(0.00)	0.04	(0.04)
Credit card	0.00	(0.00)	-0.00	(0.00)	0.03	(0.03)
Credit line	-0.00*	(0.00)	0.00	(0.00)	-0.02	(0.02)
Bank loan	-0.00	(0.00)	0.00	(0.00)	-0.00	(0.03)
Family loan	-0.00	(0.00)	0.00	(0.00)	-0.02	(0.04)
Moneylender loan	0.00	(0.00)	-0.00	(0.00)	0.01	(0.02)

Notes: Standard errors in parenthesis. Regressions control for stratos and estimate standard errors robust to heteroscedasticity.

Table 14: Interaction between the effect of the role model and age and education

Variables	40 - 50		Older than 50		High school		Tertiary education	
	β	se	β	se	β	se	β	se
<i>Income:</i>								
Income (\$) last month	-182,751	(124,393)	-48,548	(61,781)	45,272	(66,504)	-98,638	(112,197)
Income main occupation (\$) last month	55,716	(101,524)	77,382	(84,660)	-53,837	(121,709)	-67,918	(120,234)
<i>Employment:</i>								
Not employed	-0.00	(0.04)	-0.01	(0.04)	0.02	(0.05)	0.10**	(0.05)
Employed	0.08**	(0.04)	0.03	(0.03)	-0.01	(0.03)	-0.09**	(0.04)
Self-employed	-0.07	(0.05)	-0.02	(0.04)	-0.00	(0.05)	0.00	(0.05)
<i>Entrepreneurship:</i>								
Has business	0.01	(0.05)	-0.01	(0.05)	-0.03	(0.06)	-0.07	(0.06)
Has a business idea	-0.08	(0.07)	-0.06	(0.06)	0.01	(0.07)	-0.02	(0.07)
Hours dedicated to the business	-3.53**	(1.70)	-0.60	(1.55)	0.91	(1.13)	1.19	(1.52)
Registered with the tax authority	0.07	(0.10)	-0.10	(0.09)	0.00	(0.10)	0.16	(0.10)
Number of employees last month	-0.23	(0.53)	-0.32	(0.36)	-0.06	(0.45)	-0.64	(0.51)
Wagebill (\$) last month	-153,436	(131,999)	-124,048	(114,408)	96,461	(100,281)	-9,030	(57,557)
Computer	-0.02	(0.05)	0.04	(0.05)	-0.05	(0.05)	-0.01	(0.06)
Cell phone	-0.08	(0.07)	-0.05	(0.06)	0.03	(0.07)	0.04	(0.07)
Stove, oven or microwave	0.01	(0.05)	0.08*	(0.04)	0.02	(0.05)	0.07	(0.05)
Furniture	0.04	(0.05)	0.03	(0.05)	-0.01	(0.05)	-0.07	(0.06)
Car	0.03	(0.03)	0.08***	(0.03)	-0.03	(0.03)	-0.00	(0.03)
Traction vehicle	0.00	(0.03)	0.01	(0.03)	0.03	(0.03)	0.03	(0.04)
Balance	0.02	(0.04)	0.03	(0.04)	-0.03	(0.05)	-0.02	(0.05)
Refrigerator, freezer, etc	-0.00	(0.04)	0.06*	(0.04)	0.00	(0.04)	-0.02	(0.04)
Machines	-0.08	(0.06)	-0.02	(0.05)	-0.05	(0.05)	-0.06	(0.06)
Real estate	0.02	(0.04)	0.03	(0.04)	-0.00	(0.04)	0.01	(0.04)
Sales (\$) last month	-12,277	(126,765)	-9,036	(151,094)	60,150	(145,960)	-188,464	(155,444)
Costs (\$) last month	63,872	(84,481)	61,578	(69,177)	-5,499	(95,734)	-106,712	(102,175)
Applied for seed fund	0.02	(0.07)	-0.01	(0.06)	-0.04	(0.07)	-0.03	(0.07)
<i>Financial Techniques:</i>								
Visited competition to see prices	0.00	(0.06)	-0.05	(0.06)	-0.03	(0.06)	-0.00	(0.07)
Visited competition to see products	0.06	(0.07)	-0.03	(0.06)	0.05	(0.07)	0.11	(0.08)
Asked customers for the possibility of new products	-0.08	(0.07)	-0.05	(0.07)	-0.02	(0.07)	-0.04	(0.08)
Asked suppliers for products most sold	0.00	(0.08)	0.14*	(0.07)	0.01	(0.08)	-0.10	(0.09)
Asked ex-clients why they stopped buying	-0.04	(0.06)	0.09	(0.06)	0.07	(0.07)	-0.01	(0.07)
Made special offers (last 3 months)	0.03	(0.06)	-0.02	(0.06)	0.08	(0.06)	0.07	(0.07)
Made publicity	0.07	(0.06)	-0.06	(0.06)	0.06	(0.08)	0.05	(0.08)
Business inventory	-0.08	(0.07)	-0.15**	(0.06)	0.04	(0.07)	0.07	(0.07)
Register of sales and purchases	-0.03	(0.06)	-0.05	(0.05)	-0.04	(0.06)	-0.10	(0.06)
Clarity of register	0.00	(0.04)	-0.03	(0.04)	-0.02	(0.05)	0.01	(0.05)
Budget for expenditures	0.20***	(0.07)	-0.00	(0.07)	0.15**	(0.07)	0.08	(0.08)
Sells on credit	0.06	(0.09)	0.12	(0.08)	-0.18**	(0.09)	-0.25**	(0.10)
Register of credit sales	-0.14	(0.10)	0.10	(0.11)	0.14	(0.12)	0.06	(0.13)
Frequency of business planning	-0.04	(0.19)	-0.39**	(0.18)	0.18	(0.20)	-0.08	(0.20)
Profit or loss balance	0.03	(0.07)	0.03	(0.06)	-0.00	(0.06)	0.01	(0.07)
Cash flows	-0.07	(0.07)	-0.05	(0.06)	0.00	(0.06)	-0.05	(0.07)
Balance sheet	0.02	(0.05)	0.05	(0.05)	0.02	(0.06)	0.03	(0.06)
Income and expenses	0.12	(0.08)	0.02	(0.07)	-0.01	(0.08)	-0.03	(0.09)
No document prepared	-0.16*	(0.08)	-0.12	(0.07)	0.02	(0.08)	0.02	(0.09)
Quantity of \$ in petty cash	11,778	(23,593)	10,217	(22,634)	36,353	(26,345)	2,947	(30,572)
<i>Financing of inputs:</i>								
Savings	0.06	(0.07)	0.03	(0.06)	0.06	(0.07)	0.06	(0.07)
Credit card	0.10*	(0.06)	0.04	(0.05)	-0.07	(0.05)	-0.04	(0.05)
Credit line	0.02	(0.04)	0.02	(0.03)	-0.03	(0.03)	-0.04	(0.04)
Bank loan	0.01	(0.05)	0.03	(0.05)	0.01	(0.05)	-0.05	(0.06)
Family loan	-0.02	(0.07)	-0.03	(0.06)	-0.02	(0.06)	-0.01	(0.07)
Moneylender loan	0.02	(0.03)	-0.03	(0.02)	0.03	(0.03)	0.04	(0.03)

Notes: Standard errors in parenthesis. Regressions control for stratos and estimate standard errors robust to heteroscedasticity.

Table 15: Interaction between the effect of technical assistance and age and education

Variables	40 - 50			Older than 50			High school			Tertiary education			
	β_{AC}	se	β_{AN}	β_{AC}	se	β_{AN}	β_{AC}	se	β_{AN}	β_{AC}	se	β_{AN}	se
<i>Income:</i>													
Income (\$ last month	257.126	(204.310)	30.090	-31.715	(67.324)	-71.066	-12.960	(58.092)	-32.346	198.101	(170.429)	-2.480	(71.977)
Income main occupation (\$) last month	57.875	(64.375)	146.309	-16.908	(54.136)	-55.392	-65.560	(39.992)	-76.783*	84.171	(91.077)	97.027	(86.800)
<i>Employment:</i>													
Not employed	0.07*	(0.04)	0.02	-0.01	(0.04)	0.13***	0.02	(0.03)	0.05	-0.02	(0.04)	0.00	(0.04)
Employed	-0.03	(0.04)	-0.07*	-0.08***	(0.04)	-0.08***	-0.05*	(0.03)	-0.08***	-0.03	(0.04)	-0.01	(0.04)
Self-employed	-0.04	(0.04)	0.05	0.09**	(0.04)	-0.06	0.03	(0.04)	0.03	0.05	(0.04)	0.01	(0.05)
<i>Entrepreneurship:</i>													
Has business	-0.08	(0.06)	0.03	0.00	(0.05)	0.03	-0.02	(0.04)	0.06	-0.02	(0.04)	-0.03	(0.05)
Has a business idea	0.15**	(0.07)	0.02	0.01	(0.07)	0.01	0.11*	(0.06)	0.06	0.05	(0.06)	0.01	(0.07)
Hours dedicated to the business	0.55	(1.43)	-1.07	0.26	(0.83)	-0.21	-0.73	(0.89)	1.87	-3.11	(3.16)	-4.31	(2.94)
Registered with the tax authority	-0.22*	(0.11)	-0.24**	0.13	(0.08)	0.12	0.05	(0.08)	0.07	-0.20**	(0.10)	-0.10	(0.10)
Number of employees last month	0.18	(0.73)	-0.12	-0.14	(0.36)	0.82*	0.47	(0.73)	-0.05	-0.52	(0.35)	0.04	(0.29)
Wagebill (\$) last month	12.167	(129.065)	-14.635	-103.150	(120.616)	13.974	-251.380*	(99.113)	-109.172	-113.960	(98.699)	-26.209	(59.997)
Computer	0.06	(0.05)	0.10**	0.00	(0.04)	0.08*	0.06*	(0.04)	0.06	0.04	(0.05)	0.12**	(0.06)
Cell phone	0.00	(0.07)	0.14**	0.06	(0.05)	0.13**	-0.03	(0.05)	0.06	0.03	(0.06)	0.13**	(0.06)
Stove, oven or microwave	-0.07	(0.06)	0.02	0.06	(0.04)	0.03	-0.02	(0.04)	0.04	-0.05	(0.04)	0.02	(0.05)
Furniture	0.04	(0.05)	0.08	0.02	(0.05)	-0.03	0.00	(0.04)	0.04	-0.03	(0.06)	-0.02	(0.06)
Car	-0.03	(0.02)	-0.01	-0.04	(0.03)	-0.03	-0.01	(0.02)	-0.00	-0.03	(0.03)	-0.02	(0.03)
Traction vehicle	0.00	(0.03)	0.02	0.06	(0.04)	-0.02	-0.00	(0.02)	0.01	0.07*	(0.04)	0.03	(0.04)
Balance	-0.00	(0.05)	-0.03	0.06	(0.04)	0.04	-0.01	(0.04)	0.02	0.00	(0.04)	0.03	(0.04)
Refrigerator, freezer, etc	-0.07	(0.04)	-0.04	0.04	(0.05)	0.04	-0.03	(0.03)	-0.02	-0.08	(0.06)	0.01	(0.07)
Machines	-0.10	(0.07)	-0.04	0.04	(0.05)	0.01	-0.03	(0.04)	0.02	-0.01	(0.03)	0.01	(0.03)
Real estate	0.02	(0.04)	0.08**	-0.03	(0.03)	0.00	-0.03	(0.03)	0.01	-0.00	(0.04)	0.03	(0.04)
Sales (\$) last month	-115.960	(91.745)	124.486	-30.293	(68.417)	147.199	-87.494	(111.355)	-114.878	256.282	(88.329)	235.300	(213.148)
Costs (\$) last month	-69.422	(75.588)	189.934*	53.956	(101.308)	63.070	-46.706	(52.597)	-2.222	24.986	(76.754)	83.583	(73.651)
Applied for seed fund	0.05	(0.07)	0.10	0.11*	(0.06)	-0.01	0.11**	(0.05)	0.07	0.01	(0.07)	-0.02	(0.07)
<i>Financial Techniques:</i>													
Visited competition to see prices	-0.03	(0.06)	-0.05	0.07	(0.06)	0.06	0.06	(0.05)	0.04	-0.15**	(0.06)	-0.05	(0.06)
Visited competition to see products	-0.05	(0.08)	-0.14*	0.12*	(0.07)	-0.07	0.07	(0.06)	-0.05	-0.08	(0.07)	-0.10	(0.07)
Asked customers for the possibility of new products	-0.05	(0.08)	0.01	0.01	(0.07)	0.05	0.03	(0.06)	0.03	-0.05	(0.08)	0.01	(0.07)
Asked suppliers for products most sold	-0.05	(0.09)	0.04	-0.03	(0.08)	-0.02	-0.03	(0.07)	0.00	-0.03	(0.08)	-0.01	(0.08)
Asked ex-clients why they stopped buying	-0.09	(0.07)	0.01	-0.02	(0.07)	0.00	0.02	(0.06)	0.08	-0.10	(0.06)	-0.01	(0.07)
Made special offers (last 3 months)	0.01	(0.06)	0.02	0.01	(0.05)	-0.03	0.05	(0.04)	0.03	0.07	(0.06)	0.04	(0.07)
Made publicity	0.11	(0.07)	0.13*	0.01	(0.07)	-0.05	0.06	(0.06)	0.11**	0.10	(0.06)	0.01	(0.07)
Business inventory	0.10	(0.07)	0.00	-0.06	(0.06)	0.04	0.03	(0.06)	0.09*	0.07	(0.07)	-0.02	(0.07)
Register of sales and purchases	0.02	(0.06)	-0.07	0.03	(0.06)	0.03	0.06	(0.04)	0.00	-0.05	(0.05)	-0.04	(0.06)
Clarity of register	0.11**	(0.04)	0.04	0.00	(0.04)	0.01	0.07*	(0.04)	0.03	0.04	(0.04)	0.01	(0.04)
Budget for expenditures	0.04	(0.08)	-0.05	0.06	(0.07)	0.03	0.03	(0.06)	-0.02	0.08	(0.07)	0.05	(0.08)
Sells on credit	-0.22**	(0.09)	0.15*	-0.02	(0.08)	-0.14	-0.07	(0.09)	0.01	-0.04	(0.09)	0.06	(0.09)
Register of credit sales	0.28*	(0.16)	-0.04	0.07	(0.14)	0.14	-0.01	(0.13)	-0.08	-0.01	(0.15)	-0.08	(0.15)
Frequency of business planning	0.17	(0.21)	-0.02	0.18	(0.17)	0.12	0.08	(0.17)	0.10	0.03	(0.19)	-0.07	(0.19)
Profit or loss balance	0.03	(0.08)	0.08	-0.07	(0.06)	-0.11*	0.03	(0.06)	0.02	-0.01	(0.07)	0.06	(0.07)
Cash flows	-0.11	(0.08)	-0.04	0.02	(0.06)	-0.02	0.03	(0.06)	-0.06	0.02	(0.07)	0.00	(0.07)
Balance sheet	-0.06	(0.06)	-0.02	-0.02	(0.05)	-0.07	-0.02	(0.05)	-0.05	-0.02	(0.06)	-0.02	(0.06)
Income and expenses	-0.11	(0.10)	-0.00	0.12	(0.08)	-0.01	0.04	(0.07)	0.00	-0.06	(0.08)	-0.06	(0.09)
No document prepared	0.09	(0.09)	-0.04	0.02	(0.08)	0.04	-0.01	(0.07)	0.02	0.08	(0.08)	-0.01	(0.08)
Quantity of \$ in petty cash	20.746	(23.757)	32.772	21.653	(32.139)	-11.061	10.524	(22.264)	-11.770	21.124	(23.277)	16.913	(28.602)
<i>Financing of inputs:</i>													
Savings	-0.10	(0.07)	-0.06	0.14**	(0.06)	0.10	0.06	(0.05)	-0.02	-0.01	(0.07)	0.02	(0.08)
Credit card	0.03	(0.06)	0.01	0.00	(0.05)	-0.05	0.02	(0.04)	-0.00	0.03	(0.06)	0.03	(0.07)
Credit line	0.00	(0.03)	0.00*	0.01	(0.03)	0.02	-0.04	(0.03)	-0.02	-0.02	(0.03)	0.05	(0.05)
Bank loan	0.05	(0.05)	0.02	-0.07	(0.05)	-0.03	-0.02	(0.04)	-0.04	0.02	(0.05)	0.09	(0.06)
Family loan	-0.04	(0.08)	0.11	0.04	(0.06)	-0.01	0.02	(0.06)	0.11*	-0.14*	(0.08)	-0.05	(0.08)
Money/lender loan	-0.04	(0.04)	-0.04	0.01	(0.02)	0.01	0.03	(0.03)	-0.01	-0.02	(0.03)	0.01	(0.04)

