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Do Micro-Entrepreneurship Programs Increase Wage-Work? Evidence from Chile

Claudia Martínez A.
Esteban Puentes, *Universidad de Chile*
Jaime Ruiz-Tagle, *Universidad de Chile*

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Claudia Martínez A.[2]

Esteban Puentes[3]

Jaime Ruiz-Tagle[4]

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Abstract

Using a randomized controlled trial of a large-scale, publicly run micro-entrepreneurship program in Chile, we assess the effectiveness of business training and asset transfers to the poor. Using survey and monthly administrative data we study the effects of the program over a period of 46 months. We find that the program significantly increases employment by 15.3 and 6.8 percentages points 9 and 33 months after implementation, respectively. There is also a significant increase in labor income. The employment increase in the short run is through self-employment, while in the long run wage work also increases. In the long run, total labor increases mostly due to an increase in wage income. This is consistent with the hypothesis that skills taught during the training lessons are also useful for wage work. We also find that the quality of the intervention matter, especially in the long run. Finally, comparing two levels of asset transfers, different employment paths emerge: those who receive a low level of transfers mostly end up with salaried work whereas those who receive a high level of transfers tend to be self-employed.

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[2] Corresponding author. Department of Economics, Pontificia Universidad Católica de Chile. Email: clmartineza@uc.cl. Phone: (562) 354-4303, Fax: (562) 553-2377. Address: Avda. Vicuña Mackenna 4860, Macul, Santiago, Chile

[3] Centre of Micro Data and Department of Economics, University of Chile. Email: epuentes@econ.uchile.cl.

[4] Centre of Micro Data and Department of Economics, University of Chile. Email: jaimert@econ.uchile.cl.

1 Introduction

Income generation strategies for poor populations are at the cornerstone of the questions in development economics. For years, micro-entrepreneurship has been seen as a plausible strategy to boost the income of vulnerable households, considering that small firms are an important source of employment in developing countries. A number of initiatives have promoted micro-entrepreneurship training and microcredit programs as a necessary input to create the conditions for its development. Randomized impact evaluation studies have found modest results for both policies (McKenzie and Woodruff, (2013), Banerjee, Karlan and Zinman (2015)).

Although there is a growing literature regarding the impact of micro-entrepreneurship training programs, there is still little evidence about what are the effects of such programs in the long run and what are the mechanisms that lead those effects. McKenzie and Woodruff (op. cit.) summarize fourteen studies noting that these studies account for effects at most two years after treatment. Regarding the type of program, the combination of training and asset transfers has not being studied profoundly, the exception being the study by de Mel, McKenzie and Woodruff (2014) who find positive results only for new owners in the short run. Moreover, the vast majority of the papers in the literature consider non-government micro-entrepreneurship programs, so that the scalability of the results has not been sufficiently supported.

We conducted an impact evaluation of a public micro-entrepreneurship program targeted to the very poor in Chile. We randomly assigned over 1,900 applicants, both current business owners and individuals interested in opening a business, to receive training combined with two levels of asset transfers. Our study considers a span of 38 months through survey data and a span of 46 months using high frequency administrative records, allowing for the longest-term assessment of micro entrepreneurship programs in developing countries.[5] As far as we know, this is the first study that uses administrative data, which enables us to understand the labor market impact beyond what is declared in survey data.

The program "Micro-entrepreneurship Support Program" (MESP)[6] is administered by the Chilean Ministry of Social Development and has more than 24,000 beneficiaries per year. MESP has two

[5]To the best of our knowledge, only the 'Project Growing America through Entrepreneurship' (GATE) implemented in United States is evaluated for a longer time span (60 months). See Fairlie, Karlan and Zinman (2015).

[6]In Spanish, the program is known as "Programa de Apoyo al Microemprendimiento" (PAME). In 2011 its name was changed to "Yo Emprendo Semilla" (YES).

components: an in-kind transfer of start-up capital of about US$600 (approximately 4.5 times the monthly poverty line) and 60 hours of training over one month in effective business practices. In addition, the program includes follow-up mentoring visits within the next three months. The asset transfer is made in kind so that the entrepreneur can choose the required materials (or inputs) to buy according to the business plan developed during the training. A random sample of beneficiaries received an additional US$240 asset transfer on top of the regular MESP intervention. This additional transfer was implemented exclusively for this evaluation, with the objective to provide evidence on the optimal level of transfers. Individuals do not have to be micro-entrepreneurs to qualify as beneficiaries; in our sample about 50% of beneficiaries were not entrepreneurs before the program started. Overall, 66% were employed at the start, either self-employed or wage employed.

In this paper we focus on the long-term results of the evaluation.[7] We measure the effects of the program on employment, labor income, and business practices. The program has long-term effects (41 months after the program ends), but these effects are moderate with respect to the short-term results (9 months after the program ends). We also observe that the quality of the treatment matters and that this effect reveals itself mostly in the long run. Moreover, since most of the long-term effectiveness of the program comes from wage-work, our results suggest that some of the micro entrepreneurship skills are likely transferrable to wage employment provided they are taught with high quality.

In the short run, we find that the program generated substitution from wage-employment to self-employment and a transition from unemployment to self-employment. Overall, these transitions imply an increase in income. In the long run both self-employment and wage-employment increase for the treatment group, but with positive effects on income only for the wageworkers. When comparing the two levels of asset transfers, we observe that the employment increase has a different composition in the long run depending on the treatment: those with low levels of transfers mostly end up in dependent work whereas those with high levels of transfers mostly end up self-employed. These results suggest that encouraging individuals to persevere in their business by granting them additional capital could be beneficial in the short run, but could also prevent them from being flexible enough to take advantage of dependent work when the economic environment improves in the long run. In addition, the evidence presented in this paper indicates that the individuals that do benefit the most from this type of program are those unemployed at the baseline

[7] Martínez, Puentes and Ruiz-Tagle (2013) focuses on the short-term results of this program.

(the new owners), but the effect vanishes in the long run, suggesting that dynamic assessment is key to adequately evaluate micro-entrepreneurship programs.

Overall, our results suggest that providing business training and asset transfers are successful in increasing beneficiaries' employment and labor income in the short and long run. Moreover, the mechanism of employment and income increase that the beneficiaries obtain differs in the long run according to the quality of training they receive. These results are important as the evidence on micro-entrepreneurship programs on business outcomes is mixed. Some studies find no positive results of training programs in the short and medium run: Karlan and Valdivia (2011) in Peru and de Mel et al. (op. cit.) in Sri Lanka for existing entrepreneurs. Furthermore, the studies that do find positive results do so for particular populations: Gene and Mansuri (2014) provide training and entry into a large business loan lottery to microcredit clients in Pakistan and find a positive effect of training (after 22 months), but particularly for men. Furthermore, de Mel et al. (op. cit.) show that training only, rather than combined with cash transfers, has positive impacts but for new owners only. Finally, concerning the type of training, there is evidence that additional technical assistance can be useful to increase sales 24 months after training in Peru (Valdivia, 2014) and that simple "rules of thumb" increase the likelihood of keeping accounting records, calculating monthly revenues, and separating household and business records, but that more complex training does not affect business practices in the Dominican Republic (Drexler, Fischer and Schoar, 2014). We add to this literature showing that the quality of the training is important and further research should study which aspects of the training delivery are more relevant.

The rest of the paper is organized as follows. Section 2 describes the program and the intervention. Section 3 discusses the data collection process and the balance and attrition of the sample. Section 4 and 5 present the empirical strategy and results respectively. Finally, section 6 summarizes the main results and their implications.

2 The Intervention

We evaluate the impact of a large-scale, publicly run micro-entrepreneurship program as it is currently implemented as well as with an additional asset transfer specifically implemented to test whether the lack of capital is an impediment to successful self-employment. The experiment design includes three randomly assigned treatment arms: a control group, a treatment group that received the regular MESP, and a third group that received an additional asset transfer to the MESP (MESP+). A comparison between the first two

groups provides an estimate of the program's impact whereas a comparison between the two treatment groups provides an estimate of the effect of additional capital, conditional on having received the regular MESP training and original asset transfer. It was politically impossible to separate the training and capital components to assess the effectiveness of each individual intervention. Thus, we extended the asset transfer instead. Nevertheless, we also consider the overall effect of MESP and MESP+ to gain power in the long-term assessment and to avoid issues of differential attrition.

2.1 The Micro Entrepreneurship Support Program (MESP)

The Ministry of Social Development of Chile started MESP in 2006.[8] It has about 24,000 beneficiaries per year. The program's purpose is to give individuals the skills and capital required to generate income through self-employment by developing their own businesses. MESP's target population comprises extremely poor households, specifically those with individuals over 18 years old who benefit from social programs and who are unemployed or underemployed.[9] Interested individuals must apply to the program in government agency offices. Our sample consists of individuals who applied to MESP in 2010 in the Metropolitan Region of Santiago. The intervention was conducted from October 2010 to February 2011.

The program has a training as well as an asset transfer component. The training runs for four months. The first three weeks consist of sixty hours of intensive formal training in micro-entrepreneurial skills. The rest of the time is allocated to mentoring visits.

The 60-hour MESP training is divided into 5 parts. Part one, with lasts at most 8 hours, consists on studying the business idea of the beneficiary. During these sessions the training company addresses the strengths and difficulties of the original business idea proposed by the beneficiary, considering the

[8] The program is carried out by the "Solidarity and Social Investment Fund" (in Spanish: Fondo de Solidaridad e Inversión Social, FOSIS), under the Ministry of Social Development (in Spanish: Ministerio de Desarrollo Social).

[9] "Underemployment" is loosely defined by the government implementing agency, FOSIS. In general, it considers occupations that provide low income and require few working hours. Applicants demonstrate their qualification by filing a Social Security Card (SSC) and obtaining a score below a certain income threshold. Our sample consists only of beneficiaries of "Chile Solidario," which is the main anti-poverty program of the Chilean government. This allows us to concentrate on the extremely poor. The Social Security Card (SSC) is the "Ficha de Protección Social" (FPS) and is aimed at measuring economic vulnerability. The government agency sets the threshold on the SSC scale based on the applicant's economic resources, needs, and risk factors. The SSC score goes from 2,072 to 16,316 points, with a lower number implying a higher degree of vulnerability. The threshold for the MESP was set at 8,500 points, corresponding to the lowest 20% of scores. People below this threshold are eligible for the program.

beneficiary skills, and the economic, social, and legal context necessary to have a profitable business. Part two, of at least 20 hours, consists on quality management, where the beneficiaries are taught several management practices, such as how to set and update goals, define products, obtain customers' feedback, and learn about the current legislation. Part three, with a minimum of 20 hours, is devoted to elaborating the business plan, which includes a characterization of the potential costumers and the competition; an analysis of the institutions that can help the beneficiary, such as NGOs or municipalizes; and finally a definition of the final business idea. Part four, with a minimum of 8 hours, sets the activities that will follow in the next three months and the beneficiary commits to follow a plan that will be reviewed during the follow-up visits. Finally, part five, with a maximum of 4 hours, is a price exercise that will be used for the asset transfer that is part of the intervention.

Some of the lessons learned during this training can be useful for wage work. For instance, the second module of at least 20 hours in which beneficiaries learn about management practices (preparing a budget, obtain feedback from the costumers, knowing the current legislation, managing the inventory among others) can be useful for some occupations besides self-employment. Also, module 3 of at least 20 hours, in which the business plan is prepared, can provide skills that are valued in the wage sector. Then, at least 40 hours of the training program could be considered valuable for wage work.

All MESP graduates must have an attendance rate of at least 90%. This means that participants can miss up to 2 of the 12 sessions. During the three months mentoring period, beneficiaries are visited three times by the implementing institution to follow up on the businesses' performance and to provide managerial advice. [10]

After the formal training, there is financial support comprised of an in-kind transfer of about US$600 that the beneficiaries can spend on machinery, raw materials, or other inputs.[11] The trainer can accompany

[10] Institutions that provide the training are selected through a bidding process. These organizations include private institutions such as foundations or tertiary education institutions that are properly accredited by the government. The chosen institutions provide all services as a package, with standardized protocols for this provision. These protocols include the content of the classes, a maximum class size of twenty students, a transportation subsidy, and childcare. In order to study the level of achievement of all the training protocols we called a sample of participants and randomly supervised training sessions, observing that the protocols were correctly implemented.

