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Microfinance for Decent Work

Microfinance and women entrepreneurship

An impact assessment of a start-up loan program
by IMON International (Tajikistan)

Social Finance Programme
&
Robin Gravesteijn

2012

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Executive Summary:

This report presents findings from a quasi-experimental impact evaluation of a start-up loan plus entrepreneurship training. We compare women who received only training and women who ended up receiving training and start-up loan with a control group of existing borrower whom are matched on key observable indicators. We employ a difference-in-difference approach to evaluate the effect of the innovation on women entrepreneurship outcomes.

A total of 486 women received gender training of which in total 57% took a start-up loan after the baseline survey and the remainder only training. Almost all women took the loan within several months after training. Women who work in agriculture and trade, who owned a business at baseline and had families with a higher household dependency index had a significantly higher chance of accessing the loan.

We find positive impacts on self-employment and business expansion, but mainly for women who received both training and loan. There is a positive impact on business registration observed for the training and loan group, but no effects on reinvesting income into the business. We find evidence of an increase in awareness and usage of products and services from the association also in the long term. There is no impact of the innovation on women empowerment indicators for women who received both training and loan, and a small negative impact for women who received only the training. Women had more control over financial services and earnings, fewer control over small expenses and much less control over large expenses.

In terms of economic benefits of innovation for the MFI we find mixed results with the groups who received the loans being equally satisfied. The start-up loan seems more risky with a higher percentage of late payments, but on the other hand we see positive effects on client retention rates.

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The ILO would like to acknowledge the partnership with Oikocredit in conducting the Action Research on Microfinance for Decent Work with IMON International.

Oikocredit is a cooperative financial institution that offers loans or investment capital to MFIs, cooperatives, fair trade organizations and small-to-medium sized enterprises (SMEs) in the developing world. Today, Oikocredit has over 850 partners in almost 70 countries. Oikocredit offers a dual return to its investors: financial and social. In addition to earning modest financial returns, investors are secure in the knowledge that their money is being used to fight poverty, promote fair trade and respect our planet's natural resources.

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1. Background: The ILO Microfinance for Decent Work: Action Research

The **Microfinance for Decent Work** (MF4DW) action research aims to build knowledge on the effects of innovations on microfinance clients' livelihoods. Launched by the ILO's Social Finance Programme (SFP) in 2008, the MF4DW action research began by identifying specific work-related challenges among microfinance clients and, to address them, implemented tailor-made innovations with 16 microfinance institutions (MFIs) worldwide. The MF4DW action research set out to apply an experimental research design to measure the impact of these innovations overtime. The MF4DW action research concludes in June, 2012.

At the outset of the MF4DW action research, each participating MFI conducted a diagnostic survey among 200 of its clients to determine their most pressing work-related challenge. The analysis was guided by ILO's vision of **decent work** for all and its goal to promote opportunities for women and men to obtain decent and productive work, in conditions of freedom, equity, security and human dignity. Within this framework, the diagnostic determined **child labour, working conditions, formalisation, job creation and productive employment, risk management/over-indebtedness, and women's empowerment**, as key challenges keeping microfinance clients from obtaining decent work.

Informed by the diagnostic results, each MFI developed an innovation to address the work-related challenge that most affected its clients and began implementing the innovations from 2009 onwards. The innovations included new or upgraded:

- financial services (loan, savings, insurance, leasing);
- non-financial services (training, awareness campaign); or
- mechanisms for delivering services (organisational restructuring).

The MF4DW action research used an experimental research design, meaning that one group of clients received the innovation (target group) while another group of clients did not (control group). Ideally, clients of each group were selected randomly. Before the introduction of the innovations, all clients of the target and control groups were interviewed to establish a baseline against which changes could be compared. Depending on the

implementation timeline, up to four follow-up surveys were conducted once the innovation was launched. The last follow-up surveys were completed in February 2012.