Notes: Standard errors in parenthesis. Regressions control for stratos and estimate standard errors robust to heteroscedasticity.

Table 16: Interaction between the effect of the role model and sectors

Variables	Manufacturing		Services		Stores	
	β	se	β	se	β	se
<i>Income:</i>						
Income (\$) last month	-53,915	(81,128)	-16,055	(76,098)	-19,624	(92,392)
Income main occupation (\$) last month	-117,243	(74,294)	-15,876	(76,610)	-3,112	(100,069)
<i>Employment:</i>						
Not employed	0.02	(0.03)	0.05	(0.03)	-0.06	(0.05)
Employed	0.00	(0.03)	-0.03	(0.03)	0.04	(0.04)
Self-employed	-0.02	(0.04)	-0.01	(0.04)	0.02	(0.04)
<i>Entrepreneurship:</i>						
Has business	-0.01	(0.05)	0.03	(0.04)	-0.04	(0.05)
Has a business idea	0.05	(0.08)	0.02	(0.07)	0.14*	(0.09)
Hours dedicated to the business	0.64	(1.12)	-0.67	(1.07)	0.67	(1.10)
Registered with the tax authority	-0.01	(0.11)	0.19**	(0.09)	0.07	(0.11)
Number of employees last month	-0.51	(0.53)	0.05	(0.53)	0.97	(1.14)
Wagebill (\$) last month	-21,736	(78,233)	64,181	(135,299)	-44,349	(64,069)
Computer	-0.03	(0.06)	-0.02	(0.05)	-0.02	(0.06)
Cell phone	0.03	(0.06)	0.05	(0.06)	-0.08	(0.08)
Stove, oven or microwave	0.02	(0.05)	-0.02	(0.04)	-0.10*	(0.06)
Furniture	-0.10	(0.06)	-0.01	(0.05)	-0.04	(0.08)
Car	0.00	(0.03)	-0.01	(0.03)	-0.04	(0.05)
Traction vehicle	0.02	(0.02)	0.02	(0.03)	-0.03	(0.04)
Balance	0.01	(0.04)	0.00	(0.03)	-0.07	(0.05)
Refrigerator, freezer, etc	-0.00	(0.04)	-0.05*	(0.03)	0.02	(0.05)
Machines	-0.04	(0.08)	-0.04	(0.05)	-0.00	(0.06)
Real estate	-0.03	(0.04)	-0.03	(0.04)	-0.04	(0.06)
Sales (\$) last month	-130,560	(116,454)	24,856	(116,789)	106,420	(181,998)
Costs (\$) last month	-152,347*	(81,089)	-99,019	(74,226)	14,801	(109,195)
Applied for seed fund	-0.01	(0.08)	0.05	(0.06)	-0.03	(0.08)
<i>Financial Techniques:</i>						
Visited competition to see prices	-0.07	(0.05)	0.02	(0.06)	0.03	(0.06)
Visited competition to see products	-0.04	(0.07)	0.07	(0.06)	-0.01	(0.08)
Asked customers for the possibility of new products	0.04	(0.08)	0.02	(0.07)	0.06	(0.08)
Asked suppliers for products most sold	0.09	(0.09)	-0.05	(0.07)	0.05	(0.09)
Asked ex-clients why they stopped buying	-0.01	(0.08)	-0.04	(0.06)	0.01	(0.08)
Made special offers (last 3 months)	0.04	(0.07)	-0.05	(0.05)	0.04	(0.06)
Made publicity	-0.04	(0.07)	-0.09*	(0.05)	-0.02	(0.07)
Business inventory	0.03	(0.07)	0.03	(0.07)	0.07	(0.08)
Register of sales and purchases	-0.08	(0.06)	-0.05	(0.05)	0.06	(0.07)
Clarity of register	-0.01	(0.05)	-0.02	(0.04)	0.00	(0.05)
Budget for expenditures	-0.04	(0.08)	0.02	(0.07)	0.06	(0.08)
Sells on credit	0.05	(0.10)	-0.09	(0.09)	0.08	(0.11)
Register of credit sales	0.05	(0.18)	-0.09	(0.13)	-0.01	(0.12)
Frequency of business planning	0.10	(0.23)	0.04	(0.18)	0.05	(0.21)
Profit or loss balance	-0.08	(0.07)	0.05	(0.06)	0.01	(0.09)
Cash flows	-0.07	(0.07)	0.05	(0.06)	0.07	(0.09)
Balance sheet	-0.02	(0.06)	0.00	(0.05)	0.03	(0.08)
Income and expenses	0.04	(0.09)	0.03	(0.08)	0.04	(0.09)
No document prepared	-0.01	(0.09)	-0.08	(0.08)	-0.11	(0.08)
Quantity of \$ in petty cash	-13,295	(23,986)	-23,388	(23,225)	-29,250	(37,540)
<i>Financing of inputs:</i>						
Savings	-0.03	(0.07)	0.02	(0.06)	-0.06	(0.09)
Credit card	-0.12*	(0.06)	-0.09	(0.06)	0.02	(0.06)
Credit line	0.01	(0.04)	0.01	(0.03)	-0.02	(0.05)
Bank loan	-0.06	(0.05)	-0.04	(0.05)	-0.01	(0.07)
Family loan	0.03	(0.07)	0.04	(0.06)	-0.00	(0.09)
Moneylender loan	-0.05**	(0.02)	0.02	(0.03)	0.01	(0.03)

Notes: Standard errors in parenthesis. Regressions control for stratos and estimate standard errors robust to heteroscedasticity.