[11] The amount they receive is Ch$300,000. A maximum amount of 10% could be received in cash or as working capital. This amount is about 4.5 times the poverty line.

the entrepreneur to purchase these inputs. Alternatively, the entrepreneurs can provide a receipt as proof that the expenditure was made. The amount of funding is standard and does not differ by type of business, economic sector, or geographical location.

2.2 MESP with Additional Funding (MESP+)

The additional funding component was implemented specifically for this study, corresponding to a lump sum of US$240[12] to be given to beneficiaries in addition to the US$600 received under the *normal* MESP. As with the initial transfer, recipients could use the extra grant for equipment or inventory and were accompanied by personnel of the implementing institution to make the purchases or were required to provide receipts. The additional resources were delivered in August 2011, six months after the end of the MESP, and it was required that these resources be spent in accordance to the business plan developed during the prior training. Individuals who received the additional funding did not know about the additional funding during the MESP, and therefore did not consider this additional transfer when planning for their first round of funding. Figure 1 shows the intervention calendar.

2.3 Experimental design

The MESP is offered at least once a year. We randomly assigned applicants to the MESP into three treatment arms: (i) control group, (ii) access to the MESP, and (iii) access to the MESP with additional funding (MESP+). We stratified applicants using four quartiles of the SSC score and municipality of residence.[13] In total there are 18 MESP courses. Individuals from the same municipality were all enrolled in the same training course, which they may have shared with participants from other municipalities. Individuals who were not chosen for MESP (control group) received a letter from FOSIS indicating that they were not selected due to excess demand, but that they could apply in the following year.

The treatment arms were implemented with a total of 1,948 individuals. Table 1 shows the 566 individuals who were randomly assigned to the control group, the 689 to the "normal" MESP (T1), and the 693 to MESP+ (T2).

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[12] US$240 ≈ Ch$120,000.

[13] The four groups were built using three SSC score cuts: 2168, 2298.5, and 3445 points. Recall that the upper limit to enter the program was 8500 points; the applicants are concentrated in the lower part of the SSC score to specifically study the high degree of vulnerability among the program participants.

3 Data and Measurement

The baseline household survey took place between August and October 2010. The one-year follow-up survey took place between October and November 2011, 12 months after MESP started and 2 months after MESP+ was delivered. The second follow-up survey was carried out in September-December 2013, 36 months after the program started and more than 2 years after MESP+.[14] The analysis is conducted over individuals for whom all surveys are available. We address balance among treatment groups and attrition in the following subsections.

We also use high frequency administrative data from the contributions to the unemployment insurance program (UI). This is used in the analysis as an independent source of formal wage employment. The UI administrative data includes information about the jobs covered by the UI system (formal jobs) and the wage received in each job relationship on a monthly basis.[15] All new contracts (since the law started in October 2002) are captured by the UI. We merged this monthly data for the period September 2010 to June 2014, allowing us to study the impact on formal employment 41 months after the MESP implementation, and 46 months since its start.

Importantly, during the period we analyze, the Chilean economy exhibited high growth rates and decreasing unemployment. While the GDP grew 5.8% in 2010 and 2011, 5.5% in 2012 and 4.2% in 2013, unemployment rates in greater Santiago decreased from 7.9% in December 2010 to 6.2% in December 2011, 5.2 % in December 2012, and 6.2% in December 2013.[16] This is a favorable economic environment, which is relevant to consider when analyzing the results and making recommendations.

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[14] The response rates for the randomized populations were 94%, 88% and 77% respectively. The randomization was done before the implementation. Because of the program's timeline there was a limit on the number of days that could elapse between the end of the application period and the announcement of the admissions results. The spots were supposed to be filled by September 15th, and at that point 93% of the total interviews had been made. In order to avoid benefit-seeking answers and to ensure the reliability of the instrument an impartial third party conducted the surveys. The implementation of the survey was clearly confidential and it was emphasized that there was no link between survey answers and the individual's eligibility for social programs.

[15] The only type of formal work that is not included are those jobs that had a contract signed before October 2002 and who are still employed under the same contract. Since those are long-term contract jobs, it is very unlikely that somebody in our sample is in that condition, which implies that all formal jobs should be captured in the UI data. Also, jobs in the public sector are not captured by the UI data since public servants do not have access to the UI.

3.1 Balance among treatments and control groups

We use baseline survey data for a set of variables of interest to test whether the assignment to the groups was effectively random by comparing the means for the subsample interviewed in both waves. In Table 2, we present the mean values for the Control Group, Treatment groups (T=T1+T2), Treatment MESP (T1), and Treatment MESP+ (T2). In the last four columns, we present the p-values for the test of differences in means, comparing T, T1 and T2 against the Control group, and T1 with T2.

The individuals' characteristics in each treatment group are presented in Table 2. About 95% of beneficiaries are females and are, on average, 36 years old. Approximately 31% of individuals have only completed primary education, while between 4 to 7% have some tertiary education. The average SSC score is between 3,447 and 3,451 points, well below the entrance threshold requirement of 8,500 points. None of the observed differences in individual characteristics among treatments are statistically significant at the 5% level.

Regarding employment variables, 66% reported being employed at baseline and about 50% reported being self-employed[17], with no significant differences between treatment arms. Average monthly labor income was approximately US$97 to US$116 and there is a significant difference only between T1 and T2 (p-value=0.02) but not statistically different compared the control group. This unbalance in income comes from larger self-employment income in T2. Using the UI data we estimated the average number of months for which an individual had a formal job during 2009 and the monthly formal wage earned during the same period (before the intervention). We observe that on average individuals were formally employed for just over a month during 2009, while on average their monthly income was US$44. There are no differences by treatment arms. Therefore, the randomization seems successful in generating well-balanced treatment groups.

These summary statistics also shed light on the special characteristics of the applicants with respect to the eligible population: applicants are overwhelmingly women and a significant fraction of them worked prior to the program.[18] Therefore, the external validity of the results of the evaluation should be carefully

[17] Individuals can report more than one occupation and they could declare to be wage-earner sin one and self-employed in another. We classified individuals as self-employed if they had any income from independent activities; the same was done for wage earners. Therefore individuals with both types of jobs will appear as wage earners and self-employed.

[18] Female labor participation and employment in Chile is 43.5% and 39.3% respectively (Casen, 2011).

considered and potential extensions of the program to poor individuals need to account for these characteristics.

3.2 Attrition assessment in the follow-up

In Table 1 Panel B we observe that the response rate for all rounds is slightly higher for the treatment groups (T = T1+T2) relative to the control group (74.3% vs. 72.4%), but the difference is not statistically significant (p-value is 0.40, see Panel C). However, the smaller attrition rate of the MESP+ group compared with the Control and the MESP groups (77.4% versus 72.4% and 71.2%) is statistically significant (Panel C), indicating that attrition rates vary by treatment group.[19] Hence, the results we obtain for MESP+ in the following section must be interpreted with care. For instance one could argue that individuals are more likely to answer the follow-up survey when they are performing better; thus the higher response rate for the MESP+ could result in an overestimated effect of the additional transfer. In Section 5 we calculate bounds using Lee's (2009) methodology, which allows us to control for endogenous attrition and to analyze the potential impact of different response rates.

4 Empirical strategy

i) Intent to Treat (ITT) of the program and heterogeneity with respect to baseline activities and preferences

Our empirical strategy relies on the random allocation of each eligible individual to a treatment group, which guarantees that individuals in each treatment group have, on average, the same relevant characteristics. As shown in the previous section, this assumption is strongly supported by the data in the baseline. We study the existence of treatment effects with the following equation:

$$y_i = b_0 + b_1 T_i + b_2 X_i + \varepsilon_i \qquad (1)$$

[19] In order to assess if attrition depends on observables we follow Fairlie, Karlan and Zinman (2015). We regressed the follow-up dummy on the treatment variables and on a set of observed characteristics in the baseline and on the same characteristics interacted with the treatment variables. Then, we performed an F-test on the interaction coefficients. The p-values for the F-tests are 0.58 for the MESP and 0.77 for the MESP+ (Table 1, Panel D), so we cannot reject the null hypothesis that the observables have no effect on attrition.

Where y_i is an outcome variable (such as employment, income, or hours of work), T_i is a dummy indicator of the treatment status, and X_i is a set of control variables. Fixed effects for strata (SSC score and the municipality where individuals live) are included in each regression specification. Errors are clustered at the municipality level.[20] Regressions are weighted following Humphreys (2009) to consider different probabilities of selection into the treatment groups in each stratum.

We study the existence of heterogeneous treatment effects with the following equation:

$$y_i = \alpha_0 + \alpha_1 T_i + \alpha_2 X_i + \alpha_3^k Z_i^k + \alpha_4^k T_i Z_i^k + \epsilon_i \qquad (2)$$

Where Z^k_i is the variable where the interaction effect is studied (k represents the particular heterogeneity and Z^k_i can be either a dummy variable or a continuous variable depending on the heterogeneity under study). The coefficient of interest is α^k_4, which represents the treatment effect for the particular subgroup studied. If $\alpha^k_4 = 0$, then the MESP effect does not vary by Z_i and the average homogenous effect would be captured in α_1.

ii) Comparing different levels of transfers

We compute the ITT estimates for different levels of assets transfers on outcome y_j with:

$$y_i = \delta_0 + \delta_1 T1_i + \delta_2 T2_i + \delta_3 X_i + \xi_i \qquad (3)$$

Where $T1_i$ and $T2_i$ are dummy indicators of the treatment status as explained above and X_i is a set of baseline variables used as controls. The variables δ_1 and δ_2 capture the ITT estimates of being offered the MESP and MESP+ respectively. We test if δ_1 and δ_2 are different from zero and whether they are different from each other.

5 Impact Evaluation Results

i) Labor Market Effects

[20] It is not possible to cluster by training courses because the control group did not attend any trainings. However, the municipality where individuals live is a level of aggregation that should allow us to consider common shocks.

The average treatment effects (ITT) in employment and income are reported in Table 3. Columns (1) and (2) reports the 9-month and 33-month effects respectively. In 2011 (9-month results) there is a 22.7 percentage point increase in the probability of being self-employed (the average in the control group is 42%). There is also a 5.0 percentage point decrease in dependent employment. Together, these effects imply a significant increase in total employment of 15.3 percentage points. The impacts on income (panel B) are consistent with these employment effects. There is a substantial increase in self-employment and total income: total labor income increases by US$70 (from US$133 for the control group), corresponding to a 52.7% increase. Self-employment income increases by US$58.4 (from US$64 for the control group), corresponding to a 91% increase. There is also an increase of six hours in the amount of hours worked weekly (from 19.8 for the control group).

The long-term effects show some different patterns (Table 3, Panel A, column 2). It is important to note that there is a 5 point increase in employment between 2011 and 2013 for the control group as well, so the identified program impact is on top of this substantial increase and therefore more difficult to identify. Although there is still a positive and significant effect in total employment of 6.8 percentage points, this is smaller than the short-term effect. Regarding the type of employment, there is an increase in both self-employment and dependent employment of 5.7 and 4.8 percentage points respectively.

The long-term impact on total labor income is US$34 (from US$198 for the control group), representing a 17% increase (Table 3, Panel B, column 2). Although this long-term effect is smaller than the short-term effect, it is a substantial impact 3 years after the intervention.

The employment and income results therefore show a perhaps unexpected mechanisms through which MESP increases employment: one year after the intervention there is an expected increased in self-employment, which not only comes from formerly unemployed individuals, but also from a decrease in wage-employment. In the same period, there is an increase of labor income exclusively from self-employment income. Three years after the intervention, the effect in self-employment decreases, and – unexpectedly – there is a rebound of wage-employment. Taken together, we still find a significant employment effect. Interestingly, three years after the intervention, the income increase comes from an

unexpected channel: the self-employment income does not significantly increase, whereas the wage work income does so by 17% with respect to the control group. [21]

This puzzling path can be the result of the training process, which could have provided the participants with skills that can be effective both as self-employed workers and as wageworkers. Eventually, for example, being able to read and prepare a budget can be useful in the wage sector.