Table 17: Interaction between the effect of technical assistance and sectors

Variables	Manufacturing			Services			Stores					
	β_{AC}	se	β_{AN}	β_{AC}	se	β_{AN}	β_{AC}	se	β_{AN}	se		
<i>Income:</i>												
Income (\$) last month	-81,395	(92,027)	-143,662	(90,101)	-56,313	(83,598)	-53,940	(101,287)	83,819	(132,818)	181,010	(145,792)
Income main occupation (\$) last month	93,750	(97,940)	69,809	(104,737)	-89,390	(94,020)	-11,649	(90,697)	59,580	(97,614)	134,932	(140,467)
<i>Employment:</i>												
Not employed	0.02	(0.04)	0.06	(0.04)	0.04	(0.03)	0.07*	(0.04)	-0.01	(0.08)	0.05	(0.08)
Employed	-0.04	(0.04)	-0.04	(0.03)	-0.04	(0.03)	-0.07*	(0.04)	-0.03	(0.06)	-0.11	(0.07)
Self-employed	0.02	(0.05)	-0.02	(0.05)	-0.00	(0.03)	0.01	(0.04)	0.04	(0.07)	0.06	(0.07)
<i>Entrepreneurship:</i>												
Has business	-0.07	(0.06)	-0.09	(0.06)	-0.03	(0.04)	-0.06	(0.06)	0.04	(0.07)	0.00	(0.07)
Has a business idea	0.11	(0.12)	0.16	(0.12)	0.14*	(0.08)	0.10	(0.09)	-0.00	(0.12)	-0.06	(0.13)
Hours dedicated to the business	-0.69	(1.41)	0.11	(1.81)	-3.19*	(1.66)	-4.29**	(1.72)	-0.40	(1.66)	-1.68	(1.64)
Registered with the tax authority	0.19	(0.16)	0.12	(0.16)	0.03	(0.12)	0.11	(0.13)	0.07	(0.16)	-0.08	(0.18)
Number of employees last month	-0.07	(0.38)	0.73	(0.36)	0.46	(1.03)	-0.43	(0.37)	0.28	(0.50)	0.42	(0.67)
Wagebill (\$) last month	-63,024	(154,475)	89,300	(250,236)	-236,602	(207,883)	-275,609	(314,417)	-183,193	(139,672)	-85,607	(135,502)
Computer	0.16**	(0.07)	0.18***	(0.06)	0.05	(0.05)	0.04	(0.06)	0.06	(0.08)	0.02	(0.08)
Cell phone	0.07	(0.08)	0.13	(0.10)	0.05	(0.07)	0.11	(0.08)	0.25**	(0.10)	0.10	(0.10)
Stove, oven or microwave	0.03	(0.07)	0.11	(0.07)	-0.07*	(0.04)	0.00	(0.05)	-0.00	(0.06)	0.13	(0.09)
Furniture	-0.11	(0.09)	-0.13*	(0.08)	-0.02	(0.06)	0.06	(0.07)	0.07	(0.10)	0.13	(0.11)
Car	-0.00	(0.05)	-0.03	(0.04)	-0.02	(0.04)	-0.03	(0.05)	-0.04	(0.08)	-0.10	(0.07)
Traction vehicle	-0.01	(0.02)	0.04	(0.03)	0.03	(0.04)	0.00	(0.03)	-0.00	(0.04)	0.01	(0.04)
Balance	0.01	(0.05)	0.04	(0.05)	-0.01	(0.03)	0.02	(0.04)	-0.04	(0.07)	0.01	(0.07)
Refrigerator, freezer, etc	0.04	(0.05)	-0.01	(0.05)	0.03	(0.04)	0.00	(0.03)	0.06	(0.06)	-0.01	(0.05)
Machines	-0.02	(0.11)	0.02	(0.11)	-0.05	(0.06)	0.03	(0.07)	-0.08	(0.08)	0.01	(0.09)
Real estate	-0.03	(0.04)	0.02	(0.05)	0.03	(0.04)	0.04	(0.04)	0.02	(0.10)	-0.01	(0.10)
Sales (\$) last month	-42,145	(135,859)	99,849	(162,926)	-211,192	(191,391)	-117,244	(172,512)	-112,090	(136,573)	78,383	(153,519)
Costs (\$) last month	92,950	(95,086)	304,534**	(125,921)	-18,363	(97,706)	-18,004	(92,268)	-122,296	(113,463)	218,674	(141,875)
Applied for seed fund	-0.01	(0.10)	0.01	(0.11)	0.06	(0.07)	0.01	(0.08)	0.22**	(0.11)	0.14	(0.12)
<i>Financial Techniques:</i>												
Visited competition to see prices	0.14*	(0.08)	0.12*	(0.07)	0.01	(0.07)	-0.03	(0.08)	-0.04	(0.09)	0.04	(0.08)
Visited competition to see products	0.05	(0.10)	0.07	(0.10)	0.02	(0.08)	-0.06	(0.09)	-0.20**	(0.10)	-0.09	(0.09)
Asked customers for the possibility of new products	-0.01	(0.11)	0.11	(0.10)	0.03	(0.09)	-0.01	(0.08)	-0.18**	(0.09)	-0.38***	(0.10)
Asked suppliers for products most sold	-0.14	(0.12)	-0.09	(0.12)	-0.01	(0.10)	0.05	(0.10)	-0.12	(0.14)	0.03	(0.13)
Asked ex-clients why they stopped buying	-0.03	(0.10)	0.02	(0.11)	0.04	(0.08)	0.05	(0.09)	0.07	(0.12)	-0.00	(0.12)
Made special offers (last 3 months)	0.05	(0.10)	0.02	(0.12)	0.05	(0.06)	0.02	(0.07)	0.06	(0.08)	0.02	(0.11)
Made publicity	-0.04	(0.10)	-0.08	(0.11)	0.04	(0.07)	0.02	(0.08)	0.12	(0.10)	0.20**	(0.10)
Business inventory	-0.03	(0.09)	0.02	(0.09)	0.01	(0.08)	0.07	(0.09)	-0.06	(0.11)	-0.12	(0.12)
Register of sales and purchases	-0.03	(0.09)	0.06	(0.07)	-0.01	(0.07)	-0.02	(0.07)	0.10	(0.07)	0.07	(0.08)
Clarity of register	-0.07	(0.06)	-0.07	(0.06)	0.00	(0.05)	-0.01	(0.05)	0.14**	(0.06)	0.03	(0.07)
Budget for expenditures	-0.16	(0.10)	-0.02	(0.11)	0.02	(0.09)	-0.08	(0.09)	0.04	(0.12)	0.09	(0.11)
Sells on credit	-0.21*	(0.13)	-0.09	(0.13)	-0.14	(0.11)	-0.04	(0.11)	-0.05	(0.16)	-0.11	(0.16)
Register of credit sales	-0.15	(0.27)	-0.27	(0.25)	0.09	(0.24)	-0.23	(0.23)	-0.11	(0.13)	-0.17	(0.19)
Frequency of business planning	0.07	(0.31)	-0.45	(0.35)	-0.06	(0.23)	-0.46*	(0.26)	-0.22	(0.29)	-0.01	(0.27)
Profit or loss balance	0.03	(0.09)	-0.04	(0.11)	0.04	(0.07)	-0.00	(0.08)	0.08	(0.13)	0.22	(0.14)
Cash flows	-0.11	(0.11)	-0.14	(0.11)	0.06	(0.08)	-0.02	(0.08)	-0.02	(0.12)	0.14	(0.14)
Balance sheet	0.03	(0.06)	0.10	(0.08)	-0.02	(0.06)	-0.00	(0.06)	0.04	(0.10)	0.06	(0.12)
Income and expenses	-0.09	(0.12)	-0.09	(0.12)	0.02	(0.10)	-0.13	(0.10)	0.00	(0.14)	-0.01	(0.14)
No document prepared	0.14	(0.12)	0.05	(0.12)	0.00	(0.09)	0.07	(0.10)	0.12	(0.12)	-0.03	(0.11)
Quantity of \$ in petty cash	-1,860	(27,537)	4,502	(32,082)	-8,680	(29,167)	5,948	(30,978)	870.45	(45,775)	-2,246	(48,941)
<i>Financing of inputs:</i>												
Savings	0.05	(0.09)	-0.06	(0.10)	0.05	(0.08)	0.03	(0.09)	0.05	(0.10)	-0.05	(0.12)
Credit card	0.03	(0.08)	-0.12*	(0.07)	0.03	(0.07)	0.00	(0.08)	0.02	(0.06)	-0.02	(0.07)
Credit line	-0.05	(0.05)	-0.01	(0.06)	-0.06	(0.04)	-0.02	(0.05)	-0.01	(0.06)	0.06	(0.08)
Bank loan	-0.07	(0.07)	-0.07	(0.08)	-0.02	(0.06)	0.03	(0.06)	0.02	(0.09)	-0.05	(0.09)
Family loan	-0.04	(0.10)	0.06	(0.09)	-0.08	(0.08)	-0.00	(0.08)	0.02	(0.12)	0.02	(0.12)
Moneylender loan	0.09**	(0.05)	0.03	(0.02)	-0.06	(0.04)	-0.03	(0.04)	0.03	(0.04)	0.01	(0.03)

Notes: Standard errors in parenthesis. Regressions control for stratos and estimate standard errors robust to heteroscedasticity.

Finally, we separate the treatment effects into sectors of specialization of the participant, may it be production/manufacturing, services or trade. In this case, we do not present the interaction effect if not separate the treatment effect by each sector. Thus, the coefficients in Table 16 should be interpreted as being the impact of the role model for individuals who declared being involved in each sector. The results suggest that the role model increased the formalization of firms in the service sector and fomented new businesses among those interested in trade. The decrease in the use of assets appear to be particularly concentrated in the services and the trade sector while the aggregate increase in application to seed capital is only visible in those involved in services. The role model appear to have particularly changed the way production-oriented firms financed the purchase of inputs, reducing the use of two of the most costly ways of financing inputs: credit cards and moneylenders. This may be because financing of inputs is most important for firms in that sector. The interactions between technical assistance and sectors is presented in Table 17 where coefficients should be interpreted exactly like in Table 16. It shows there that the changes in terms of employment were concentrated in services and the generation of new self-employed, among individuals who were involved in sales. The aggregate impact on new ideas is concentrated in production and services (although only significantly so for services). The purchase of computers is only significant for the manufacturing sector while the application to seed capital is concentrated in the trade sector. We find very limited evidence again that this occurs through changes in techniques as, if anything, individualized technical assistance appears to have worsened the practices of firms in each sector. However, the fact that most of the impact of the individualized technical assistance appears to be concentrated in production while that of the role model is strongest in the other two suggest that they may be operating through different channels. In particular, the management of a production firm may be more complex than that of trade and thus particularly benefit from personalized assistance.

While not reported here, we have explored how the characteristics of the role model may have influenced its impact. We have so far looked at whether the role model is the same sex, in the same age range as the participant and whether the participant is involved in a similar type of business as the role model. We have found little evidence that a role model that is “closer” to the participant increases the benefits of participation more strongly than when the role model is not as similar to the participant. This suggests that the motivational aspect of the role model is not linked necessarily, as it has been argued in other contexts, to offering an example similar to those of the participants but maybe simply to offering a sense that one can expand and improve its business, no matter what sector one works in or what characteristics one has.

5.4 Impact Evaluation in Long Term

The last survey is applied a year after the beginning of the course, and has had almost a 70% response rate. This information is available only for the first three cohorts so far. It is important to remember that results may change with the inclusion of our last cohort, which will be included in April 2015. Reassuringly, our response rate in this survey is orthogonal to our treatment branches, making our results unlikely to be biased by selection into the interview.

Table 18 shows that all our interventions appear to increase the income obtained from the main occupation but never in a statistically significant way. The impact of the intervention on credit is limited, although those who were assigned to receive the visit of the role model appear to be more likely to receive funds from micro-credit institutions. Those who received individual technical assistance in the class are also less likely than the control group to have been denied a bank loan although they were not more likely to apply for one. The participation of a role model increases the probability that the person is self-employed (although not necessarily as the owner of the business). Personalized technical assistance decreases significantly the number of hours devoted to the business among business owners by about 5 hours per week. Finally, all

the interventions increase profits but not statistically significantly so, nor are sales and costs significantly altered.

Table 18: Impact Evaluation in Long Term – Economic Variables

Variables:	Role Model			Technical Assistance			
	N	β - rm	se - rm	β - Ac	se - Ac	β - An	se - An
<i>Income:</i>							
Income p/c from work	542	9,594	(9,708)	13,860	(17,437)	1,445	(12,616)
Main household income source	606	0.04	(0.04)	0.01	(0.06)	-0.01	(0.06)
<i>Credit and banking:</i>							
Has a bank account	481	0.02	(0.04)	0.01	(0.05)	-0.00	(0.05)
Has credit	481	0.03	(0.04)	-0.08	(0.06)	-0.07	(0.06)
Has bank credit	408	-0.01	(0.03)	-0.04	(0.06)	-0.07	(0.05)
Has retail credit	373	-0.02	(0.02)	-0.02	(0.04)	-0.02	(0.03)
Has microfinance institution credit	395	0.08**	(0.03)	-0.04	(0.05)	0.01	(0.04)
Has family or neighbor credit	373	0.03	(0.02)	-0.03	(0.04)	-0.03	(0.03)
Has credit with another entity	364	-0.00	(0.02)	0.02	(0.03)	0.02	(0.03)
Asked for bank credit (last 6 months)	478	-0.02	(0.03)	0.00	(0.04)	-0.01	(0.04)
Bank credit rejected (last 6 months)	480	-0.01	(0.02)	-0.04*	(0.02)	-0.01	(0.02)
<i>Entrepreneurship:</i>							
Has business	618	0.06*	(0.03)	-0.01	(0.05)	0.04	(0.05)
Owner	490	-0.05*	(0.02)	-0.02	(0.03)	0.03	(0.03)
Hours per week	485	0.44	(1.97)	-5.12*	(2.80)	-6.05**	(2.73)
Registered with tax authority	477	-0.04	(0.04)	0.04	(0.06)	0.03	(0.06)
Number of workers (last month)	433	-0.03	(0.09)	-0.10	(0.16)	-0.11	(0.16)
Wagebill (\$) last month	393	-7,577	(17,199)	-15,706	(28,680)	-17,817	(25,375)
Sales (\$) last month	442	63,311	(89,614)	-28,677	(147,550)	42,896	(108,050)
Costs (\$) last month	400	-20,080	(70,619)	-122,236	(119,579)	3,037	(75,366)
Reinvestment	421	62,708	(45,121)	33,333	(58,654)	36,245	(43,482)

Notes: Standard errors in parenthesis. Regressions control for stratos and estimate standard errors robust to heteroscedasticity.

While these are not extremely strong results, they do suggest that there is some lasting effect of the intervention. The question, again, is what explains this change.

Table 19 shows that there are few long-lasting changes in management/financial aspects of the business. The only statistically significant results we obtain in this table are that personalized technical assistance increased the probability of making special offers and also the financing of inputs through savings instead of through loans. It also appears to increase the quantity of petty cash that entrepreneurs keep in their business. However, Table 20 suggests that our intervention may have benefited some entrepreneurs through improved learning. It shows that individuals who received personalized assistance answered correctly our financial literacy questions about 10-15 percent more often than those who received it in a group setting. Thus, while there may have been limited effect on the acquisition of knowledge right at the end of the class, personalized assistance may help individuals to retain the material better in the long-run. We need to see whether this result will remain as strong once we add the last cohort.

The long-run changes we observed in response to the role model, on the other hand, clearly do not seem to be related to better financial literacy nor to better business practices. However, it may simply be linked to the added motivation that the role model offers the participants. In our last wave of the survey, we will include measures related to that so that we can test whether this is a logical channel through which the role model impacts outcomes.