The results in Table 3 show a dynamic labor market: employment is increasing overall, and there is movement between self-employment and wage work. In order to further study the dynamics of the labor markets and how MESP could have affected them in a longer time period and to check the results of the survey data with an independent and reliable source, we use the abovementioned UI high frequency administrative data to study the effects of the program on formal wage employment and corresponding wages month by month.

The UI formal employment definition differs from our definition of wage employment in several aspects. Wage employment includes housekeeping services, which are not included in the UI data. Also, the UI data only covers individual with contracts whereas our definition of wage employment includes jobs with and without a contract. Therefore, in principle, the UI employment is a subset of our definition of wage employment used in the survey.

Graph 1 and Table A2 in the appendix tables show the results for each month (September 2010-June 2014). Graph 1 shows the coefficient obtained from regression (1) on employment (left figure) and earnings (right figure) in percentage points relative to the control group levels. Two important findings can be observed from this monthly frequency data. First, there are negative effects on wage employment and income from September 2010 to the end of 2012, though only significant in a few months at the beginning of that period, which partially coincides with the training period. Second, during the years 2013 and 2014 the program had positive effects on both formal employment and earnings, and the effects on earnings tend to be statistically significant more often than the results on employment.

[21] There is a heterogeneous treatment effect that depends on baseline employment in the short run: unemployed individuals at the baseline are more likely to be self-employed and employed. However, in 2013 there are no differences in self-employment by labor status at the baseline (see Table A1 in the appendix tables).

The increment in wage work for the control group with respect to MESP recipients from September 2010 to February 2011 (that is, since the MESP announced its beneficiaries until the end of the program) is consistent with not selected individuals looking for formal employment once they were not offered a spot in the program. It is also consistent with beneficiaries stepping out of the labor market for the MESP training. The range of the drop in formal employment goes from 5.6 percentage points in October 2010 to 3 percentage points in February 2011 and corresponds to around a third of the control group wage-employment. The decrease in wage-employment does not always translate into earnings: in two of the months, October and November 2010, there was a significant drop in earnings of US$20 and US$13 respectively. Between March 2011 (once the program had finished) and the end of 2012 the negative effect persists, although for most months it is not statistically significant. Therefore the program seems to generate a substantial substitution away from wage-employment during the program period and this effect persists for almost two years. If during the first months of the intervention the beneficiaries are not actively working on their business or if during these two years these businesses do not generate enough income, this negative employment and income effect should be considered as part of the cost the intervention.

The analysis of the UI data also shows that MESP successfully increased wage-employment and income between January 2013 and June 2014 (last available month). Interestingly, in the same period the effects are statistically significant for earnings more often than for employment: the ITT estimate for employment is significant at the 10% level in 5 of the months, while for earnings, the ITT estimate is significant at the 10% level in 10 of the months. This suggests that the program not only facilitated finding a formal wage job, but also had an effect on the productivity of the beneficiaries. In terms of the magnitude of the effects for the 2013-2014 period, the ITT estimates for employment range from 2.6 to 4.8 percentage points (see table A1 in the appendix), which is consistent with the results in Table 3, where dependent income increased by 4.8 percentage points according to the 2013 survey. The ITT effects for earnings during the 2013-2014 period range from US$17 to US$29 (see Table 1 in the appendix), which are also consistent with the increase of US$19 found for dependent earnings in Table 3.

Overall, the results with survey and administrative data show that MESP increased employment and income. The survey data shows this is the case one and three years after the intervention. Furthermore, the administrative data reports positive effects in wage-employment four years after the program took place. This contrasts with most papers in the literature, which usually report positive effects on employment in the short

run but that disappear in the long run. However, we do find that the effects on self-employment are decreasing over time, although there is a boost in wage-employment, which partially compensates the self-employment decline.

Furthermore, the long term administrative high frequency data allow us to determine that the short run decline in wage-work also found by de Mel el al (2014), vanishes in the medium run and turns into an increase in the long run. The result that a micro-entrepreneurship program could positively affect wage work in the long run (approximately 4 years) is new to the literature and we discuss the possible channels that explain these results in the following sections

ii) Business Practices and Assets

Considering that MESP is a combination of business training and asset transfer, we study its effects on business practices and assets accumulation measured in the 9-months and 33-months follow-up surveys. Effects in business practices and/or assets accumulation would shed light on the mechanisms through which the program works.

We follow De Mel *et al.* (2014) in using several questions to create different indices for business practices in four categories: marketing, inventories, records, and financial planning.[22] For example, the following questions are used to measure marketing, record keeping, and planning practices, respectively: During the last 3 months, have you asked your clients if they would like your business to sell a new product or offer a new service? Have you calculated the cost of your main products? and Have you made a budget for next year's costs? For instance, for marketing practices, we created a dummy variable equal to one if a particular marketing practice was used and then added this to other questions related to marketing practices. This allowed us to build a marketing index that goes from 0 to 9. A similar procedure was used for each business practice dimension (see Appendix 1 for details).

We also collected data on the amount of cash available for business expenses and we have information from independent reports collected by enumerators at the follow-up visits regarding the

[22] We thank Christopher Woodruff for facilitating the questionnaire. The specific questions used in the construction of each variable are reported in Appendix 1.

existence of inventory and register books.[23] This could be a better outcome measurement if training affects the quality of reporting, but not behavior. For example, in an extreme case, what is found in self-reported outcomes could simply be an improvement in the quality of self-reporting and not a change in behavior.[24]

MESP impacts on business practices are presented in Table 4. The ITT estimates consistently report a positive effect of the treatment on all business practices; both in self-reported ones as well as on those reported by the enumerator. A year after the program ended all business practices had improved. For instance available cash increased by 44 dollars (column 2), which is equivalent to three times the cash available among the control group, and the ITT for business practices is almost twice that of the control group. These large effects can be in part explained by the increase in self-employment for 2011; nonetheless, in 2013 there is still an impact on practices despite the fact that self-employment fell. For instance, in 2013 (column 4) the ITT estimates of marketing practices is 0.4 and for inventory management it is 0.2, which represent increases with respect to the control group of 24% and 27% over the control group, respectively. There is also a US$18 increase in the cash available and a 35% increase in the availability of a book registry. These results show that the training seems to have affected the practices of small entrepreneurs for at least three years after the training.

On the other hand, panel B shows that 33 months after the intervention there are no differences in the amount of assets between the groups. Therefore the program was not able to create a permanent increase in capital among its beneficiaries, despite the transfers made by MESP and MESP+. This is consistent with the absence of effects in self-employment income in that same year.

iii) Heterogeneous Effects

[23] These questions are asked only if the interview was conducted at the business.

[24] This measurement reporting problem could bias our results in either direction: individuals with training might learn about the business practices (including how to compute profits) and then improve their reporting. In the case of profits, the knowledge might increase or decrease their estimated profits. For example, if they had not been including their wages, then profits will appear lower once they include wages, but if they were not accurately computing their sales, profits might be larger once they make that change. We have different strategies to address these potential problems. In the case of business practices, we include a report by an enumerator. However, we could not directly derive income numbers by observing the entrepreneurs because our large sample size would make this too costly.

The increase in dependent employment in the long run could be caused by a training that provides a set of skills that are useful for self-employment as well as for wage-employment. As we argued in section 2.1, at least 40 of the 60 hours of training could be considered useful for wage work. For instance, the training considers budgeting, marketing strategies, developing a business plan among other activities. This training can increase the understanding of business in general, adding value to workers and increasing their attractiveness in the wage labor market. Moreover, most of the beneficiaries put in practice this training during 2011 as self-employed workers and this job experience could have added value to these skills.

Then, if the training provided skills also useful for wage work, higher quality training would have a larger effect in wage-employment. Although the MESP's content in the training lessons is homogeneous, there is variation in the quality of the training execution. We measure training quality with the program's graduation rate and a quality score index constructed by the implementing agency (FOSIS). The graduation rate is an indirect measure of training quality as beneficiaries are more likely to graduate if the training is of better quality. The quality index evaluates whether the program's requirements are satisfied. For example, it incorporates factors such as whether the program started and finished at the proposed dates, whether material was delivered to the beneficiaries, the human resources available, the appropriateness of the methodology used by the training company, and the quality of products and services delivered to the beneficiaries.[25] The graduation rates range from 48.5 to 97.5 percent and the quality index ranges from 8 to 10. [26]

Tables 5a and 5b show the coefficients for the heterogeneous effects in 2011 and 2013 respectively. In 2011 the quality index had an effect on self-employment and total labor income. In 2013 the two measures of quality are positively related to wage employment and total employment and their corresponding income measure. Furthermore the quality index has a positive effect on self-employment income. Therefore, three years after the intervention, higher quality training increased the probability of having a job as a wage earner and wage-employment income, whereas this is not the case for self-employment. This result is consistent with the hypothesis that the skills taught during the training are transferable to wage work.

[25] In the appendix 2 we present a detailed explanation of all items considered in this evaluation.

[26] For data completeness and estimation purposes, we impute quality indicators to the control group by averaging the quality indicators of the individuals selected for treatment that live in the same municipality.

If a beneficiary is moved from a training with a quality index equal to 8 (the worst index) to a training with a quality index equal to 10 (the best index),[27] she would gain US$100 in monthly labor income in 2011 and US$95 in 2013. In the later year, the probability of being a wage-worker or employed would increase by approximately 16 percentage points and the monthly dependent income would increase in US$50.[28]

An important caveat that has to be taken into account is that, as described previously, during 2013 the Chilean economy experienced high growth rates and a tight labor market, which could have amplified the effects of the program.

iv) Different levels of Transfers

The research design allows us to compare the program effect on employment by different levels of asset transfers. As reported in section 3.2, there is lower attrition in MESP+ than in the MESP and control groups. This is considered in the analysis by constructing lower and upper bounds for the treatment effects.

Following Lee (2009), we make the monotonicity assumption that receiving additional funding affects sample selection in only one direction. In our case, this implies that some individuals would have participated in the follow-up survey only if they received additional funding, but that additional funding did not cause certain individuals to not participate in the follow-up survey. The bounds are constructed trimming the distribution of the dependent variable where the percentage of the trimming is equal to the difference in the attrition rates between the MESP+ and the two other groups divided by the response rate of the additional funding group. In our case, that number is 4.7% (according to figures in Table 1). Therefore, for the lower (upper) bound we randomly trim 4.7% of the individuals with dependent values equal to one (zero) in the MESP+ group.

[27] The calculation consists in multiplying the quality index by 2, which is the difference between the index of the best and the worst trainings.

[28] An analogous exercise can be done by moving the graduation rate from 48.5% to 97.5%. The corresponding effects in 2013 are of 24.5 and 29.4 percentage points for wage-employment and total employment respectively and US$98 and US$147 for wage and total labor income respectively.

Table 6 presents the relevant comparisons: Panel A reports results without considering the differential attrition while Panel B and C report results for the lower and upper bounds respectively.[29] MESP and MESP+ substantially increase self-employment 9 months after the intervention by 17.8 and 27.8 percentage points respectively (columns 2 and 3), with the MESP+ effect being statistically different than the MESP effect and robust to the lower and upper bound scenarios. These large effects are relevant considering that 42% of the control group was self-employed 12-months after the intervention (column 1). Therefore, in the short run, a larger asset transfer increases the number of individuals in self-employment. Interestingly, the same transfer decreases the probability of being a wage worker by 6 percentage points with respect to the control group, but we cannot reject that this effect is the same between the two transfer levels (p=0.30 without considering the differential attrition). There is a robust increase in total employment for both treatment arms of 11.5 and 19.3 percentage points of MESP and MESP+ (control group=65.5%, column 1), and MESP+ has a statistically different effect than MESP.

Columns (5)-(8) reports similar results for the 33-months follow up. Only MESP+ has a statistically significant effect on self-employment (7.9 percentage points). However we cannot reject that the effect of MESP and MESP+ is the same on this outcome (p-value=0.14 without considering differential attrition). On the other hand, MESP increases the fraction of dependent work by 9.5 percentage points (it is 33% for the control group) and we can reject that this effect is the same for MESP and MESP+ in all scenarios (panels B and C). Finally, both treatment arms increase total employment: MESP by 8.4 percentage points and MESP+ by 6.2 percentage points and this effect is not statistically different between them (p-value=0.25 not considering attrition).

Therefore, in the long run the combination of training with both asset levels increase employment, but MESP does it through wage employment, whereas MESP+ through self-employment. This latter result, however, is not robust to all specifications. The additional transfer was successful in the short run in keeping self-employment functioning at higher levels than the MESP alone and resulted in an overall larger employment level, but slowed the movement from self-employment to dependent work that occurred for the MESP group. In other words, the additional transfer might have created hysteresis in self-employment that

[29] Note that the point estimates of MESP change in panel B and C due to sample change.

lasted at least two years and could explain the differences in wage-employment between the MESP and MESP+ group in 2013. [30]

We can compare the impact of MESP and MESP+ in formal wage-employment using the UI data. For each month from September 2010 to June 2014, we calculate the upper and lower bounds of each treatment arm for formal employment and earnings. These bounds are presented in Graph 2 for wage-employment (left figure) and wage-income (right figure). As expected, the bounds for MESP are irrelevant, since they only reflect the sample change produced by the trimming of T2. On the other hand, the trimming of T2 generates a substantial wedge between the upper and the lower bound. However note that the point estimates of MESP on wage-employment and income are above those of MESP+ for almost every month.

The point estimates are presented in Tables A3 and A4 in the appendix tables for employment and income respectively and we compare those effects in appendix Tables A5 and A6. For only a few of the months we find that at the same time that the effects of the treatment arms are statistically different, one of the arms is by itself statistically significant. For employment, only for March 2013, there is a significant difference at the 10% level between MESP and MESP+ (see Table A5) and one of the treatments is significant for both the upper and lower bounds (see Table A3). In this case MESP had a larger effect on formal employment than MESP+. For formal earnings, for three of the months there is a significant difference between treatment arms (June 2012 and December 2013 at the 10% level and May 2013 at the 5 % level; see Table A6), while at the same time MESP has significant effects on earnings (June 2013 and December 2013 at the 10% level and May 2013 at the 1% level; see appendix Table A4). Then, for only a few of the months we find that MESP had a larger and significant impact on formal employment and wages than MESP+, which is consistent with the results in Table 6.

6 Discussion and Conclusions

Micro-entrepreneurial programs targeted to the poor revolve around two objectives: providing entrepreneurial skills and granting access to capital. The idea behind these objectives is that with these resources, poor individuals will be able to establish (more) successful businesses, allowing them an

[30] In terms of labor income, in 2013 MESP had a significant and larger income than the control group. The income of the MESP+ group was not different from that of the control group. However, from the bound analysis, we cannot reject that its income level was similar to the MESP group (results available upon request).

opportunity to escape poverty. However, the evidence is limited in several dimensions. First, the vast majority of the studies in the literature consider non-government, micro-entrepreneurship programs, so that the scalability of findings has not been sufficiently supported. Second, most of the literature investigates effects up to two years after the implementation of programs, but long-term studies are very scarce. Third, despite some efforts to understand what type of training can be more useful (Valdivia, 2014), there is little knowledge about what type of interventions are better at increasing income. Finally, there is little evidence on whether the skills taught during the training sessions can be useful for occupations other than self-employment.

Our study contributes to these four points. We study a publicly run micro entrepreneurship program targeted to the very poor in Chile. We use survey data and high frequency administrative data, which allow us to study the effects of the program 41 months after the implementation ended. We are also able to show that the quality of the training can explain employment and income gains. Finally, we carefully study the impact of the program on self-employment and wage work.

We find that the program has positive long run effects, though these are smaller than the short-term effects. We also find that the quality of the treatment matters and that this effect reveals itself mostly in the long run. Moreover, most of the long-term effectiveness of the program comes from wage work, suggesting that some of the micro-entrepreneurship skills are possibly transferrable to wage work, provided that they are taught with high quality.

These results allow us to derive four lessons. First, the program has a positive long run effect in employment and labor income. The cost-benefit analysis of the program can be computed comparing the labor income increase with the program's cost. A back of the envelope calculation shows that the MESP cost per participant of US$1,320 (according to the implementing agency's figures) is recovered in 27 months.[31] This is a relatively short period compared to other successful programs. For example, De Mel et al. (2014) calculate that a training program in Sri Lanka can recover its costs in 12 months but that a training plus cash program could take up to 48 months.

Second, the quality of the program is important. While the content of the training is important: how the training is given is crucial beyond what is covered in training. We observe that a training delivered with higher quality leads to larger employment effects, particularly in wage-employment. Moreover, the fact that the quality of the intervention has a lasting effect and that it is even amplified in the long run, while there is

[31] Considering the increase in labor income of US$70 in the short run and US$34 in long run and making a simple linear interpolation.

no change in business assets in the same time frame, is consistent with the idea that training but not the asset transfers are more important in obtaining better labor outcomes in the long run. Hence, the design of micro-entrepreneurship program should actively promote high quality training.

Third, the skills developed through training are not only important for self-employment but are also important for wage work. High quality training for self-employment generates 'general working skills' that are valuable in the wage-labor market.

Fourth, a larger assets transfer substantially increased self-employment one year after the program, but three years later, its impact does not seem to be different from that of the smaller transfer. At the same time, individuals with the smaller transfer were significantly more likely to be wage earners three to four years after the intervention. The interaction of the training and the asset transfer provided individuals with the skills to be more employed, but the different asset transfers seems to have set individuals in different employment paths. As a short-term employment generating strategy, it seems that the larger the transfer, the better. Nevertheless, in the long run the larger transfer does not seem to produce a gain, although the overall integral of earnings could have been larger.

In terms of future research, our study shows that it is important to study the quality of the training, long run impacts, and effects on wage-employment. We cannot distinguish which part of the micro-entrepreneurship training contributes the most to improve 'general working skills,' which should be the focus of future research of programs that provide training for micro-entrepreneurship. Understanding the role of general and specific skills in long run labor outcomes would be crucial in improving the design and effectiveness of this type of programs. At the same time, the evidence suggest that these programs are not being very effective individuals who are self-employed at the baseline and more research is needed to find effective interventions for this population.

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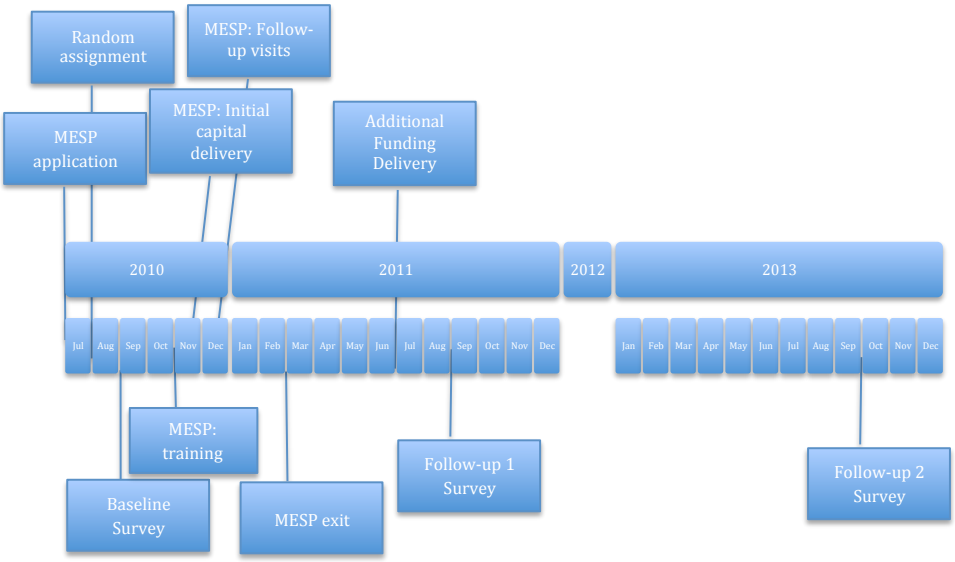
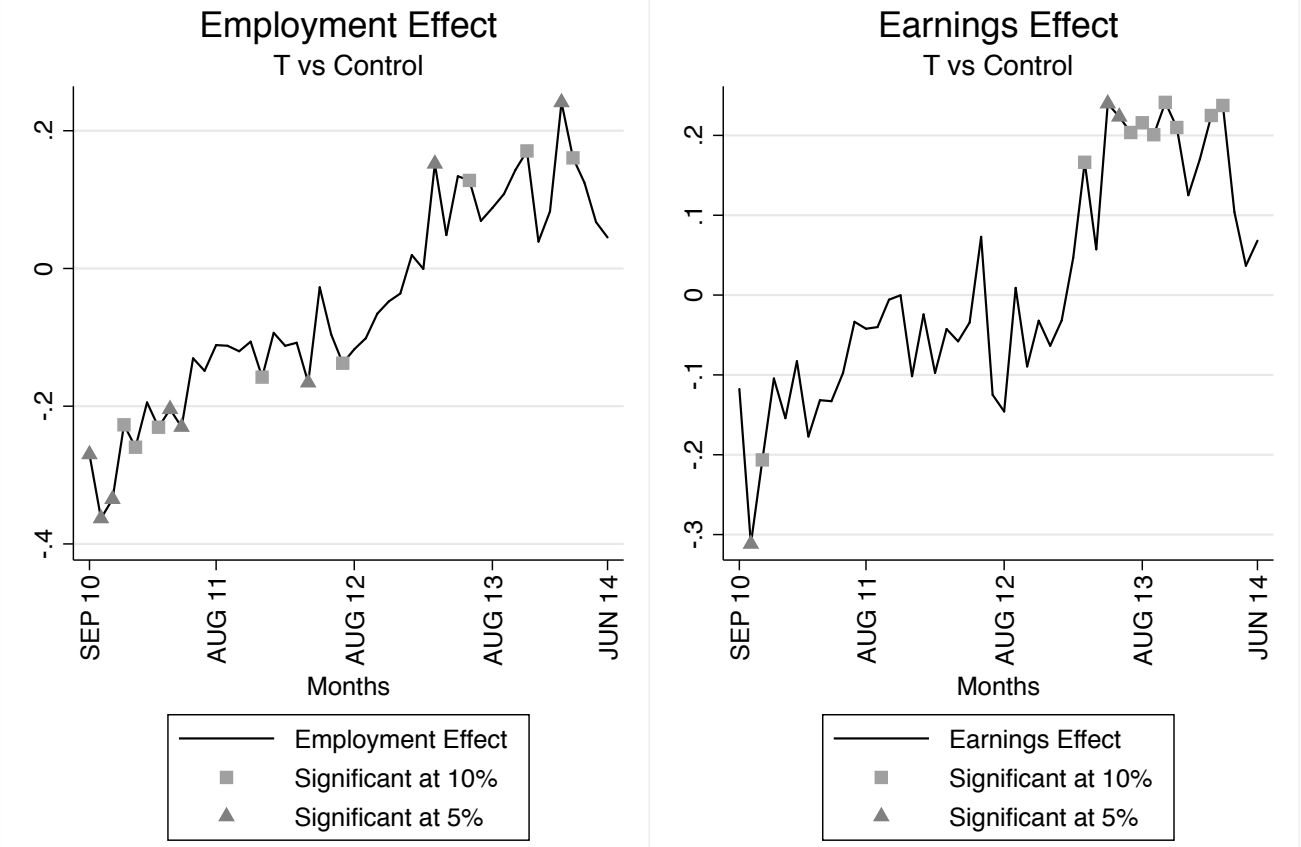
Figure 1: MESP Timeline