Table 19: Impact Evaluation in Long Term – Financial Techniques

Variables:	Role Model			Technical Assistance			
	N	β - rm	se - rm	β - Ac	se - Ac	β - An	se - An
Visited competition to see prices	488	-0.02	(0.04)	-0.07	(0.07)	-0.00	(0.06)
Visited competition to see products	488	0.03	(0.04)	-0.06	(0.07)	0.03	(0.07)
Asked customers for possibility of sales of new products	489	-0.02	(0.04)	-0.04	(0.07)	0.05	(0.06)
Asked suppliers for products most sold	482	-0.02	(0.05)	-0.00	(0.07)	-0.02	(0.07)
Asked ex-clients why they stopped buying	481	0.03	(0.04)	-0.07	(0.07)	-0.04	(0.06)
Made special offers (last 3 months)	488	0.04	(0.04)	0.12*	(0.07)	0.12*	(0.07)
Made publicity	488	0.03	(0.05)	-0.04	(0.07)	0.02	(0.07)
Business inventory	485	0.03	(0.05)	0.04	(0.07)	0.10	(0.07)
Register of sales and purchases	486	-0.01	(0.03)	-0.01	(0.05)	0.05	(0.04)
Clarity of register	486	-0.03	(0.04)	0.01	(0.06)	0.01	(0.05)
Budget for expenditures	484	-0.02	(0.04)	0.00	(0.07)	0.06	(0.07)
Sell on credit	483	0.05	(0.05)	0.03	(0.07)	0.04	(0.07)
Profits or loss balances	486	0.01	(0.05)	0.03	(0.07)	0.08	(0.07)
Quantity of \$in petty cash	429	4.33	(16,610)	23,994*	(12,569)	12,719	(15,004)
<i>Financing of inputs:</i>							
Savings	471	0.02	(0.03)	0.07	(0.05)	0.08*	(0.05)
Bank loan	471	-0.03	(0.04)	-0.03	(0.06)	-0.02	(0.06)
Loan from friend or family	471	-0.03	(0.04)	-0.04	(0.07)	-0.06	(0.07)

Notes: Standard errors in parenthesis. Regressions control for stratos and estimate standard errors robust to heteroscedasticity.

Table 20: Impact Evaluation in Long Term – Financial literacy

Variables:	Role Model			Technical Assistance			
	N	β - rm	se - rm	β - Ac	se - Ac	β - An	se - An
Analytic question 1	562	0.02	(0.04)	0.11**	(0.05)	0.05	(0.05)
Analytic question 2	510	0.01	(0.04)	0.14***	(0.05)	0.12**	(0.05)

Notes: Standard errors in parenthesis. Regressions control for stratos and estimate standard errors robust to heteroscedasticity.

We now explore whether the impacts we have measured at the aggregate level in the long run are heterogeneous in the characteristics of the beneficiaries. In the short-run, we had found that the role model was potentially more useful to individuals who had previously dedicated less hours to their business or who had lower levels of financial literacy ex-ante. We repeat the exercise, but this time for our long-term effects, in Table 21. We find that the visit of a role model increases more the likelihood of having a bank account and bank credit for individuals who devoted more hours and had higher financial literacy before the class. But the aggregate effect that the role model had on increasing the take-up of micro-credit is concentrated in those without an existing business before the training. The aggregate impact the role model had on the likelihood of having a business is not dependent on the experience or knowledge of the participant. However, the presence of a role model particularly increased the hours dedicated to the business for individuals who did not have a business before the program. The role model changed the financing of inputs of individuals with less hours previously dedicated to the business and to those who had a business before compared to those who had only an idea when they started the class. Finally, the role model appears to have particularly improved the answer to our first question of financial literacy for those who had no business before the training. Overall, these results seem to strengthen our previous conclusions that the role model was particularly useful for individuals with less experience although in this case, it seems to have impacted seasoned entrepreneurs in some outcomes such as banking.

Table 21: Interaction of the long-term impact of the role model with previous knowledge

Variables	Hours dedicated		Had a business		Financial knowledge	
	β	se	β	se	β	se
<i>Income:</i>						
Income p/c from work	490.74	(367.90)	-5,929	(18,106)	12,281	(18,463)
Main household income source	0.00	(0.00)	-0.01	(0.08)	-0.02	(0.08)
<i>Credit and banking:</i>						
Has a bank account	0.00**	(0.00)	-0.07	(0.07)	-0.07	(0.08)
Has credit	0.00	(0.00)	-0.09	(0.08)	0.14*	(0.08)
Has bank credit	0.00	(0.00)	0.04	(0.07)	0.13**	(0.07)
Has retail credit	-0.00	(0.00)	0.01	(0.04)	0.10	(0.06)
Has microfinance institution credit	0.00	(0.00)	-0.15***	(0.06)	0.06	(0.06)
Has family or neighbor credit	0.00	(0.00)	-0.01	(0.05)	-0.02	(0.03)
Has credit with another entity	0.00	(0.00)	-0.04	(0.03)	0.04	(0.04)
Asked for bank credit (last 6 months)	0.00***	(0.00)	-0.07	(0.05)	0.08	(0.06)
Bank credit rejected (last 6 months)	0.00**	(0.00)	-0.07**	(0.03)	0.08*	(0.04)
<i>Entrepreneurship:</i>						
Has business	-0.00	(0.00)	-0.01	(0.07)	0.05	(0.07)
Owner	0.00	(0.00)	-0.03	(0.05)	0.00	(0.05)
Hours per week	0.10	(0.08)	-8.17**	(4.02)	-4.30	(3.44)
Registered with tax authority	-0.00	(0.00)	0.04	(0.08)	-0.06	(0.08)
Number of workers (last month)	0.00	(0.00)	0.18	(0.24)	-0.21	(0.17)
Wagebill (\$) last month	-190.91	(802.22)	31,379	(48,633)	5,284	(40,365)
Sales (\$) last month	-296.45	(4,251)	474,899*	(269,507)	-107,124	(238,544)
Costs (\$) last month	-2,335	(3,276)	193,799	(196,904)	-249,818	(175,663)
Reinvestment	1,391	(2,528)	75,059	(79,984)	14,154	(79,925)
<i>Financial techniques:</i>						
Visited competition to see prices	0.00	(0.00)	-0.07	(0.09)	0.04	(0.09)
Visited competition to see products	0.00	(0.00)	-0.12	(0.09)	0.13	(0.09)
Asked customers for possibility of sales of new products	0.00	(0.00)	-0.07	(0.09)	-0.02	(0.09)
Asked suppliers for products most sold	0.00	(0.00)	-0.03	(0.09)	-0.01	(0.10)
Asked ex-clients why they stopped buying	0.00	(0.00)	0.06	(0.08)	0.14*	(0.08)
Made special offers (last 3 months)	0.00	(0.00)	-0.03	(0.09)	0.08	(0.09)
Made publicity	0.00	(0.00)	-0.02	(0.09)	-0.01	(0.09)
Business inventory	0.00**	(0.00)	-0.20**	(0.09)	-0.14	(0.09)
Register of sales and purchases	0.00***	(0.00)	-0.10	(0.06)	0.05	(0.07)
Clarity of register	0.00*	(0.00)	0.04	(0.08)	0.10	(0.07)
Budget for expenditures	0.00	(0.00)	0.09	(0.09)	-0.10	(0.09)
Sell on credit	-0.00	(0.00)	0.01	(0.10)	-0.08	(0.10)
Profits or loss balances	0.00*	(0.00)	-0.08	(0.09)	-0.13	(0.09)
Quantity of \$ in petty cash	647.07	(443.92)	21,197	(23,587)	23,168*	(12,585)
<i>Financing of inputs:</i>						
Savings	-0.00**	(0.00)	-0.01	(0.07)	-0.03	(0.06)
Bank loan	0.00	(0.00)	-0.04	(0.08)	0.03	(0.07)
Loan from friend or family	-0.00**	(0.00)	0.23**	(0.09)	-0.08	(0.09)
<i>Knowledge:</i>						
Analytic question 1	0.00	(0.00)	-0.21***	(0.07)	0.03	(0.08)
Analytic question 2	0.00	(0.00)	-0.03	(0.08)	-0.13	(0.09)

Notes: Standard errors in parenthesis. Regressions control for stratos and estimate standard errors robust to heteroscedasticity.

We then explore whether technical assistance also had a differential impact depending on the past experience and knowledge of the participant, as presented in Table 22. These results suggest that technical assistance changes the business practices of individuals with higher previous financial literacy, those who previously devoted more hours to their business and those who arrived to the class only with an idea instead of an existing business. These results closely mirror those we obtain in the short-run, suggesting again that technical assistance is particularly

useful for individuals who have a better financial knowledge and experience, although not necessarily those with an existing business.

Table 22: Interaction of the long-term impact of technical assistance with previous knowledge

Variables	Hours devoted			Had a business			Financial knowledge					
	β_{AC}	se	β_{AN}	se	β_{AC}	se	β_{AC}	se	β_{AN}	se		
<i>Income:</i>												
Income (\$) last month	871.40	(1,122)	678.78	(978.34)	55,869	(83,366)	-9,720	(45,900)	18,060	(55,879)	-24,885	(35,237)
Income main occupation (\$) last month	680.45	(1,183)	481.17	(1,107)	16,521	(42,324)	21,157	(41,634)	-19,084	(31,139)	40,520	(52,243)
<i>Employment:</i>												
Not employed	0.00	(0.00)	0.00*	(0.00)	0.01	(0.02)	0.04	(0.03)	-0.01	(0.03)	0.02	(0.02)
Employed	-0.00**	(0.00)	-0.00***	(0.00)	-0.03	(0.02)	-0.06***	(0.02)	-0.04*	(0.02)	-0.05***	(0.02)
Self-employed	0.00	(0.00)	0.00	(0.00)	0.02	(0.03)	0.02	(0.03)	0.04	(0.03)	0.03	(0.03)
<i>Entrepreneurship:</i>												
Has business	-0.00	(0.00)	-0.00	(0.00)	-0.05*	(0.03)	-0.03	(0.03)	-0.08**	(0.04)	-0.00	(0.03)
Has a business idea	0.00	(0.00)	0.00	(0.00)	0.08	(0.05)	0.07	(0.05)	0.09**	(0.05)	0.01	(0.04)
Hours dedicated to the business	-0.01	(0.02)	-0.01	(0.03)	-0.42	(1.19)	-0.19	(1.65)	-1.10	(1.16)	0.07	(0.98)
Registered with the tax authority	-0.00	(0.00)	-0.00	(0.00)	-0.03	(0.07)	-0.03	(0.07)	-0.04	(0.07)	0.00	(0.06)
Number of employees last month	-0.00	(0.01)	0.00	(0.01)	0.28	(0.44)	0.26	(0.30)	0.33	(0.42)	0.16	(0.27)
Wagebill (\$) last month	-3,434	(2,915)	-2,308	(3,035)	-141,774	(115,707)	-58,928	(101,956)	-141,217*	(79,689)	-59,669	(65,434)
Computer	0.00*	(0.00)	0.00***	(0.00)	0.05	(0.03)	0.07**	(0.03)	0.01	(0.03)	0.05	(0.03)
Cell phone	0.00	(0.00)	0.00***	(0.00)	0.03	(0.04)	0.08**	(0.04)	0.01	(0.04)	0.06	(0.04)
Stove, oven or microwave	-0.00	(0.00)	0.00**	(0.00)	-0.04	(0.03)	0.01	(0.03)	-0.04	(0.02)	0.01	(0.03)
Furniture	-0.00	(0.00)	0.00**	(0.00)	-0.02	(0.04)	0.02	(0.04)	-0.04	(0.03)	-0.01	(0.03)
Car	0.00	(0.00)	-0.00	(0.00)	-0.03	(0.02)	-0.03	(0.02)	-0.03*	(0.02)	-0.03*	(0.02)
Tractor vehicle	0.00	(0.00)	0.00	(0.00)	0.01	(0.02)	0.00	(0.02)	0.03*	(0.02)	0.01	(0.01)
Balance	0.00	(0.00)	0.00	(0.00)	-0.02	(0.03)	-0.01	(0.03)	0.01	(0.03)	0.01	(0.03)
Refrigerator, freezer, etc	0.00	(0.00)	0.00	(0.00)	-0.03	(0.04)	-0.03	(0.04)	-0.02	(0.03)	0.04	(0.03)
Machines	-0.00	(0.00)	0.00	(0.00)	-0.03	(0.04)	-0.03	(0.04)	-0.02	(0.03)	0.04	(0.03)
Real estate	-0.00	(0.00)	0.00	(0.00)	-0.02	(0.03)	0.02	(0.03)	-0.04*	(0.02)	0.00	(0.03)
Sales (\$) last month	-1,313	(2,235)	2,180	(3,630)	-76,189	(75,323)	74,203	(98,336)	-54,048	(36,651)	121,360	(75,231)
Costs (\$) last month	-29.72	(1,454)	1,554	(1,359)	-5,523	(45,184)	70,163	(46,025)	-13,074	(26,788)	70,638	(49,423)
Applied for seed fund	0.00	(0.00)	0.00	(0.00)	0.09**	(0.05)	0.05	(0.05)	0.07*	(0.04)	0.04	(0.04)
<i>Financial Techniques:</i>												
Visited competition to see prices	0.00	(0.00)	0.00	(0.00)	-0.01	(0.04)	0.03	(0.04)	0.00	(0.04)	-0.00	(0.04)
Visited competition to see products	0.00	(0.00)	-0.00	(0.00)	-0.04	(0.05)	-0.05	(0.05)	0.03	(0.04)	-0.04	(0.04)
Asked customers for the possibility of new products	-0.00	(0.00)	0.00	(0.00)	-0.04	(0.05)	0.03	(0.04)	0.03	(0.04)	0.05	(0.04)
Asked suppliers for products most sold	-0.00	(0.00)	-0.00	(0.00)	-0.05	(0.05)	-0.02	(0.05)	-0.01	(0.05)	0.01	(0.05)
Asked ex-clients why they stopped buying	-0.00	(0.00)	0.00	(0.00)	-0.01	(0.04)	0.04	(0.05)	-0.04	(0.05)	-0.02	(0.04)
Made special offers (last 3 months)	0.00	(0.00)	0.00	(0.00)	0.04	(0.04)	0.04	(0.04)	-0.00	(0.03)	-0.02	(0.04)
Made publicity	0.00	(0.00)	0.00	(0.00)	0.06	(0.05)	0.04	(0.04)	0.04	(0.04)	0.04	(0.05)
Business inventory	-0.00	(0.00)	0.00	(0.00)	-0.03	(0.04)	0.03	(0.04)	-0.03	(0.05)	0.01	(0.04)
Register of sales and purchases	0.00	(0.00)	0.00	(0.00)	0.04	(0.03)	0.01	(0.03)	0.01	(0.03)	0.00	(0.03)
Charity of register	0.00	(0.00)	-0.00	(0.00)	0.02	(0.03)	-0.01	(0.03)	0.05**	(0.02)	0.05**	(0.02)
Budget for expenditures	-0.00	(0.00)	0.00	(0.00)	0.07	(0.05)	0.02	(0.05)	-0.01	(0.05)	-0.03	(0.04)
Sells on credit	-0.00	(0.00)	-0.00	(0.00)	-0.06	(0.06)	-0.11	(0.10)	0.01	(0.12)	-0.01	(0.10)
Register of credit sales	0.00	(0.00)	-0.00	(0.00)	0.06	(0.13)	0.02	(0.13)	0.14	(0.11)	0.05	(0.12)
Frequency of business planning	0.00	(0.00)	0.00	(0.00)	0.01	(0.04)	0.01	(0.05)	-0.05	(0.04)	0.00	(0.04)
Profit or loss balance	0.00	(0.00)	-0.00	(0.00)	0.04	(0.05)	-0.02	(0.05)	-0.00	(0.05)	-0.02	(0.04)
Cash flows	0.00	(0.00)	-0.00	(0.00)	0.04	(0.04)	-0.04	(0.04)	-0.06	(0.04)	-0.05	(0.04)
Balance sheet	-0.00	(0.00)	-0.00	(0.00)	0.04	(0.06)	-0.02	(0.06)	0.02	(0.05)	-0.01	(0.05)
Income and expenses	0.00	(0.00)	-0.00	(0.00)	0.04	(0.05)	0.02	(0.05)	0.03	(0.05)	0.01	(0.05)
No document prepared	0.00	(0.00)	0.00	(0.00)	0.01	(0.05)	0.02	(0.05)	-0.03	(0.05)	0.01	(0.05)
Quantity of \$ in petty cash	416.40	(454,95)	381.06	(412,34)	296.41	(16,834)	-3,879	(16,694)	-3,844	(14,307)	-9,704	(18,295)
<i>Financing of inputs:</i>												
Savings	0.00	(0.00)	-0.00	(0.00)	0.04	(0.04)	-0.01	(0.05)	0.06	(0.04)	0.01	(0.04)
Credit card	0.00	(0.00)	0.00	(0.00)	0.03	(0.03)	0.00	(0.03)	0.02	(0.03)	0.01	(0.03)
Credit line	-0.00*	(0.00)	-0.00	(0.00)	-0.02	(0.02)	0.03	(0.03)	-0.03	(0.02)	0.02	(0.02)
Bank loan	-0.00	(0.00)	0.00	(0.00)	-0.00	(0.03)	0.03	(0.04)	-0.04	(0.03)	-0.02	(0.03)
Family loan	-0.00	(0.00)	0.00	(0.00)	-0.02	(0.05)	0.04	(0.05)	-0.02	(0.04)	0.01	(0.04)
Moneylender loan	0.00	(0.00)	-0.00	(0.00)	0.01	(0.02)	-0.01	(0.02)	0.02	(0.02)	0.01	(0.01)