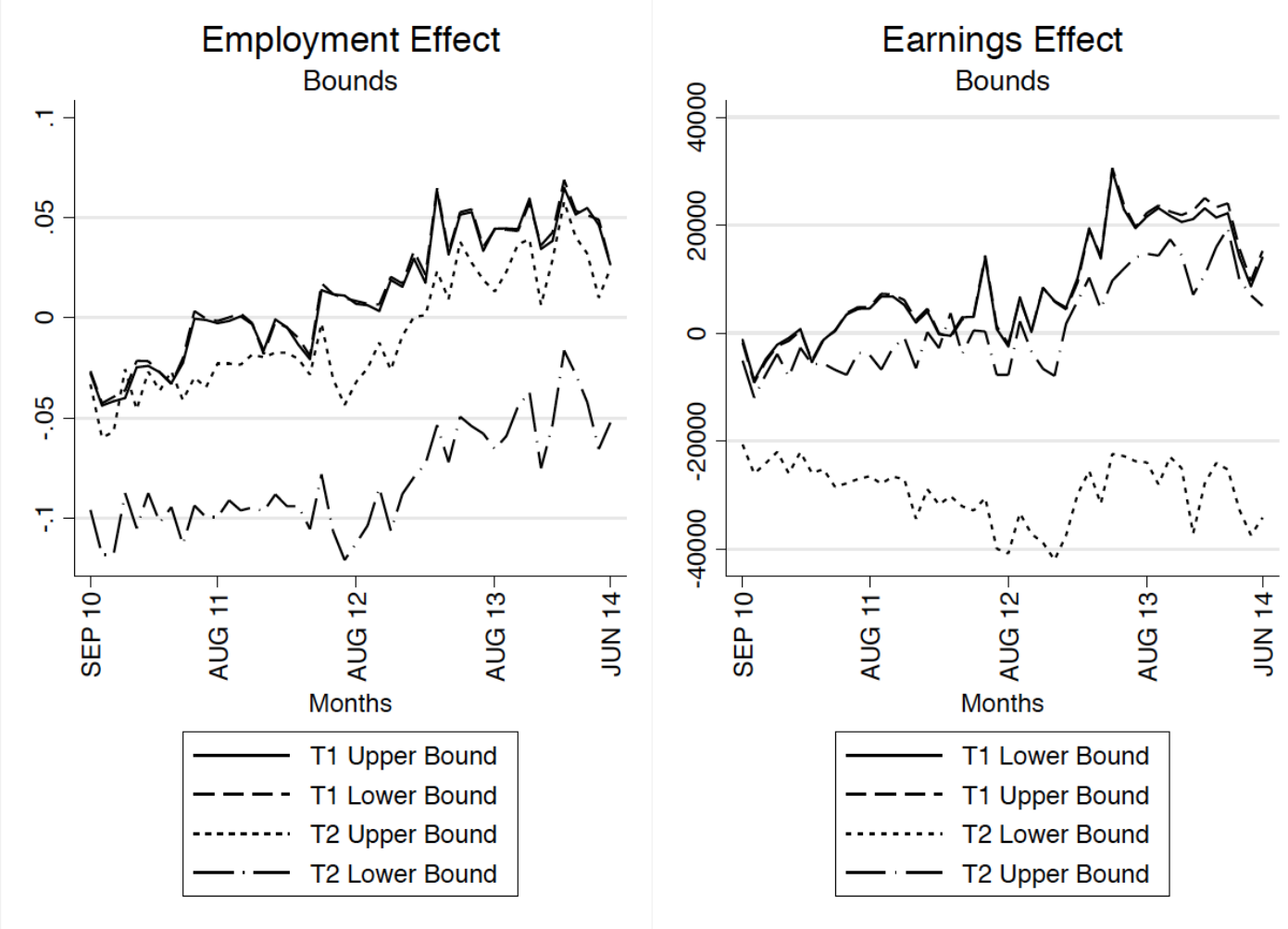


Graph 1: ITT Effect on Wage- Employment and Earnings (MESP over control group)



Note: Plot of the Intent to Treat effect on employment and earnings measured over the control group level for September 2010-June 2014. The lower (upper) bound for MESP+ (T2) is computed by trimming the top (bottom) 4.7% of the MESP+ data. The estimate for MESP (T1) changes due to sample change. Data from the unemployment insurance administrative records.

Graph 2: ITT Bounds on Wage-Employment and Earnings for MESP+



Note: Plot of the bounded effects of T1 (MESP) and T2 (MESP+) on wage-employment and earnings, for September 2010-June 2014. The lower (upper) bound for MESP+ (T2) is computed by trimming the top (bottom) 4.7% of the MESP+ data. The estimate for MESP (T1) changes due to sample change. Data from the unemployment insurance administrative records.

Table 1: Treatment Groups and Attrition

Panel A: Number of observations		Randomized	Base Line	Follow-Up 1	Follow-Up 2	All Rounds
		[1]	[2]	[3]	[4]	[5]
Control Group	Pure Control Group	566	532	490	432	385
T	T1 + T2	1382	1307	1222	1071	971
T1	MESP	689	649	593	513	462
T2	MESP + Additional Funding	693	658	629	558	509
Total		1,948	1,839	1,712	1,503	1,356

Panel B: Response Rates with respect to base line		Follow-Up 1	Follow-Up 2	All Rounds
		[3]	[4]	[5]
Control Group	Pure Control Group	92.1%	81.2%	72.4%
T	T1 + T2	93.5%	81.9%	74.3%
T1	MESP	91.4%	79.0%	71.2%
T2	MESP + Additional Funding	95.6%	84.8%	77.4%

Panel C: Attrition

P- Value of the differences in follow-up response rates	All Rounds
T vs C	0.40
T1 vs. C	0.65
T1 vs. T2	0.01
T2 vs. C	0.05

Panel D: Observables and attition

P- Value of the interaction of treatment and observables explain attriton	
T1	0.58
T2	0.77

Note: T pools individuals in T1 and T2

Table 2: Variable Means and Difference-Test Between Treatments Groups (sample 2011 and 2013)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
Variables	N obs	Control	T	T1	T2	p-val MESP=C	p-val T1=C	p-val T1=T2	p-val T2=C
Survey Data									
Gender (1=Male)	1,356	0.05	0.07	0.06	0.07	0.18	0.40	0.47	0.13
Age	1,356	36.04	36.19	36.13	36.25	0.82	0.91	0.87	0.79
Primary Education	1,354	0.31	0.33	0.33	0.32	0.67	0.63	0.82	0.79
Secondary Education Incomplete	1,354	0.23	0.25	0.24	0.26	0.47	0.74	0.54	0.36
Secondary Education Complete	1,354	0.41	0.37	0.36	0.37	0.12	0.15	0.86	0.19
Tertiary Education	1,354	0.04	0.06	0.07	0.05	0.26	0.13	0.29	0.59
SSC score	1,356	3,447	3,472	3,451	3,491	0.85	0.98	0.79	0.77
Employed	1,348	0.66	0.64	0.65	0.63	0.60	0.89	0.53	0.46
Self-Employed	1,348	0.50	0.50	0.50	0.49	0.78	0.93	0.73	0.68
Labor income (US $)	1,348	106.23	107.29	96.96	116.63	0.90	0.30	0.02	0.29
Wage work income	1,350	38.79	37.04	36.41	37.62	0.76	0.72	0.84	0.86
Self-employment income	1,354	66.81	69.99	60.16	78.94	0.65	0.37	0.01	0.15
Unemployment Insurance Data									
N of Months with Formal Employment in 2009	1,356	1.19	1.36	1.31	1.40	0.38	0.59	0.64	0.31
Average Formal Earnings in 2009	1,356	44.90	44.82	45.14	44.54	0.99	0.98	0.94	0.97

Note: Data from baseline survey conducted by the authors in September-October 2010. Sample size varies due to missing values. Income variable is measured in November 2009 pesos. Column [1] shows the number of observation. Columns [2], [3], and [4] show the mean value of the variable for the control group, T1, and T2 respectively. Column [5] reports the p-value of the null hypothesis that T1=Control Group, column [6] reports the p-value of the null hypothesis that T1=T2. Column [3] shows the p-value of the null hypothesis that T2=Control Group. Formal employment and earnings are from the UI data.

Table 3: ITT effects on main labor market outcomes

	[1] 2011	[2] 2013
Panel A: Employment		
Self-Employment	0.227***	0.057**
	(0.024)	(0.023)
Dep. Var. Control Mean	0.424	0.415
Wage Employment	-0.05**	0.048**
	(0.021)	(0.021)
Dep. Var. Control Mean	0.276	0.331
Total Employment	0.153***	0.068***
	(0.019)	(0.022)
Dep. Var. Control Mean	0.653	0.698
Sample size	1,325	1,347
Panel B: Income and Hours Worked		
Self-Employment Income	58***	14
	(9.18)	(8.62)
Dep. Var. Control Mean	64	87
Wage Employment Income	10	20**
	(9.35)	(7.72)
Dep. Var. Control Mean	68	111
Total Labor Income	70***	34***
	(13.93)	(9.98)
Dep. Var. Control Mean	133	199
Weekly Hours Worked	6.0	3.6
	(0.8)	(1.1)
Dep. Var. Control Mean	19.9	24.1
Sample size	1,325	1,347

Note: *** p<0.01, ** p<0.05, * p<0.1. Standard deviations in parenthesis. All income variables are measured in real US dollars (using exchange rate as of November 2009). Regressions include dummies for strata (defined by a socioeconomic index computed by the government using the Social Security Card score and municipality of residence). Standard errors are calculated allowing for clustering at the municipality level. Regressions are weighted following Humphreys (2009). Sample size varies due to missing values.

Table 4: Mechanisms

	2011		2013	
	[1] Control	[2] MESP & MESP+	[3] Control	[4] MESP & MESP+
Panel A: Business Practices				
Marketing (min. 0 - max. 9)	1.1	1.7***	1.7	0.4***
		(0.1)		(0.11)
Inventory Management (min. 0 - max. 5)	0.5	0.9***	0.7	0.2***
		(0.05)		(0.05)
Costing and Record Keeping (min. 0 - max. 7)	1.0	1.8***	1.4	0.4***
		(0.11)		(0.1)
Financial Planning (min. 0 - max. 4)	0.5	0.8***	0.7	0.2***
		(0.06)		(0.05)
Business Practices (min. 0 - max. 25)	3.1	5.3***	4.4	1.2***
		(0.31)		(0.29)
Available Cash (US Dollars)	14	44***	36	18***
		(6.8)		(6.38)
Inventory Available (min. 0 - max. 1)	0.023	0.037***	0.044	0.018*
		(0.01)		(0.01)
Registry Book Available (min. 0 - max. 1)	0.024	0.036***	0.062	0.022**
		(0.01)		(0.01)
Panel B: Assets				
Total Assets (Business + Household, US Dollars)			-107	-39
				(151.64)

Note: *** p<0.01, ** p<0.05, * p<0.1. Standard deviations in parenthesis. Asset variables are measured in real US dollars (using exchange rate as of November 2009). Regressions include dummies for strata (defined by a socioeconomic index computed by the government using the Social Security Card score and municipality of residence). Standard errors are calculated allowing for clustering at the municipality level. Regressions are weighted following Humphreys (2009). Sample size varies due to missing values. Business practices are described in Appendix 1. No data on assets was collected in 2011.