Notes: Standard errors in parenthesis. Regressions control for stratos and estimate standard errors robust to heteroscedasticity.

We next turn to differences by age and education. The results for the role model are presented in Table 23. Older individuals seem to have responded to the role model more strongly than those younger than 40 although the differences are fairly limited. In the same way, the differential impact of the role model by educational attainment is relatively small but if anything, suggests that individuals with less education were more likely to benefit from the visit of the ex-student. These results are different from the ones in the short-run where the results appeared to have been concentrated in younger participants but they once again suggest limited complementarity between existing knowledge and the role model.

Table 23: Interaction of the long-term impact of the role model with age and education

Variables	40 - 50		Older than 50		High school		Tertiary Education	
	β	se	β	se	β	se	β	se
<i>Income:</i>								
Income p/c from work	18,798	(22,714)	25,832	(22,253)	-34,330*	(20,398)	-37,715	(22,946)
Main household income source	0.14	(0.10)	0.11	(0.09)	-0.05	(0.10)	-0.07	(0.11)
<i>Credit and banking:</i>								
Has a bank account	-0.02	(0.08)	0.19**	(0.08)	0.01	(0.09)	0.07	(0.09)
Has credit	0.00	(0.10)	-0.03	(0.09)	0.12	(0.10)	0.09	(0.11)
Has bank credit	-0.08	(0.08)	0.03	(0.08)	0.07	(0.08)	-0.01	(0.10)
Has retail credit	0.04	(0.05)	-0.03	(0.04)	-0.05*	(0.03)	-0.01	(0.06)
Has microfinance institution credit	0.02	(0.07)	-0.01	(0.06)	0.12	(0.07)	0.06	(0.08)
Has family or neighbor credit	0.02	(0.05)	-0.02	(0.05)	-0.01	(0.05)	0.07	(0.05)
Has credit with another entity	0.01	(0.03)	-0.01	(0.03)	-0.01	(0.03)	0.04	(0.04)
Asked for bank credit (last 6 months)	-0.01	(0.06)	-0.03	(0.06)	0.11**	(0.05)	0.10	(0.07)
Bank credit rejected (last 6 months)	0.01	(0.04)	-0.00	(0.04)	-0.01	(0.03)	0.01	(0.04)
<i>Entrepreneurship:</i>								
Has business	0.11	(0.08)	0.14*	(0.07)	-0.05	(0.08)	-0.04	(0.08)
Owner	0.10*	(0.05)	0.08	(0.06)	-0.07	(0.05)	-0.04	(0.05)
Hours per week	-0.99	(4.33)	-3.84	(4.23)	0.61	(4.55)	-6.73	(4.77)
Registered with tax authority	0.06	(0.10)	0.06	(0.09)	-0.15	(0.09)	-0.15	(0.10)
Number of workers (last month)	0.42	(0.27)	0.53**	(0.24)	-0.14	(0.26)	-0.09	(0.31)
Wagebill (\$) last month	50,795	(53,907)	89,802**	(39,730)	-25,507	(56,159)	-6,705	(70,214)
Sales (\$) last month	166,900	(228,306)	203,306	(249,652)	-248,722	(274,523)	-510,415*	(262,806)
Costs (\$) last month	29,489	(175,595)	-75,352	(161,548)	-172,841	(189,705)	-214,724	(185,317)
Reinvestment	27,647	(116,117)	7,580	(105,800)	-2,340	(91,788)	-55,098	(104,460)
<i>Financial techniques:</i>								
Visited competition to see prices	0.06	(0.10)	-0.02	(0.09)	0.03	(0.10)	-0.09	(0.12)
Visited competition to see products	-0.02	(0.10)	-0.13	(0.10)	0.13	(0.11)	0.02	(0.12)
Asked customers for possibility of sales of new products	-0.03	(0.10)	-0.16*	(0.10)	0.13	(0.10)	0.13	(0.11)
Asked suppliers for products most sold	0.12	(0.11)	0.11	(0.10)	-0.02	(0.11)	0.04	(0.12)
Asked ex-clients why they stopped buying	0.01	(0.09)	-0.02	(0.09)	0.08	(0.10)	-0.00	(0.11)
Made special offers (last 3 months)	-0.01	(0.11)	-0.14	(0.10)	0.13	(0.10)	0.07	(0.11)
Made publicity	0.06	(0.11)	0.13	(0.10)	-0.13	(0.11)	-0.17	(0.12)
Business inventory	0.02	(0.11)	-0.10	(0.10)	-0.09	(0.11)	0.01	(0.12)
Register of sales and purchases	0.06	(0.08)	0.05	(0.07)	-0.07	(0.08)	-0.10	(0.08)
Clarity of register	0.01	(0.09)	-0.05	(0.08)	0.15	(0.09)	0.11	(0.09)
Budget for expenditures	0.10	(0.11)	0.04	(0.09)	-0.13	(0.10)	-0.14	(0.11)
Sell on credit	0.34***	(0.11)	0.19*	(0.11)	-0.00	(0.11)	0.01	(0.12)
Profits or loss balances	-0.02	(0.10)	-0.05	(0.10)	0.05	(0.10)	-0.01	(0.11)
Quantity of \$in petty cash	-48,961	(42,016)	-19,447	(24,123)	1,386	(15,202)	-21,924	(41,078)
<i>Financing of inputs:</i>								
Savings	0.01	(0.08)	0.04	(0.07)	-0.02	(0.07)	-0.03	(0.08)
Bank loan	0.00	(0.09)	-0.01	(0.09)	0.04	(0.09)	-0.10	(0.10)
Loan from friend or family	0.06	(0.11)	0.02	(0.10)	-0.20**	(0.10)	-0.04	(0.11)
<i>Knowledge:</i>								
Analytic question 1	-0.00	(0.08)	-0.02	(0.08)	0.09	(0.09)	-0.04	(0.10)
Analytic question 2	0.02	(0.10)	0.12	(0.09)	-0.04	(0.10)	0.01	(0.11)

Notes: Standard errors in parenthesis. Regressions control for stratos and estimate standard errors robust to heteroscedasticity.

When looking at the impact of technical assistance in Table 24, we find again some differences compared to the role model. The decrease in hours at the office, the change in the financing of inputs and the changes in business practices are all stronger for older ages. But when looking at differences by education, the conclusion seems to depend on the outcomes we are interested in. Personalized technical assistance appears to decrease particularly the credit rejection rate and the number of hours dedicated to the business for individuals with a high school degree. It is also for this particular group that the increase in knowledge is most marked.

Table 24: Interaction of the long-term impact of technical assistance with age and education

Variables	40-50		Older than 50		High school		Tertiary Education	
	β_{AC}	β_{AN}	β_{AC}	β_{AN}	β_{AC}	β_{AN}	β_{AC}	β_{AN}
<i>Income:</i>								
Income p/c from work	18.458	16.856	44.903	30.962	9.853	824.72	12.997	5.174
Main household income source	0.14	0.10	-0.08	0.02	-0.01	-0.00	0.08	0.02
<i>Credit and banking:</i>								
Has a bank account	-0.02	-0.00	0.05	-0.08	0.05	0.07	-0.03	-0.09
Has credit	-0.24**	-0.04	-0.04	-0.09	-0.07	0.09	-0.12	-0.12
Has bank credit	-0.10	0.01	-0.09	-0.08	-0.00	0.00	-0.11	-0.11
Has retail credit	-0.06	-0.10	0.06	0.01	0.01	0.02	-0.04	-0.14
Has microfinance institution credit	-0.11	0.09	-0.12	-0.09	-0.04	0.06	-0.05	0.07
Has family or neighbor credit	0.02	0.06	0.03	-0.07	-0.04	-0.01	-0.05	-0.03
Has credit with another entity	-0.04	0.00	0.07	0.03	0.00	0.04	0.09	0.08
Asked for bank credit (last 6 months)	0.04	0.03	0.09	0.01	0.00	0.06	-0.02	-0.03
Bank credit rejected (last 6 months)	-0.02	0.02	0.01	0.03	-0.08**	-0.05*	0.00	0.05
<i>Entrepreneurship:</i>								
Has business	-0.03	-0.04	-0.02	0.05	0.05	0.07	0.04	0.16*
Owner	-0.01	0.03	-0.12	-0.02	-0.01	0.05	0.01	0.08
Hours per week	-5.68	-6.64	-9.70**	-5.88	-9.18**	-7.65*	2.40	1.32
Registered with tax authority	-0.12	-0.13	0.12	0.02	0.04	0.09	0.02	-0.01
Number of workers (last month)	-0.25	0.24	-0.11	-0.14	0.22	0.21	-0.36	-0.10
Wagebill (\$) last month	18.118	37.969	33.685	22.813	-6.196	31.954	-3.841	-21.057
Sales (\$) last month	-69.879	136.643	140.417	401.729	93.641	219.443	-126.160	-76.601
Costs (\$) last month	-48.877	120.584	134.477	276.595	-82.895	180.549	-95.564	2.562
Reinvestment	-2.571	41.670	20.568	97.443	93.713	138.236	-37.596	-13.098
<i>Financial techniques:</i>								
Visited competition to see prices	0.04	0.09	-0.16	-0.04	0.00	0.09	-0.05	-0.10
Visited competitors to see products	0.02	0.01	-0.10	-0.01	0.04	0.09	-0.11	-0.13
Asked customers for possibility of sales of new products	-0.18	-0.05	0.07	-0.00	-0.05	0.05	0.04	-0.02
Asked suppliers for products most sold	-0.16	-0.14	0.07	-0.13	0.07	0.10	-0.12	-0.06
Asked ex-clients why they stopped buying	-0.13	-0.12	-0.08	-0.14	-0.15	-0.09	0.03	-0.07
Made special offers (last 3 months)	0.22*	0.28**	0.12	0.04	0.08	0.10	0.16	0.22*
Made publicity	0.06	0.14	-0.11	-0.08	0.14	0.17*	-0.11	-0.15
Business inventory	0.06	0.13	-0.02	0.11	-0.04	0.09	0.30**	0.12
Register of sales and purchases	-0.01	0.09	-0.01	-0.04	0.00	0.06	0.04	0.02
Clarity of register	-0.00	-0.03	0.12	-0.09	-0.00	0.08	0.14	0.05
Budget for expenditures	-0.03	0.13	-0.05	-0.01	-0.08	0.10	0.16	0.15
Sell on credit	-0.10	0.13	0.11	0.12	0.19*	0.11	-0.18	-0.18
Profits or loss balances	0.14	0.14	-0.05	-0.06	-0.07	0.03	0.18	0.24**
Quantity of \$ in petty cash	76.170	29.481	3.583	10.915	9.575	14.801	57.782	26.406
<i>Financing of inputs:</i>								
Savings	0.13	0.09	0.12	0.10	0.09	0.08	0.04	0.09
Bank loan	0.01	0.09	-0.04	-0.03	-0.05	-0.03	0.03	-0.00
Loan from friend or family	-0.14	-0.23**	-0.06	0.05	-0.07	-0.01	-0.01	-0.21*
<i>Knowledge:</i>								
Analytic question 1	0.16	0.05	-0.01	-0.02	0.06	0.07	0.13	0.11
Analytic question 2	0.12	0.18	0.13	0.10	0.15**	0.12	0.03	0.03

Notes: Standard errors in parenthesis. Regressions control for stratos and estimate standard errors robust to heteroscedasticity.

Table 25: Interaction of the long-term impact of the role model with sectors

Variables	Manufacturing		Services		Stores	
	β	se	β	se	β	se
<i>Income:</i>						
Income p/c from work	8,866	(27,001)	-17,120	(22,049)	-15,135	(25,207)
Main household income source	0.06	(0.12)	-0.13	(0.10)	0.23*	(0.13)
<i>Credit and banking:</i>						
Has a bank account	0.00	(0.09)	0.04	(0.08)	-0.02	(0.10)
Has credit	-0.20*	(0.12)	0.02	(0.10)	0.13	(0.13)
Has bank credit	-0.23**	(0.11)	-0.12	(0.08)	0.06	(0.13)
Has retail credit	0.00	(0.07)	0.00	(0.06)	-0.07	(0.06)
Has microfinance institution credit	-0.07	(0.09)	0.16**	(0.07)	0.14	(0.10)
Has family or neighbor credit	0.01	(0.08)	-0.10	(0.06)	0.19*	(0.10)
Has credit with another entity	-0.06	(0.05)	0.06*	(0.03)	-0.02	(0.02)
Asked for bank credit (last 6 months)	-0.07	(0.07)	0.05	(0.07)	0.14	(0.09)
Bank credit rejected (last 6 months)	-0.03	(0.04)	0.05	(0.04)	0.08	(0.05)
<i>Entrepreneurship:</i>						
Has business	-0.04	(0.09)	-0.06	(0.07)	-0.02	(0.10)
Owner	-0.02	(0.07)	-0.07	(0.05)	-0.05	(0.07)
Hours per week	-1.47	(3.94)	1.48	(3.93)	3.98	(5.62)
Registered with tax authority	-0.23**	(0.10)	0.12	(0.09)	0.02	(0.12)
Number of workers (last month)	0.21	(0.30)	0.02	(0.24)	0.51	(0.34)
Wagebill (\$) last month	1,411	(46,251)	14,723	(43,408)	75,315	(59,599)
Sales (\$) last month	-303,340	(197,695)	-258,321	(206,903)	391,801	(289,748)
Costs (\$) last month	-84,788	(158,218)	-64,629	(161,381)	270,714	(242,001)
Reinvestment	164,337	(109,290)	-20,849	(97,765)	196,391	(186,976)
<i>Financial techniques:</i>						
Visited competition to see prices	0.09	(0.12)	0.11	(0.09)	-0.22*	(0.12)
Visited competition to see products	0.13	(0.12)	0.08	(0.10)	-0.13	(0.13)
Asked customers for possibility of sales of new products	-0.00	(0.12)	-0.11	(0.10)	0.10	(0.13)
Asked suppliers for products most sold	0.01	(0.13)	0.14	(0.11)	0.11	(0.13)
Asked ex-clients why they stopped buying	0.07	(0.10)	-0.08	(0.09)	-0.09	(0.13)
Made special offers (last 3 months)	0.12	(0.12)	-0.07	(0.10)	0.09	(0.13)
Made publicity	-0.02	(0.12)	-0.04	(0.10)	0.15	(0.13)
Business inventory	0.03	(0.12)	0.24**	(0.10)	-0.05	(0.12)
Register of sales and purchases	0.01	(0.08)	0.06	(0.07)	0.13**	(0.06)
Clarity of register	0.03	(0.09)	-0.02	(0.08)	0.10	(0.08)
Budget for expenditures	-0.07	(0.11)	0.15	(0.10)	-0.03	(0.12)
Sell on credit	0.03	(0.13)	-0.11	(0.11)	0.03	(0.13)
Profits or loss balances	-0.09	(0.12)	0.16	(0.10)	-0.12	(0.10)
Quantity of \$in petty cash	-16,493	(27,382)	70,856*	(36,548)	17,004	(33,293)
<i>Financing of inputs:</i>						
Savings	-0.02	(0.07)	0.09	(0.07)	-0.06	(0.09)
Bank loan	-0.05	(0.11)	-0.08	(0.09)	0.05	(0.13)
Loan from friend or family	-0.13	(0.12)	-0.18*	(0.10)	0.02	(0.14)
<i>Knowledge:</i>						
Analytic question 1	0.28***	(0.10)	-0.03	(0.09)	0.08	(0.10)
Analytic question 2	-0.02	(0.11)	-0.07	(0.09)	0.13	(0.09)

Notes: Standard errors in parenthesis. Regressions control for stratos and estimate standard errors robust to heteroscedasticity.

Table 26: Interaction of the long-term impact of technical assistance with sectors

Variables	Manufacturing			Services			Stores					
	β_{AC}	β_{AN}	se	β_{AC}	β_{AN}	se	β_{AC}	β_{AN}	se			
<i>Income:</i>												
Income p/c from work	-62.330	(41.215)	-8.718	(44,236)	-32.355	(38,334)	-32.448	(32,393)	27.601	(29,024)	-24,967	(28,562)
Main household income source	0.13	(0.16)	0.16	(0.18)	-0.04	(0.13)	0.04	(0.13)	0.19	(0.19)	0.23	(0.19)
<i>Credit and banking:</i>												
Has a bank account	0.14	(0.14)	0.13	(0.16)	-0.10	(0.11)	0.05	(0.09)	-0.09	(0.17)	-0.09	(0.15)
Has credit	0.03	(0.14)	0.04	(0.17)	-0.25*	(0.14)	-0.16	(0.15)	-0.33	(0.21)	-0.05	(0.20)
Has bank credit	0.02	(0.05)	0.02	(0.10)	-0.06	(0.13)	-0.10	(0.12)	-0.44**	(0.19)	-0.23	(0.20)
Has retail credit	-0.03	(0.03)	0.07	(0.06)	-0.06	(0.11)	-0.03	(0.11)	0.02	(0.04)	0.07	(0.07)
Has microfinance institution credit	0.10	(0.08)	0.06	(0.10)	-0.18	(0.11)	-0.11	(0.13)	0.03	(0.12)	0.11	(0.08)
Has family or neighbor credit	-0.01	(0.10)	-0.09	(0.09)	-0.15**	(0.07)	-0.06	(0.09)	-0.04	(0.18)	-0.18	(0.15)
Has credit with another entity	-0.02	(0.08)	-0.04	(0.10)	0.06	(0.06)	0.07	(0.07)	0.06	(0.06)	0.05	(0.06)
Asked for bank credit (last 6 months)	0.07	(0.08)	0.03	(0.06)	-0.10	(0.10)	-0.13	(0.10)	-0.14	(0.13)	-0.00	(0.16)
Bank credit rejected (last 6 months)	0.00	(0.03)	0.02	(0.03)	-0.09	(0.07)	-0.09	(0.08)	-0.13	(0.10)	-0.04	(0.12)
<i>Entrepreneurship:</i>												
Has business	-0.04	(0.14)	-0.06	(0.16)	-0.11	(0.10)	-0.03	(0.11)	0.14	(0.16)	0.19	(0.17)
Owner	-0.06	(0.11)	0.01	(0.09)	0.04	(0.09)	0.08	(0.07)	0.21*	(0.11)	0.14	(0.13)
Hours per week	0.88	(6.01)	0.57	(6.97)	-6.52	(5.81)	-7.77	(5.01)	-18.41**	(8.48)	-11.58*	(6.92)
Registered with tax authority	0.21	(0.15)	0.18	(0.15)	0.23*	(0.13)	0.16	(0.14)	-0.14	(0.19)	-0.14	(0.18)
Number of workers (last month)	0.36	(0.28)	0.68*	(0.41)	0.04	(0.31)	-0.13	(0.36)	-0.25	(0.54)	0.24	(0.44)
Wagebill (\$) last month	96,937*	(58,302)	63,034	(55,619)	5,954	(52,975)	20,619	(56,771)	81,174	(96,538)	135,031*	(75,405)
Sales (\$) last month	252,545	(258,423)	228,567	(268,256)	-81,242	(327,120)	407,592	(345,243)	454,274	(359,023)	405,523	(368,759)
Costs (\$) last month	59,596	(246,713)	129,917	(266,424)	-73,972	(273,505)	316,847	(238,258)	394,156	(273,749)	470,329	(286,860)
Reinvestment	26,741	(77,760)	31,379	(55,230)	-17,769	(68,035)	19,485	(165,843)	-27,876	(175,128)	-38,628	(155,856)
<i>Financial techniques:</i>												
Visited competition to see prices	-0.34*	(0.18)	-0.06	(0.16)	0.01	(0.14)	0.00	(0.15)	0.13	(0.19)	0.38**	(0.19)
Visited competition to see products	-0.45***	(0.15)	-0.22	(0.14)	-0.01	(0.13)	0.02	(0.15)	0.13	(0.19)	0.31*	(0.18)
Asked customers for possibility of sales of new products	-0.05	(0.19)	-0.01	(0.17)	-0.11	(0.14)	0.06	(0.13)	0.01	(0.21)	-0.01	(0.19)
Asked suppliers for products most sold	-0.19	(0.22)	-0.03	(0.23)	-0.06	(0.17)	-0.32*	(0.17)	-0.14	(0.22)	-0.06	(0.20)
Asked ex-clients why they stopped buying	0.03	(0.18)	-0.16	(0.18)	0.09	(0.16)	-0.12	(0.13)	-0.04	(0.19)	0.00	(0.19)
Made special offers (last 3 months)	0.10	(0.21)	0.25	(0.19)	0.10	(0.13)	-0.02	(0.15)	0.29	(0.19)	0.29	(0.21)
Made publicity	-0.04	(0.20)	0.27	(0.22)	-0.07	(0.16)	0.02	(0.14)	0.15	(0.21)	0.20	(0.20)
Business inventory	0.19	(0.18)	0.15	(0.18)	0.12	(0.14)	0.33**	(0.15)	0.49***	(0.18)	0.67***	(0.17)
Register of sales and purchases	-0.06	(0.10)	-0.07	(0.11)	-0.08	(0.10)	-0.04	(0.09)	-0.01	(0.07)	-0.21*	(0.11)
Clarity of register	0.24**	(0.11)	0.19	(0.13)	-0.16	(0.12)	-0.09	(0.12)	0.51***	(0.16)	0.31*	(0.18)
Budget for expenditures	-0.14	(0.13)	-0.17	(0.15)	-0.19	(0.15)	-0.03	(0.14)	0.13	(0.19)	0.20	(0.17)
Sell on credit	-0.05	(0.19)	0.16	(0.21)	0.13	(0.16)	0.11	(0.15)	0.14	(0.23)	0.00	(0.22)
Profits or less balances	0.15	(0.17)	0.48***	(0.15)	-0.16	(0.16)	-0.01	(0.15)	0.03	(0.19)	0.12	(0.20)
Quantity of \$ in petty cash	-245.06	(16,887)	21,183	(43,677)	-27,347	(27,969)	69,494	(43,861)	8,199	(44,428)	33,646	(49,468)
<i>Financing of inputs:</i>												
Savings	0.08	(0.10)	0.19*	(0.10)	0.10	(0.10)	0.11	(0.09)	0.37**	(0.16)	0.31*	(0.17)
Bank loan	-0.02	(0.11)	0.08	(0.14)	-0.07	(0.12)	-0.10	(0.13)	-0.17	(0.20)	0.07	(0.21)
Loan from friend or family	-0.05	(0.18)	-0.08	(0.18)	-0.07	(0.15)	-0.10	(0.15)	-0.14	(0.23)	-0.26	(0.24)
<i>Knowledge:</i>												
Analytic question 1	0.02	(0.16)	0.10	(0.15)	0.10	(0.11)	-0.02	(0.13)	0.05	(0.13)	-0.06	(0.13)
Analytic question 2	0.10	(0.15)	0.09	(0.17)	0.20	(0.13)	0.26**	(0.12)	-0.11	(0.14)	-0.04	(0.12)