Table 5a: Heterogeneous Treatment Effects (2011)

	Self-Employment		Wage Employment		Total Employment	
	[1]	[2]	[3]	[4]	[5]	[6]
MESP	0.108	-0.139	-0.222*	-0.101	-0.004	-0.219
	(0.202)	(0.357)	(0.122)	(0.292)	(0.163)	(0.284)
Interaction of treatment with Program's:						
Graduation Rate	0.002		0.002		0.002	
	(0.002)		(0.002)		(0.002)	
Quality Index		0.039		0.006		0.04
		(0.038)		(0.033)		(0.03)
Number of observations	1,325	1,325	1,325	1,325	1,325	1,325

	Self-Employment Income		Wage Employment Income		Total Labor Income	
	[1]	[2]	[3]	[4]	[5]	[6]
MESP	54	-252*	23	-95	86	-400**
	(77.87)	(146.12)	(83.15)	(103.29)	(135.39)	(153.87)
Interaction of treatment with Program's:						
Graduation Rate	0.059		-0.161		-0.196	
	(0.97)		(1.01)		(1.63)	
Quality Index		33**		11		51***
		(15.72)		(11.55)		(16.72)
Number of observations	1,332	1,332	1,345	1,345	1,325	1,325

Note: *** p<0.01, ** p<0.05, * p<0.1. Standard deviations in parenthesis. All income variables are measured in real US dollars (using exchange rate as of November 2009). Regressions include dummies for strata (defined by a socioeconomic index computed by the government using the Social Security Card score and municipality of residence). Standard errors are calculated allowing for clustering at the municipality level. Regressions are weighted following Humphreys (2009). Sample size varies due to missing values. Quality Index corresponds to a standardized evaluation performed by FOSIS to all training companies. We impute quality indicators to the control group averaging the quality indicators of the individuals selected for T that live in the same municipality.

Table 5b: Heterogeneous Treatment Effects (2013)

	Self-Employment		Wage Employment		Total Employment	
	[1]	[2]	[3]	[4]	[5]	[6]
MESP	-0.014	-0.306	-0.378**	-0.728*	-0.362**	-0.695**
	(0.173)	(0.307)	(0.143)	(0.383)	(0.148)	(0.348)
Interaction of treatment with Program's:						
Graduation Rate	0.001		0.005***		0.006***	
	(0.002)		(0.002)		(0.002)	
Quality Index		0.039		0.083**		0.082**
		(0.033)		(0.041)		(0.038)
Number of observations	1,347	1,347	1,347	1,347	1,347	1,347

	Self-Employment Income		Wage Employment Income		Total Labor Income	
	[1]	[2]	[3]	[4]	[5]	[6]
MESP	-60	-183	-111**	-213*	-166***	-409***
	(55.26)	(111.74)	(50.53)	(120.32)	(57.99)	(143.17)
Interaction of treatment with Program's:						
Graduation Rate	0.942		1.682**		2.566***	
	(0.65)		(0.65)		(0.73)	
Quality Index		21*		25*		48***
		(11.63)		(13.17)		(15.21)
Number of observations	1,353	1,353	1,350	1,350	1,347	1,347

Note: *** p<0.01, ** p<0.05, * p<0.1. Standard deviations in parenthesis. All income variables are measured in real US dollars (using exchange rate as of November 2009). Regressions include dummies for strata (defined by a socioeconomic index computed by the government using the Social Security Card score and municipality of residence). Standard errors are calculated allowing for clustering at the municipality level. Regressions are weighted following Humphreys (2009). Sample size varies due to missing values. Quality Index corresponds to a standardized evaluation performed by FOSIS to all training companies. We impute quality indicators to the control group averaging the quality indicators of the individuals selected for T that live in the same municipality.

Table 6: Employment Effects of Treatments Arms

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
		2011				2013		
	Control	MESP	MESP+	P-Value	Control	MESP	MESP+	P-Value
Panel A: Levels								
Self-Employment	0.424	0.178***	0.278***	0.00	0.415	0.037	0.079***	0.14
		(0.032)	(0.03)			(0.028)	(0.028)	
Wage Employment	0.276	-0.035	-0.062**	0.30	0.331	0.095***	0.005	0.00
		(0.026)	(0.025)			(0.024)	(0.028)	
Total Employment	0.653	0.115***	0.193***	0.00	0.698	0.084***	0.062**	0.25
		(0.026)	(0.023)			(0.024)	(0.025)	
Panel B: Lower Bound								
Self-Employment	0.424	0.178***	0.262***	0.02	0.415	0.037	0.034	0.92
		(0.032)	(0.031)			(0.028)	(0.027)	
Wage Employment	0.276	-0.036	-0.126***	0.00	0.331	0.093***	-0.042	0.00
		(0.026)	(0.025)			(0.024)	(0.027)	
Total Employment	0.653	0.113***	0.173***	0.03	0.698	0.081***	0.042	0.06
		(0.026)	(0.024)			(0.024)	(0.026)	
Panel C: Upper Bound								
Self-Employment	0.424	0.175***	0.332***	0.00	0.415	0.035	0.116***	0.01
		(0.031)	(0.03)			(0.029)	(0.029)	
Wage Employment	0.276	-0.033	-0.048*	0.59	0.331	0.096***	0.018	0.01
		(0.027)	(0.026)			(0.024)	(0.028)	
Total Employment	0.653	0.116***	0.2***	0.00	0.698	0.084***	0.08***	0.82
		(0.026)	(0.024)			(0.024)	(0.025)	

Note: *** p<0.01, ** p<0.05, * p<0.1. Standard deviations in parenthesis. Regressions are weighted following Humphreys (2009). Sample size varies due to missing values. Following Lee (2009), we trim the distribution of each independent variable of the MESP+ group by the difference in attrition rates between the MESP+ and MESP and control group as a proportion of the retention rate of the additional funding group. Since the variables are discrete we randomly trim variables y=1 for the lower bound and variables y=0 for the upper bound. Standard errors are calculated allowing for clustering at the municipality level.

Appendix 1: Business Practices

The **marketing** score ranges from 0 to 9. One point is added for each one of the following activities done within the last three months:

1.- Visited at least one competitor's businesses to note their prices

2.- Visited at least one competitor's businesses to note their products

3.- Asked existing customers if there are any other products they would like the business to sell or produce

4.- Talked to at least one former customer to find out why she is a former customer

5.- Asked a supplier about which products are selling well in their industry

6.- Had a special offer

7.- Advertised in any form (past 6 months)

8.- Used non-rounded prices such as $999 instead of $1,000?

9.- Suggested to new products to their clients

The **stock management** score ranges from 0 to 5. One point is added for each of the following activities completed within the last three months

1.- Attempted to negotiate with a supplier for a lower price on raw materials

2.- Compared the prices or quality offered by alternate suppliers or sources of raw materials

with one point was awarded for each affirmative answer to the following two questions

3.- Do you maintain an inventory?

4.- Do you have a record of your inventory?

Additionally, the following question was worth multiple points:

5.- How often do you update the data on your inventory?

a.- One point for answering daily

b.- Zero points for answering weekly, monthly, less than monthly, and never

The **pricing and record keeping** score ranges from 0 to 7, where one point is added for each one of the following:

1.- Recording every purchase and sale made by the business

2.- Having the ability to use records to see how much cash is on hand

3.- Using records to see whether sales of a particular product are increasing or decreasing

4.- Working out the cost of each product sold

5.- Knowing which goods have the highest profit margins

6.- Having a written budget, which states how much is owed each month for rent, electricity, equipment maintenance, transport, advertising, and other indirect costs to business

7.- Having records documenting that the business makes enough of a profit to pay back a hypothetical bank loan

The **financial planning** score ranges from 0-4 and is calculated by awarding one point for each of the following questions.

The first question awards points on the below scale:

1.- How frequently do you review the financial performance of your business and analyze where there are areas for improvement

a.- Zero points for "Never," "Once a year or less," and "Two or three times a year"

b.- One point for "Monthly or more often"

Questions 2 and 4, add one point for any of the below

2.- A target sales amount for the next year

3.- A budget of likely costs for the next year

And by adding one point for any of the following business items:

- An annual profit and loss statement
- An annual cash flow statement
- An annual balance sheet
- An annual income/expenditure sheet

Appendix 2: Quality index

Nº	Weight	Variables considered in the model	
I	6.7	Compliance with Project's start date	
II	6.7	Compliance with Project's end date	
III	6.7	Compliance with the delivery of compromised reports	
IV	5.0	Compliance with additional contributions	
V	5.0	Compliance with the requirement of registering beneficiaries into the National User System (NUS)	
VI	5.0	Consistency of data entry into NUS in the following fields: gender, address and birth date.	
VII	5.0	Compliance of the implementing organization with committed coverage of direct beneficiaries for the Project	
VIII	5.0	Correspondence of direct beneficiaries to the Project's final group of interest	
IX	5.0	Compliance of coordination activities performed by the implementing organization	
X	5.0	Performance of human resources assigned to the Project (Members of the executing team)	**DEDICATION:** Team members met with dedication of time committed to the Project
			AVAILABILITY: Team members met with the availability committed to the Project
			TASK COMPLIANCE: Team members performed tasks or activities under their responsibility as committed in the Project
			QUALITY: Implementation activities were performed according to the quality standards committed by the implementing organization in its proposal
XI	5.0	Quality of the products and/or services delivered to Project's beneficiaries	
XII	13.3	Quality of the methodology used by the implementing organization	Methodology used was relevant to beneficiaries' reality and characteristics
			Methodology used facilitated the participation of beneficiaries
			Methodology used assured equal access to goods and services for men and women
			Methodology used effectively incorporated basic principles related to gender approach
XIII	13.3	Characteristics of infrastructure destined for the Project by the implementing organization	**USE:** infrastructure committed in the proposal and/or operative agreement was used
			AVAILABILITY: The facilities were available during all the committed period for implementation of defined activities
			QUALITY: Used infrastructure met the quality standards committed in the proposal
			ACCESSIBILITY: Access to the facilities was easy for the beneficiaries

XIV	13.3	Support material committed by the implementing organization for beneficiaries	**QUANTITY:** Committed materials for the implementation of the Project met committed quantities according to the proposal and/or operative agreement
			AVAILABILITY: Committed materials for the implementation of the Project were timely available
			QUALITY: Committed materials for the implementation of the Project had good quality

Each item can have several sub-items. In total there are 73 sub-items that can take a value from 1 to 10. Within each Item, the scores of the sub-items have similar weight. Then each Item is weighed according to the percentage in the weight column. The Evaluation Index considers Items I to XIV with their respective weighting.

Appendix Tables:

Appendix Table A1: Heterogeneous effect by baseline labor market status

Following de Mel et al. 2014, we study if the program had different effects for individuals that were self-employed, wage workers or unemployed at the baseline. We find that in 2011, unemployed individuals at the baseline had a larger probability of being self-employed and employed, however in 2013 there are no differences in self-employment by labor status at the baseline (see Table 1 in the appendix 3). These results are consistent with de Mel et al, who find that training was more useful for potential business owners than current business owner, but the effects dissipate over time. Moreover, we find that self-employed individuals in the baseline have a lower probability of being a dependent worker and receive a lower wage in 2013, which indicates that self-employed individuals in the baseline have some difficulties transiting to wage employment when overall labor market conditions improve. These results suggest that this type of programs might be less appropriate for current business owners.

Appendix Table A1: Heterogeneous Treatment Effects

Panel A: 2011

	Self-Employment	Wage Employment	Total Employment	Self-Employment Income	Wage Employment Income	Total Labor Income
	[1]	[2]	[3]	[4]	[5]	[6]
MESP	0.331***	-0.011	0.303***	58.7***	10.5	68.7***
	(0.047)	(0.034)	(0.049)	(9.95)	(15.13)	(18.34)
Interaction of treatment with:						
Self-Employed in baseline	-0.132**	-0.063	-0.197***	10.1	-5.5	6.7
	(0.053)	(0.046)	(0.05)	(19.63)	(17.22)	(24.45)
Wage Employed in baseline	-0.210***	-0.04	-0.286***	-27.3	12.9	-10
	(0.072)	(0.068)	(0.051)	(22.36)	(20.51)	(27.93)
Number of observations	1,325	1,325	1,325	1,326	1,343	1,325

Panel B: 2013

	Self-Employment	Wage Employment	Total Employment	Self-Employment Income	Wage Employment Income	Total Labor Income
	[1]	[2]	[3]	[4]	[5]	[6]
MESP	0.073	0.098**	0.114**	3.8	50.7***	53.2***
	(0.055)	(0.043)	(0.051)	(12.97)	(15.02)	(17.18)
Interaction of treatment with:						
Self-Employed in baseline and MESP	-0.013	-0.091*	-0.076	22.3	-43**	-18.1
	(0.076)	(0.048)	(0.06)	(24.02)	(19.05)	(23.96)
Wage-earner in baseline and MESP	-0.072	-0.037	-0.06	-9.7	-56	-61.9
	(0.067)	(0.081)	(0.073)	(26.08)	(35.55)	(38.57)
Number of observations	1,347	1,347	1,347	1,347	1,348	1,347

Note: *** p<0.01, ** p<0.05, * p<0.1. Standard deviations in parenthesis. All income variables are measured in real US dollars (using exchange rate as of November 2009). Regressions include dummies for strata (defined by a socioeconomic index computed by the government using the Social Security Card score and municipality of residence). Standard errors are calculated allowing for clustering at the municipality level. Regressions are weighted following Humphreys (2009). Sample size varies due to missing values.