Notes: Standard errors in parenthesis. Regressions control for stratos and estimate standard errors robust to heteroscedasticity.

However, in terms of changes in ownership of business, adoption of financial techniques, changes in financing of inputs, it is the most educated individuals who appear to have benefited more importantly from the technical assistance. As in the short-run, this seems to suggest that the personalized technical assistance is particularly useful for individuals who have better educational background.

Finally, we once more divide our sample by the sector in which the participant was previously involved in. The role model once more appears to have influenced individuals involved in services and trade, except for the added financial knowledge which is strong and significant

only for individuals in the production sector. These results can be found in Table 25. Finally, in Table 26, we show the differential impact of personalized technical assistance by sector. The reduced credit, the decreased hours dedicated to the business and the increase in entrepreneurship generated by the personalized assistance are concentrated in the sectors of services and trade. There are positive impacts of personalized assistance on business practices for all sectors although slightly more marked for stores. The change in financing of inputs is more marked in the production and sale sector while the increase in financial literacy is strongest for manufacturing and services. Overall, thus, in the long-term, there is no clear sense that the technical assistance helps individuals in one particular sector compared to another.

6. Final Remarks

This paper presents the results of an ongoing research project to estimate the impact of different techniques to motivate the adoption of management practices and business outcomes in groups of micro entrepreneurs in Chile. The first intervention considers the use of “role models”, meaning a successful micro entrepreneurs who graduated from the same course and who gives a talk in one session of a new course to motivate the students in adopting these techniques in their businesses. The second intervention considers the use of different modalities of technical assistance and measures its impact on the effectiveness of the training course. In this report, data for baselines and first follow up from the four cohorts have been used, while the second follow up is only analyzed for the first three cohorts, while the rest will be collected in March-April of this year.

The estimates show significant although limited effects of both interventions in the short and the long-run. The role model appears to be operating mostly through increased motivation and is particularly helpful for individuals that were less committed to their business before the class and those that had more limited financial literacy. On the other hand, individualized technical assistance appears to increase the retention of key financial concepts in the long-run but not in the short-run. It also appears to be complementary to existing knowledge and experience.

In terms of cost-benefit analysis, the role model has such a low cost that even the limited impacts it has on attendance and other variables is more than enough to justify its use. Importantly, it also appears to be particularly useful when dealing with a group that is more difficult to incentivize. On the other hand, individualized technical assistance costs about 10 times more than the group-assistance and the impacts we have measured do not seem to justify this cost difference so far. However, it does seem to particularly help individuals for whom the role model will not be as efficient of a tool.

It is important to emphasize that the data collected so far is partial and that these results may change once we introduce the last cohort of the long-term survey. However, we find so far that our results are consistent with different approaches being best suited for different types of participants. In summary, one size does not appear to fit all.

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Appendix 1: Photos of the program



Graduation ceremony of the participants



Group technical assistance



Presentation of a role model

Appendix 2: Balance tables

Appendix Table 1: Balance of the role model-Socioeconomic variables

Variable	N-T	Mean-T	N-C	Mean-C	Diff (T-C)	P-value
<i>General variables:</i>						
Women	704	0.93	692	0.91	0.01	0.33
Age	703	45.44	664	44.82	0.55	0.38
Household size	558	3.54	566	3.74	-0.11	0.29
Number of household members working	522	1.58	536	1.67	-0.04	0.44
<i>Educational level:</i>						
Sin educacin	563	0.03	589	0.02	0.00	0.61
Educacin primaria	563	0.15	589	0.17	-0.03	0.14
Educacin media	563	0.50	589	0.53	-0.01	0.80
Educacin tecnica	563	0.24	589	0.20	0.04	0.13
Educacin Superior	563	0.08	589	0.08	-0.00	0.89
<i>Income:</i>						
Household income last month	513	402,247	547	373,340	41,671	0.10
Income per capita	467	151,998	485	133,694	16,903	0.09*
<i>Labor supply:</i>						
Not working	586	0.15	605	0.11	0.03	0.09*
Employed	586	0.02	605	0.05	-0.03	0.01**
Self-employed	586	0.83	605	0.84	-0.01	0.80
Hours per week in main occupation	635	28.83	652	27.58	1.84	0.14
Previously not employed	373	0.21	411	0.20	0.01	0.80
Previously employed	373	0.29	411	0.31	0.01	0.86
Previously self-employed	373	0.50	411	0.49	-0.01	0.71

Notes: The difference T-C was calculated by a regression of the corresponding variable on treatment assignment. This regression includes fixed effects by strata and robust standard errors.

Appendix Table 2: Balance of the role model-Bank and credit access

Variable	N-T	Mean-T	N-C	Mean-C	Diff (T-C)	P-value
<i>General:</i>						
Has bank account	587	0.68	610	0.64	0.05	0.06*
Has bank credit	584	0.49	616	0.44	0.06	0.03**
Has asked bank for credit in last 2 years	580	0.42	604	0.40	0.02	0.45
Has been rejected for bank credit in last 2 years	417	0.32	423	0.31	0.03	0.29
<i>Reason for being rejected for credit:</i>						
Lack of guarantee	144	0.27	142	0.17	0.09	0.08*
Lack of pay capacity	144	0.26	142	0.18	0.08	0.13
Short antiquity	145	0.16	142	0.20	-0.05	0.35
Credit history	144	0.57	142	0.56	0.00	0.98
<i>Initial financing of the business:</i>						
Public funds	426	0.03	450	0.05	-0.02	0.07*
Private formal funds	426	0.06	450	0.06	0.00	0.87
NGO funds	426	0.07	450	0.06	-0.00	0.96
Informal funds	426	0.06	450	0.05	0.02	0.28
Self-financing	426	0.61	450	0.61	-0.00	0.90
<i>Financing of inputs:</i>						
Savings	424	0.75	439	0.75	0.00	0.94
Credit card	424	0.18	439	0.16	0.02	0.37
Credit line	425	0.06	439	0.05	0.00	0.90
Bank loan	424	0.13	439	0.11	0.02	0.35
Loan from friend or family	424	0.28	439	0.27	0.01	0.72
Loan from moneylenders	424	0.04	439	0.03	0.03	0.04**

Notes: The difference T-C was calculated by a regression of the corresponding variable on treatment assignment. This regression includes fixed effects by strata and robust standard errors.

Appendix Table 3: Balance of the role model-Business variables

Variable	N-T	Mean-T	N-C	Mean-C	Diff (T-C)	P-value
<i>General:</i>						
Has business	547	0.86	559	0.86	0.01	0.76
Number of employees last month	162	0.98	187	0.95	-0.03	0.86
Number of employees month before	319	0.74	289	0.80	-0.00	1.00
Pays VAT	519	0.28	555	0.33	-0.04	0.19
Owner	478	0.94	527	0.94	-0.01	0.53
Family of the owner	478	0.05	527	0.04	0.02	0.26
Other	478	0.01	527	0.02	-0.01	0.41
<i>Business sector:</i>						
Manufacturing	478	0.20	509	0.18	0.02	0.46
Reparation services	478	0.32	509	0.27	0.07	0.02**
Stores	478	0.15	509	0.17	-0.01	0.65
Street vending	491	0.16	517	0.20	-0.03	0.14
Other	478	0.35	509	0.36	-0.02	0.39
<i>Place of business:</i>						
Moving location	487	0.14	533	0.16	-0.03	0.21
Permanent location in public space	487	0.10	533	0.09	0.02	0.29
Client's residence	487	0.18	533	0.19	-0.00	0.95
Residence	487	0.66	533	0.64	0.02	0.44
Comercial property	487	0.10	533	0.12	-0.01	0.68
<i>Business results:</i>						
Hours dedicated to the business	478	34.35	518	33.99	0.71	0.64
Sales (\$) last month	435	403,221	456	444,211	-1,644	0.98
Sales (\$) month before	432	414,816	458	461,855	5,050	0.93
Costs (\$) last month	373	256,654	396	313,655	-10,484	0.83
Costs (\$) month before	373	248,681	406	309,390	-7,586	0.84
Wagebill (\$) last month	139	153,262	158	157,909	-27,346	0.63
Wagebill (\$) month before	139	136,313	158	138,499	-28,422	0.56
<i>Capital and equipment:</i>						
Computer	850	0.28	903	0.25	0.02	0.27
Cell phone	850	0.47	903	0.48	-0.01	0.67
Stove, oven or microwave	850	0.20	903	0.22	-0.03	0.18
Furniture	849	0.28	902	0.27	0.02	0.48
Car	850	0.12	903	0.11	0.02	0.22
Traction vehicle	850	0.04	903	0.05	-0.01	0.24
Balance	849	0.12	903	0.13	-0.01	0.44
Refrigerator, freezer, etc	849	0.14	903	0.15	-0.02	0.34
Tools	850	0.21	903	0.19	0.01	0.56
Machines	850	0.22	903	0.20	0.03	0.20
Real state	850	0.36	903	0.36	-0.01	0.76

Notes: The difference T-C was calculated by a regression of the corresponding variable on treatment assignment. This regression includes fixed effects by strata and robust standard errors.

Appendix Table 4: Balance of the role model-Financial methods

Variable	N-T	Mean-T	N-C	Mean-C	Diff (T-C)	P-value
Made special offers (last 3 months)	316	0.84	350	0.85	0.01	0.75
Made publicity	274	0.73	254	0.72	0.01	0.81
Visited competition to see prices	424	0.75	442	0.71	0.04	0.22
Visited competition to see products	424	0.65	442	0.60	0.06	0.09*
Asked customers for the possibility of new products	424	0.61	442	0.64	-0.03	0.30
Asked suppliers for products most sold	424	0.40	442	0.38	0.03	0.41
Asked ex-clients why they stopped buying	424	0.15	442	0.17	-0.01	0.68
Business inventory	419	0.64	427	0.60	0.05	0.13
Register of sales and purchases	445	0.73	470	0.75	-0.01	0.77
Clarity of register	449	0.82	493	0.82	0.02	0.50
Budget for expenditures	396	0.59	425	0.56	0.05	0.12
Sells on credit	284	0.41	306	0.42	-0.02	0.53
Frequency of business planning	490	2.60	529	2.46	0.12	0.15
Quantity of \$in petty cash	367	127,661	418	144,361	-7,470	0.87
Profit or loss balance	416	0.19	463	0.19	0.01	0.68
Cash flows	416	0.12	463	0.12	0.02	0.47
Balance sheet	416	0.10	463	0.09	0.02	0.47
Income and expenses	416	0.37	463	0.32	0.06	0.05*
No document prepared	416	0.53	463	0.53	-0.03	0.38

Notes: The difference T-C was calculated by a regression of the corresponding variable on treatment assignment. This regression includes fixed effects by strata and robust standard errors.

Appendix Table 5: Balance of the role model-Analytical abilities and financial knowledge

Variable	N-T	Mean-T	N-C	Mean-C	Diff (T-C)	P-value
Analytical habilities (0-4)	850	1.65	903	1.69	-0.08	0.19
Financial knowledge (0-1)	850	0.40	903	0.39	0.02	0.44

Notes: The difference T-C was calculated by a regression of the corresponding variable on treatment assignment. This regression includes fixed effects by strata and robust standard errors.

Appendix Table 6: Balance Technical assistance-Socioeconomic variables

	Technical Assistance in group (Ag)			Technical Assistance individual in class(Ac)			Technical Assistance individual in business (An)			p-Value
	N-Ag	Mean - Ag	N-Ac	Mean - Ac	Diff (Ac-Ag)	P-values	N-An	Mean - An	Diff (An-Ag)	
<i>General:</i>										
Women	355	0.93	388	0.95	0.03	0.13	386	0.92	-0.00	0.91
Age	347	45.15	380	44.57	-1.05	0.20	379	44.75	-0.72	0.40
Household size	281	3.56	318	3.51	-0.04	0.75	320	3.64	0.11	0.47
Number of household members working	260	1.57	295	1.61	0.03	0.74	308	1.54	-0.02	0.75
<i>Educational level:</i>										
Sim educacin	304	0.04	328	0.02	-0.02	0.08*	320	0.04	-0.00	0.97
Educacin primaria	304	0.17	328	0.16	-0.01	0.76	320	0.15	-0.02	0.52
Educacin media	304	0.51	328	0.52	0.01	0.80	320	0.53	0.02	0.63
Educacin tecnica	304	0.22	328	0.23	0.01	0.79	320	0.17	-0.05	0.15
Educacin Superior	304	0.06	328	0.07	0.01	0.50	320	0.11	0.05	0.05**
<i>Income level:</i>										
Household income last month	263	350,666	303	380,732	40,074	0.26	315	383,746	36,605	0.25
Income per capita	227	136,939	270	143,601	8,024	0.58	281	144,667	9,621	0.50
<i>Labor Supply:</i>										
Not working	302	0.13	342	0.14	0.01	0.66	343	0.15	0.01	0.57
Employed	302	0.04	342	0.04	-0.01	0.57	343	0.05	0.01	0.50
Self-employed	302	0.83	342	0.82	-0.00	0.97	343	0.80	-0.02	0.36
Hours per week in main occupation	316	27.25	345	27.00	-0.85	0.62	356	27.83	0.50	0.77
Previously not employed	184	0.21	210	0.26	-0.00	0.95	209	0.25	0.01	0.81
Previously employed	184	0.21	210	0.29	0.08	0.03**	209	0.24	0.06	0.16
Previously self-employed	184	0.58	210	0.45	-0.08	0.08*	209	0.50	-0.07	0.16

Notes: The difference T-C was calculated by a regression of the corresponding variable on treatment assignment. This regression includes fixed effects by strata and robust standard errors.

Appendix Table 7: Balance technical assistance-Bank and credit access

	Technical Assistance in group (Ag)		Technical Assistance individual in class(Ac)			Technical Assistance individual in business (An)			p-Value	
	N-Ag	Mean - Ag	N-Ac	Mean - Ac	Diff (Ac-Ag)	P-values	N-An	Mean - An		Diff (An-Ag)
<i>General:</i>										
Has bank account	308	0.63	341	0.63	0.00	0.91	343	0.64	0.00	0.98
Has bank credit	306	0.45	341	0.47	0.02	0.61	346	0.45	0.00	0.95
Has asked bank for credit in last 2 years	300	0.42	343	0.42	0.00	0.95	340	0.38	-0.05	0.23
Has been rejected for bank credit in last 2 years	228	0.29	246	0.29	0.01	0.88	253	0.31	0.02	0.73
<i>Bank rejection reason:</i>										
Lack of guarantee	73	0.25	79	0.15	-0.12	0.21	87	0.30	0.01	0.88
Lack of pay capacity	73	0.21	79	0.19	-0.12	0.22	87	0.26	0.01	0.88
Short antiquity	74	0.22	79	0.15	-0.09	0.40	87	0.14	-0.13	0.19
Credit history	73	0.49	79	0.67	0.25	0.02**	87	0.57	0.09	0.36
<i>Initial business financing:</i>										
Public funds	214	0.03	237	0.02	-0.01	0.63	258	0.03	-0.01	0.77
Private formal funds	214	0.06	237	0.07	0.01	0.60	258	0.03	-0.02	0.26
NGO funds	214	0.05	237	0.07	0.04	0.11	258	0.08	0.03	0.18
Informal funds	214	0.04	237	0.06	0.03	0.18	258	0.06	0.03	0.12
Self-financing	214	0.64	237	0.64	-0.04	0.40	258	0.57	-0.09	0.05*
<i>Financing of inputs:</i>										
Savings	211	0.78	237	0.76	-0.02	0.63	250	0.72	-0.06	0.15
Credit card	211	0.17	237	0.14	-0.05	0.16	250	0.15	-0.03	0.33
Credit line	212	0.04	237	0.05	0.01	0.71	250	0.05	0.00	0.90
Bank loan	211	0.12	237	0.11	-0.00	0.92	250	0.12	-0.01	0.82
Loan from friend or family	211	0.20	237	0.30	0.12	0.01***	250	0.32	0.13	0.00***
Loan from moneylenders	211	0.05	237	0.03	-0.03	0.11	250	0.01	-0.04	0.02**

Notes: The difference T-C was calculated by a regression of the corresponding variable on treatment assignment. This regression includes fixed effects by strata and robust standard errors.

Appendix Table 8: Balance technical assistance-Business variables

	Technical Assistance in group (Ag)		Technical Assistance individual in class(Ac)				Technical Assistance individual in business (An)			
	N-Ag	Mean - Ag	N-Ac	Mean - Ac	Diff (Ac-Ag)	P-values	N-An	Mean - An	Diff (An-Ag)	p-Value
<i>General:</i>										
Has business	286	0.83	317	0.82	-0.00	0.86	317	0.87	0.03	0.20
Number of employees last month	89	1.26	74	1.18	0.04	0.93	117	0.71	-0.41	0.29
Number of employees month before	159	0.81	166	0.81	0.01	0.94	178	0.68	-0.06	0.71
Pays VAT	273	0.33	299	0.24	-0.10	0.01**	310	0.26	-0.06	0.10
Owner	254	0.93	279	0.96	0.00	0.97	290	0.93	-0.01	0.55
Family of the owner	254	0.06	279	0.04	-0.00	0.90	290	0.05	0.00	0.88
Other	254	0.01	279	0.01	0.00	0.86	290	0.02	0.01	0.35
<i>Business Sector:</i>										
Manufacturing	248	0.19	274	0.20	0.03	0.33	283	0.18	0.00	0.94
Reparation services	248	0.29	274	0.26	-0.04	0.37	283	0.27	-0.03	0.38
Stores	248	0.16	274	0.17	0.01	0.76	283	0.16	-0.01	0.84
Street vending	252	0.16	282	0.19	0.02	0.60	291	0.19	0.03	0.32
Other	248	0.40	274	0.36	-0.03	0.44	283	0.34	-0.06	0.13
<i>Business Location:</i>										
Moving location	261	0.17	282	0.13	-0.05	0.12	296	0.15	-0.02	0.54
Permanent location in public spaces	261	0.08	282	0.10	0.02	0.40	296	0.10	0.02	0.49
Client's residence	261	0.15	282	0.21	0.06	0.08*	296	0.22	0.06	0.07*
Residence	261	0.64	282	0.68	0.05	0.24	296	0.63	0.00	0.98
Commercial property	261	0.13	282	0.09	-0.03	0.22	296	0.12	-0.00	0.92
<i>Business Results:</i>										
Hours dedicated to the business	248	32.23	278	32.16	-0.01	1.00	289	33.83	1.75	0.40
Sales (\$) last month	226	442,915	243	424,409	-34,611	0.78	265	312,583	-159,503	0.12
Sales (\$) month before	222	394,725	239	443,068	47,087	0.66	268	336,964	-82,799	0.32
Costs (\$) last month	196	361,787	206	294,542	-79,668	0.58	227	196,099	-151,647	0.17
Costs (\$) month before	197	329,221	206	273,148	-74,227	0.56	234	212,882	-125,827	0.29
Wagebill (\$) last month	73	251,218	63	222,635	-33,392	0.86	99	93,788	-145,647	0.36
Wagebill (\$) month before	69	218,616	66	178,364	-36,059	0.80	98	86,937	-99,166	0.43
<i>Capital and Equipment</i>										
Computer	408	0.30	441	0.28	-0.01	0.84	442	0.30	0.00	0.93
Cell phone	408	0.50	441	0.53	0.05	0.15	442	0.55	0.06	0.04**
Stove, oven or microwave	408	0.23	441	0.23	0.01	0.69	442	0.24	0.01	0.64
Furniture	408	0.32	441	0.27	-0.04	0.19	442	0.31	-0.01	0.75
Car	408	0.10	441	0.12	0.02	0.41	442	0.14	0.03	0.12
Traction vehicle	408	0.06	441	0.06	-0.01	0.65	442	0.06	0.01	0.57
Balance	407	0.15	441	0.12	-0.02	0.43	442	0.16	0.01	0.62
Refrigerator, freezer, etc	408	0.18	441	0.15	-0.02	0.56	441	0.15	-0.02	0.38
Tools	408	0.25	441	0.19	-0.04	0.13	442	0.22	-0.02	0.60
Machines	408	0.24	441	0.23	0.01	0.71	442	0.22	-0.00	0.98
Real state	408	0.40	441	0.42	0.03	0.48	442	0.46	0.07	0.14

Notes: The difference T-C was calculated by a regression of the corresponding variable on treatment assignment. This regression includes fixed effects by strata and robust standard errors.

Appendix Table 9: Balance technical assistance-Financial techniques

	Technical Assistance in group (Ag)			Technical Assistance individual in class(Ac)			Technical Assistance individual in business (An)			
	N-Ag	Mean - Ag	N-Ac	Mean - Ac	Diff (Ac-Ag)	P-values	N-An	Mean - An	Diff (An-Ag)	p-Value
Made special offers (last 3 months)	176	0.81	195	0.82	-0.02	0.69	199	0.84	0.05	0.18
Made publicity	134	0.64	155	0.68	0.02	0.75	173	0.73	0.07	0.15
Visited competition to see prices	214	0.74	236	0.76	0.01	0.86	260	0.74	0.01	0.78
Visited competition to see products	214	0.65	236	0.66	-0.01	0.84	260	0.60	-0.06	0.20
Asked customers for the possibility of new products	214	0.67	236	0.58	-0.09	0.07*	260	0.64	-0.03	0.48
Asked suppliers for products most sold	214	0.35	236	0.41	0.03	0.48	260	0.40	0.05	0.34
Asked ex-clients why they stopped buying	214	0.14	236	0.16	-0.00	0.97	260	0.19	0.05	0.19
Business inventory	228	0.60	248	0.57	-0.00	0.97	260	0.59	0.02	0.57
Register of sales and purchases	235	0.69	267	0.72	0.04	0.30	265	0.72	0.05	0.26
Clarity of register	244	0.79	264	0.82	0.05	0.19	287	0.80	0.02	0.56
Budget for expenditures	216	0.54	240	0.52	-0.02	0.67	249	0.51	-0.02	0.61
Sells on credit	147	0.47	163	0.44	-0.01	0.89	185	0.42	0.02	0.77
Frequency of business planning	255	2.61	280	2.46	-0.15	0.21	296	2.60	-0.05	0.68
Quantity of \$in petty cash	194	121,055	213	106,419	-4,874	0.92	239	161,432	61,493	0.52
Profit or loss balance	212	0.18	243	0.17	-0.02	0.66	256	0.20	0.00	0.91
Cash flows	212	0.14	243	0.10	-0.04	0.23	256	0.12	-0.02	0.54
Balance sheet	212	0.09	243	0.08	-0.02	0.51	256	0.07	-0.03	0.33
Income and expenses	212	0.39	243	0.31	-0.05	0.27	256	0.34	-0.04	0.37
No document prepared	212	0.51	243	0.60	0.06	0.22	256	0.53	0.01	0.79

Notes: The difference T-C was calculated by a regression of the corresponding variable on treatment assignment. This regression includes fixed effects by strata and robust standard errors.

Appendix Table 10: Balance technical assistance-Analytical and financial knowledge

	Technical Assistance in group (Ag)		Technical Assistance individual in class(Ac)			Technical Assistance individual in business (An)				
	N-Ag	Mean - Ag	N-Ac	Mean - Ac	Diff (Ac-Ag)	P-values	N-An	Mean - An	Diff (An-Ag)	p-Value
Analytical habilities (0-4)	408	1.72	441	1.73	0.00	1.00	442	1.79	0.05	0.55
Financial knowledge (0-1)	408	0.41	441	0.43	0.02	0.52	442	0.38	-0.03	0.32

Notes: The difference T-C was calculated by a regression of the corresponding variable on treatment assignment. This regression includes fixed effects by strata and robust standard errors.