Appendix Table A2: ITT on Formal Employment and Earning. Data from UI

Month	[1] Employment Effect	[2] P-value		[3] Over CG	[4] Earnings Effect	[5] P-value		[6] Over CG
Sep-10	-0.034	0.012	**	-0.270	-6.674	0.277		-0.118
Oct-10	-0.056	0.001	***	-0.363	-20.328	0.004	***	-0.312
Nov-10	-0.051	0.007	***	-0.335	-13.092	0.095	*	-0.207
Dec-10	-0.035	0.061	*	-0.227	-6.912	0.444		-0.104
Jan-11	-0.038	0.051	*	-0.260	-10.136	0.256		-0.154
Feb-11	-0.030	0.175		-0.195	-5.490	0.520		-0.083
Mar-11	-0.039	0.066	*	-0.231	-13.110	0.156		-0.177
Apr-11	-0.037	0.034	**	-0.204	-10.125	0.226		-0.132
May-11	-0.038	0.026	**	-0.230	-9.573	0.305		-0.133
Jun-11	-0.020	0.221		-0.130	-6.752	0.482		-0.098
Jul-11	-0.024	0.187		-0.149	-2.396	0.819		-0.033
Aug-11	-0.018	0.312		-0.111	-3.151	0.766		-0.042
Sep-11	-0.018	0.247		-0.112	-3.128	0.716		-0.040
Oct-11	-0.020	0.238		-0.120	-0.439	0.961		-0.006
Nov-11	-0.019	0.286		-0.106	-0.020	0.998		0.000
Dec-11	-0.030	0.096	*	-0.158	-9.601	0.342		-0.102
Jan-12	-0.017	0.427		-0.093	-2.021	0.850		-0.024
Feb-12	-0.020	0.370		-0.112	-8.767	0.458		-0.097
Mar-12	-0.020	0.325		-0.108	-3.928	0.683		-0.043
Apr-12	-0.033	0.042	**	-0.166	-5.553	0.604		-0.058
May-12	-0.005	0.765		-0.027	-3.400	0.777		-0.034
Jun-12	-0.018	0.360		-0.096	6.581	0.543		0.073
Jul-12	-0.028	0.082	*	-0.138	-13.251	0.202		-0.125
Aug-12	-0.024	0.154		-0.117	-16.305	0.221		-0.146
Sep-12	-0.021	0.213		-0.101	0.975	0.933		0.009
Oct-12	-0.014	0.439		-0.066	-9.932	0.492		-0.089
Nov-12	-0.010	0.552		-0.048	-3.414	0.765		-0.032
Dec-12	-0.007	0.662		-0.036	-7.801	0.594		-0.064
Jan-13	0.004	0.811		0.019	-3.620	0.809		-0.032
Feb-13	0.000	0.993		-0.001	4.977	0.643		0.047
Mar-13	0.028	0.047	**	0.152	17.023	0.097	*	0.166
Apr-13	0.010	0.428		0.049	6.782	0.576		0.057
May-13	0.026	0.119		0.134	25.865	0.043	**	0.240
Jun-13	0.026	0.070	*	0.128	23.678	0.048	**	0.223
Jul-13	0.014	0.371		0.069	21.961	0.084	*	0.204
Aug-13	0.019	0.208		0.088	25.369	0.056	*	0.216
Sep-13	0.022	0.220		0.108	24.447	0.077	*	0.201
Oct-13	0.029	0.108		0.143	27.381	0.071	*	0.241
Nov-13	0.035	0.077	*	0.171	25.110	0.070	*	0.210
Dec-13	0.009	0.687		0.039	17.413	0.309		0.125
Jan-14	0.019	0.344		0.083	21.916	0.120		0.170
Feb-14	0.048	0.014	**	0.241	26.649	0.070	*	0.225
Mar-14	0.034	0.069	*	0.161	29.114	0.058	*	0.237

Apr-14	0.027	0.166	0.124	13.607	0.388	0.104
May-14	0.015	0.386	0.067	5.006	0.686	0.037
Jun-14	0.010	0.557	0.045	8.606	0.464	0.068

Note: *** p<0.01, ** p<0.05, * p<0.1. Administrative Data from Unemployment Insurance. All income variables are measured in real US dollars (using exchange rate as of November 2009). Regressions include dummies for strata (defined by a socioeconomic index computed by the government using the Social Security Card score and municipality of residence). Standard errors are calculated allowing for clustering at the municipality level. Regressions are weighted following Humphreys (2009). Sample size is 1356. Over CG measures the change relative to the level of the variable in the Control Group

Appendix Table A3: Upper and Lower Bound of Employment Effect, for MESP (T1) and MESP + (T2)

Month	[1] T1 Upper Bound	[2] p-value		[3] T1 Lower Bound	[4] p-value		[5] T2 Upper Bound	[6] p-value		[7] T2 Lower Bound	[8] p-value	
Sep-10	-0.028	0.058	*	-0.027	0.076	*	-0.033	0.065	* **	-0.096	0.000	***
Oct-10	-0.044	0.019	**	-0.043	0.026	**	-0.060	0.002	*	-0.118	0.000	***
Nov-10	-0.042	0.054	*	-0.040	0.061	*	-0.057	0.018	**	-0.118	0.000	***
Dec-10	-0.040	0.052	*	-0.036	0.078	*	-0.026	0.232		-0.088	0.000	***
Jan-11	-0.025	0.282		-0.022	0.358		-0.046	0.039	**	-0.105	0.000	***
Feb-11	-0.024	0.344		-0.022	0.401		-0.027	0.266		-0.088	0.000	***
Mar-11	-0.027	0.244		-0.027	0.237		-0.036	0.150		-0.102	0.000	***
Apr-11	-0.033	0.119		-0.033	0.094	*	-0.027	0.253		-0.095	0.000	***
May-11	-0.023	0.247		-0.020	0.297		-0.041	0.047	**	-0.113	0.000	***
Jun-11	-0.001	0.979		0.003	0.868		-0.030	0.127		-0.094	0.000	***
Jul-11	-0.001	0.954		-0.001	0.980		-0.035	0.104		-0.100	0.000	***
Aug-11	-0.003	0.892		-0.002	0.933		-0.023	0.325		-0.100	0.000	***
Sep-11	-0.002	0.927		0.000	0.995		-0.023	0.261		-0.091	0.000	***
Oct-11	0.001	0.976		0.002	0.922		-0.023	0.308		-0.096	0.000	***
Nov-11	-0.003	0.888		-0.003	0.906		-0.018	0.437		-0.095	0.000	***
Dec-11	-0.016	0.507		-0.018	0.429		-0.020	0.460		-0.097	0.000	***
Jan-12	-0.001	0.974		-0.002	0.936		-0.017	0.527		-0.088	0.001	***
Feb-12	-0.005	0.872		-0.005	0.862		-0.017	0.544		-0.094	0.000	***
Mar-12	-0.013	0.591		-0.010	0.680		-0.021	0.438		-0.094	0.000	***
Apr-12	-0.021	0.340		-0.019	0.385		-0.028	0.187		-0.105	0.000	***
May-12	0.014	0.514		0.017	0.419		-0.003	0.895		-0.078	0.000	***
Jun-12	0.012	0.628		0.012	0.619		-0.031	0.218		-0.106	0.000	***
Jul-12	0.011	0.617		0.010	0.658		-0.044	0.026	**	-0.121	0.000	***
Aug-12	0.007	0.756		0.008	0.717		-0.032	0.130		-0.113	0.000	***
Sep-12	0.006	0.791		0.007	0.762		-0.025	0.233		-0.104	0.000	***
Oct-12	0.003	0.887		0.007	0.777		-0.012	0.573		-0.085	0.000	***
Nov-12	0.019	0.412		0.020	0.358		-0.026	0.211		-0.106	0.000	***
Dec-12	0.015	0.488		0.017	0.447		-0.009	0.653		-0.088	0.000	***
Jan-13	0.029	0.178		0.033	0.128		0.000	0.988		-0.080	0.000	***
Feb-13	0.017	0.389		0.021	0.276		0.001	0.948		-0.073	0.000	***
Mar-13	0.063	0.002	***	0.065	0.001	***	0.023	0.241		-0.054	0.001	***
Apr-13	0.031	0.100		0.033	0.067	*	0.009	0.615		-0.072	0.000	***
May-13	0.051	0.016	**	0.053	0.011	**	0.038	0.091	*	-0.049	0.020	**
Jun-13	0.053	0.009	***	0.054	0.005	***	0.027	0.208		-0.054	0.010	**
Jul-13	0.033	0.085	*	0.035	0.062	*	0.019	0.385		-0.058	0.014	**
Aug-13	0.044	0.013	**	0.044	0.013	**	0.013	0.575		-0.066	0.003	***
Sep-13	0.044	0.047	**	0.044	0.044	**	0.023	0.391		-0.059	0.017	**
Oct-13	0.044	0.037	**	0.043	0.047	**	0.037	0.133		-0.044	0.077	*
Nov-13	0.059	0.014	**	0.057	0.015	**	0.039	0.111		-0.037	0.118	
Dec-13	0.034	0.201		0.036	0.170		0.006	0.817		-0.075	0.006	***
Jan-14	0.038	0.145		0.043	0.099	*	0.029	0.291		-0.053	0.041	**
Feb-14	0.065	0.017	**	0.069	0.007	***	0.058	0.041	**	-0.016	0.465	

Mar-14	0.051	0.048	**	0.053	0.042	**	0.040	0.114	-0.028	0.261	
Apr-14	0.055	0.037	**	0.051	0.052	*	0.032	0.189	-0.042	0.089	*
May-14	0.046	0.062	*	0.049	0.045	**	0.010	0.645	-0.065	0.002	***
Jun-14	0.026	0.243		0.027	0.245		0.025	0.245	-0.052	0.012	**

Note: *** p<0.01, ** p<0.05, * p<0.1. Administrative Data from Unemployment Insurance. Following Lee (2009), we trim the distribution of each independent variable of the MESP+ group by the difference in attrition rates between the MESP+ and MESP and control group as a proportion of the retention rate of the additional funding group. Since the variables are discrete we randomly trim variables y=1 for the lower bound and variables y=0 for the upper bound. Regressions include dummies for strata (defined by a socioeconomic index computed by the government using the Social Security Card score and municipality of residence). Standard errors are calculated allowing for clustering at the municipality level. Regressions are weighted following Humphreys (2009). Sample size is 1356

Appendix Table A4: Upper and Lower Bound of Earnings Effect, for MESP (T1) and MESP + (T2)

Month	[1] T1 Upper Bound	[2] p-value		[3] T1 Lower Bound	[4] p-value		[5] T2 Upper Bound	[6] p-value		[7] T2 Lower Bound	[8] p-value	
Sep-10	-3.586	0.645		-2.437	0.754		-10.062	0.315		-40.434	0.000	***
Oct-10	-18.007	0.028	**	-17.191	0.039	**	-23.365	0.010	**	-50.929	0.000	***
Nov-10	-10.339	0.246		-9.507	0.286		-15.067	0.150		-47.130	0.000	***
Dec-10	-4.765	0.653		-4.223	0.692		-7.591	0.502		-42.925	0.000	***
Jan-11	-2.854	0.789		-1.807	0.865		-15.768	0.142		-50.617	0.000	***
Feb-11	0.755	0.945		1.416	0.896		-5.322	0.611		-42.832	0.000	***
Mar-11	-9.773	0.393		-10.405	0.358		-11.119	0.314		-50.004	0.000	***
Apr-11	-2.096	0.847		-2.456	0.811		-10.894	0.333		-48.449	0.000	***
May-11	0.616	0.957		0.917	0.932		-13.047	0.292		-54.522	0.000	***
Jun-11	7.053	0.536		6.563	0.547		-14.801	0.208		-53.160	0.000	***
Jul-11	9.162	0.453		8.526	0.467		-6.951	0.580		-51.561	0.000	***
Aug-11	9.203	0.464		8.630	0.473		-7.752	0.573		-50.510	0.000	***
Sep-11	13.774	0.210		12.743	0.228		-12.843	0.277		-52.896	0.000	***
Oct-11	13.473	0.245		12.758	0.253		-5.242	0.667		-50.158	0.000	***
Nov-11	11.459	0.309		9.773	0.353		-1.644	0.895		-50.902	0.000	***
Dec-11	4.515	0.740		3.613	0.781		-12.185	0.387		-64.248	0.000	***
Jan-12	8.419	0.543		7.396	0.561		0.274	0.985		-54.025	0.000	***
Feb-12	-0.147	0.992		-0.461	0.974		-5.186	0.745		-59.101	0.000	***
Mar-12	-1.461	0.915		-0.950	0.936		6.762	0.659		-56.090	0.000	***
Apr-12	4.639	0.742		5.386	0.699		-7.206	0.598		-59.540	0.000	***
May-12	6.076	0.673		5.559	0.692		0.897	0.954		-60.997	0.000	***
Jun-12	26.674	0.067	*	25.699	0.079	*	0.511	0.970		-56.814	0.000	***
Jul-12	2.296	0.865		1.356	0.917		-14.410	0.302		-74.322	0.000	***
Aug-12	-3.716	0.826		-4.626	0.774		-14.393	0.401		-75.807	0.000	***
Sep-12	11.506	0.479		12.195	0.438		3.970	0.795		-61.479	0.000	***
Oct-12	0.691	0.970		0.356	0.984		-6.305	0.715		-68.152	0.000	***
Nov-12	15.404	0.329		15.356	0.333		-12.214	0.355		-71.466	0.000	***
Dec-12	10.706	0.582		10.908	0.570		-14.612	0.408		-77.386	0.000	***
Jan-13	8.036	0.673		8.681	0.627		3.168	0.866		-68.855	0.000	***
Feb-13	17.261	0.274		18.760	0.211		10.938	0.449		-54.766	0.000	***
Mar-13	34.999	0.027	**	35.451	0.025	**	18.733	0.149		-46.708	0.000	***
Apr-13	26.290	0.116		25.372	0.130		8.167	0.586		-58.105	0.000	***
May-13	56.107	0.003	***	55.237	0.003	***	17.817	0.277		-41.149	0.003	***
Jun-13	43.413	0.006	***	41.818	0.006	***	21.721	0.167		-41.612	0.003	***
Jul-13	35.755	0.034	**	35.347	0.027	**	25.497	0.130		-43.249	0.004	***
Aug-13	40.436	0.020	**	39.218	0.016	**	26.654	0.145		-43.551	0.004	***
Sep-13	42.660	0.017	**	41.791	0.014	**	25.877	0.147		-50.649	0.001	***
Oct-13	40.585	0.029	**	39.184	0.024	**	31.294	0.112		-41.417	0.005	***
Nov-13	39.250	0.023	**	36.968	0.022	**	25.921	0.156		-44.961	0.001	***
Dec-13	40.586	0.060	*	37.690	0.074	*	12.690	0.516		-66.374	0.000	***
Jan-14	44.583	0.026	**	41.199	0.036	**	19.165	0.256		-49.721	0.001	***
Feb-14	41.353	0.035	**	37.961	0.050	**	28.276	0.102		-42.737	0.003	***

Mar-14	42.273	0.034	**	39.068	0.038	**	34.155	0.086	*	-44.534	0.003	***
Apr-14	27.409	0.185		24.668	0.225		17.307	0.360		-57.283	0.000	***
May-14	16.833	0.358		15.071	0.387		12.164	0.467		-65.294	0.000	***
Jun-14	26.481	0.129		24.348	0.155		8.766	0.566		-59.654	0.000	***

Note: *** p<0.01, ** p<0.05, * p<0.1. Administrative Data from Unemployment Insurance. All income variables are measured in real US dollars (using exchange rate as of November 2009). Following Lee (2009), we trim the distribution of each independent variable of the MESP+ group by the difference in attrition rates between the MESP+ and MESP and control group as a proportion of the retention rate of the additional funding group. Regressions include dummies for strata (defined by a socioeconomic index computed by the government using the Social Security Card score and municipality of residence). Standard errors are calculated allowing for clustering at the municipality level. Regressions are weighted following Humphreys (2009). Sample size is 1356.

Appendix Table A5: Bounds for T1- T2 Employment Effect (MESP – MESP+)

Month	[1] T1- T2 Upper Bounds	[2] p-value		[3] T1-T2 Lower bounds	[4] p-value	
Sep-10	0.005	0.734		0.069	0.000	***
Oct-10	0.016	0.315		0.076	0.000	***
Nov-10	0.015	0.434		0.079	0.000	***
Dec-10	-0.014	0.262		0.051	0.000	***
Jan-11	0.021	0.171		0.084	0.000	***
Feb-11	0.003	0.877		0.066	0.000	***
Mar-11	0.009	0.634		0.075	0.000	***
Apr-11	-0.006	0.792		0.061	0.002	***
May-11	0.018	0.254		0.093	0.000	***
Jun-11	0.029	0.118		0.097	0.000	***
Jul-11	0.034	0.075	*	0.099	0.000	***
Aug-11	0.020	0.308		0.098	0.000	***
Sep-11	0.021	0.262		0.091	0.000	***
Oct-11	0.024	0.359		0.098	0.000	***
Nov-11	0.015	0.582		0.092	0.000	***
Dec-11	0.003	0.911		0.078	0.004	***
Jan-12	0.017	0.573		0.086	0.004	***
Feb-12	0.013	0.662		0.089	0.000	***
Mar-12	0.007	0.783		0.084	0.000	***
Apr-12	0.008	0.763		0.086	0.001	***
May-12	0.017	0.456		0.095	0.000	***
Jun-12	0.042	0.066	*	0.118	0.000	***
Jul-12	0.055	0.009	***	0.131	0.000	***
Aug-12	0.039	0.087	*	0.121	0.000	***
Sep-12	0.031	0.214		0.110	0.000	***
Oct-12	0.016	0.517		0.091	0.000	***
Nov-12	0.045	0.101		0.127	0.000	***
Dec-12	0.024	0.291		0.105	0.000	***
Jan-13	0.029	0.214		0.113	0.000	***
Feb-13	0.016	0.499		0.094	0.000	***
Mar-13	0.040	0.086	*	0.118	0.000	***
Apr-13	0.022	0.382		0.105	0.000	***
May-13	0.014	0.581		0.102	0.000	***
Jun-13	0.025	0.359		0.108	0.000	***
Jul-13	0.014	0.525		0.093	0.000	***
Aug-13	0.031	0.186		0.110	0.000	***
Sep-13	0.022	0.399		0.103	0.000	***
Oct-13	0.008	0.726		0.088	0.001	***
Nov-13	0.020	0.336		0.094	0.000	***
Dec-13	0.028	0.186		0.111	0.000	***
Jan-14	0.009	0.733		0.096	0.001	***
Feb-14	0.007	0.824		0.085	0.002	***
Mar-14	0.011	0.697		0.082	0.012	**

Apr-14	0.023	0.404	0.093	0.001	***
May-14	0.036	0.136	0.114	0.000	***
Jun-14	0.002	0.932	0.079	0.000	***

Note: *** p<0.01, ** p<0.05, * p<0.1. Administrative Data from Unemployment Insurance. Following Lee (2009), we trim the distribution of each independent variable of the MESP+ group by the difference in attrition rates between the MESP+ and MESP and control group as a proportion of the retention rate of the additional funding group. Since the variables are discrete we randomly trim variables y=1 for the lower bound and variables y=0 for the upper bound. Regressions include dummies for strata (defined by a socioeconomic index computed by the government using the Social Security Card score and municipality of residence). Standard errors are calculated allowing for clustering at the municipality level. Regressions are weighted following Humphreys (2009). Sample size is 1356.

Appendix Table A6: Bounds for T1- T2 Earnings Effect (MESP – MESP+)

Month	[1] T1- T2 Upper Bounds	[2] p-value		[3] T1- T2 Lower Bounds	[4] p-value	
Sep-10	6.476	0.540		37.996	0.000	***
Oct-10	5.359	0.467		33.738	0.000	***
Nov-10	4.729	0.598		37.623	0.000	***
Dec-10	2.826	0.778		38.702	0.000	***
Jan-11	12.915	0.135		48.810	0.000	***
Feb-11	6.076	0.536		44.249	0.000	***
Mar-11	1.346	0.889		39.599	0.000	***
Apr-11	8.798	0.442		45.993	0.000	***
May-11	13.662	0.176		55.440	0.000	***
Jun-11	21.854	0.015	**	59.723	0.000	***
Jul-11	16.112	0.081	*	60.088	0.000	***
Aug-11	16.955	0.092	*	59.140	0.000	***
Sep-11	26.618	0.029	**	65.638	0.000	***
Oct-11	18.715	0.149		62.916	0.000	***
Nov-11	13.103	0.382		60.675	0.000	***
Dec-11	16.700	0.336		67.861	0.000	***
Jan-12	8.145	0.644		61.421	0.000	***
Feb-12	5.038	0.787		58.640	0.000	***
Mar-12	-8.223	0.670		55.140	0.000	***
Apr-12	11.845	0.436		64.926	0.000	***
May-12	5.179	0.706		66.555	0.000	***
Jun-12	26.163	0.074	*	82.513	0.000	***
Jul-12	16.706	0.245		75.677	0.000	***
Aug-12	10.678	0.513		71.181	0.000	***
Sep-12	7.535	0.643		73.674	0.000	***
Oct-12	6.996	0.609		68.508	0.000	***
Nov-12	27.618	0.054	*	86.822	0.000	***
Dec-12	25.318	0.156		88.294	0.000	***
Jan-13	4.868	0.750		77.535	0.000	***
Feb-13	6.323	0.701		73.526	0.000	***
Mar-13	16.266	0.340		82.159	0.000	***
Apr-13	18.123	0.286		83.477	0.000	***
May-13	38.290	0.036	**	96.386	0.000	***
Jun-13	21.692	0.155		83.430	0.000	***
Jul-13	10.258	0.506		78.596	0.000	***
Aug-13	13.782	0.375		82.769	0.000	***
Sep-13	16.783	0.282		92.440	0.000	***
Oct-13	9.291	0.483		80.601	0.000	***
Nov-13	13.329	0.405		81.930	0.000	***
Dec-13	27.896	0.067	*	104.064	0.000	***
Jan-14	25.418	0.159		90.920	0.000	***
Feb-14	13.077	0.413		80.698	0.000	***
Mar-14	8.118	0.659		83.602	0.000	***

Apr-14	10.102	0.592	81.952	0.000	***
May-14	4.669	0.814	80.364	0.000	***
Jun-14	17.715	0.327	84.002	0.000	***

Note: *** p<0.01, ** p<0.05, * p<0.1. Administrative Data from Unemployment Insurance. Following Lee (2009), we trim the distribution of each independent variable of the MESP+ group by the difference in attrition rates between the MESP+ and MESP and control group as a proportion of the retention rate of the additional funding group. All income variables are measured in real US dollars (using exchange rate as of November 2009). Regressions include dummies for strata (defined by a socioeconomic index computed by the government using the Social Security Card score and municipality of residence). Standard errors are calculated allowing for clustering at the municipality level. Regressions are weighted following Humphreys (2009). Sample size is 1356.