This report presents preliminary impact results of the decent work innovation implemented by IMON International in Tajikistan. IMON is the largest MFI in Tajikistan. It has branches in the Eastern part of the country and, as of December 2011², serves over 42,000 borrowers of which 39% are women. IMON provides lending services such as group and individual loans. IMON conducted the impact research in all branches, with control and treatment groups that were spread out in the whole country and within each branch.

Figure 1: Map of Tajikistan with IMON offices



²See <http://www.oikocredit.org/en/who-we-are/impact/project-partners/project/asia/tajikistan/451/enabling-thousands-of-families-to-improve-their-income-situation#27137>

2. The decent work innovation: A start-up loan and entrepreneurship training

The initial diagnostic that IMON conducted in 2008 identified an important gap between men and women in terms of entrepreneurship endeavours: entrepreneurship is a male-dominated activity, the microfinance institution considered this as the most pressing challenge for clients.

- Men were more likely to decide about the use of the loans by themselves than women. (88% for female compared to 94% for male respondents)
- 65% of the clients had registered their business, but male clients are registered more often than female clients. (71% compared to 59%)
- 77% of the clients had income and expenditure books, an equal percentage for men and women.
- Only 3% of the female and 0% of the male clients were members of an association³ that represented their interests.
- 64% of the clients even claimed there was no association in Tajikistan.

The last two findings were particularly important for IMON, as it was founded by the National Association of Business Women Tajikistan (NABWT).

The quantitative findings from the diagnostics study outlined for IMON a need to promote entrepreneurial skills in particular for women, and encourage representation in business association. IMON was also very much concerned with strengthening its organisational links with the NABWT. The NABWT is founder and shareholder of IMON and is a member-based organisation that aims to expand economic rights and opportunities of women in the labour market, promote access to women to resources, education and develop their market skills.

The project had the wider organizational objective for IMON to mitigate social mission drift: the percentage of female borrowers reduced from 100% in 2003 to 37% in 2009. The strategy for IMON was articulated around improving female targeting, supporting women in starting up a business and understanding women's demand for financial and non-financial services.

³In the diagnostic survey this included membership of either a business association, trade union or cooperative that represents the interests of the microfinance client.

This is part of a wider issue, in Tajikistan. In the last decade entrepreneurship for women has decreased and become a male-dominated activity. Tajikistan is a country with conservative gender norms and high migration for young men in working age⁴. In some provinces more than 70% of the working-age men migrated. The social costs are high as many families have no male household' heads for years at a time. Gender relations are distorted and divorce rates amongst the highest in the world⁵. Women empowerment in Tajikistan was considered by IMON staff to be lower in rural areas and in certain regions such as Isfara and Istaravshan in the North and Kurgan Tube and Shahrituz in the South.

To address some of the challenges in women empowerment and entrepreneurship in Tajikistan, IMON introduced a new start-up loan programme with entrepreneurship training. In October 2009 ILO provided entrepreneurship training package based on the ILO Get Ahead⁶ curriculum followed by training of trainers for IMON and NABWT staff. Seventeen trainers were thus trained in September 2009 to deliver Get Ahead training to women potential entrepreneurs. In October 2009, an induction workshop was organised for 50 members of IMON staff to introduce the new product and the action research innovation project.

The entrepreneurship training is a participatory module for groups of women and has a strong gender component. The training aims to improve basic marketing, book keeping and business planning for women, as well as raise self-confidence. Together with IMON and NABWT training staff the modules were adapted to suit the Tajik gender context. After developing the training and loan product IMON started a marketing campaign to attract women interested in starting up their own income generating activities. Loan officers of IMON had an intake and counselling meeting upfront with the women. As soon as a group of 12 women was formed the training could begin. NABWT staff then trained a total of 486 women over a time line of 9 months. After completing the training women could apply for a start-up loan. The start-up capital is an individual loan up to US\$ 3000 with similar conditions and eligibility criteria as other IMON loans, but with the exception that women do not need to have a business and are actively supported in writing their business plan through the training.

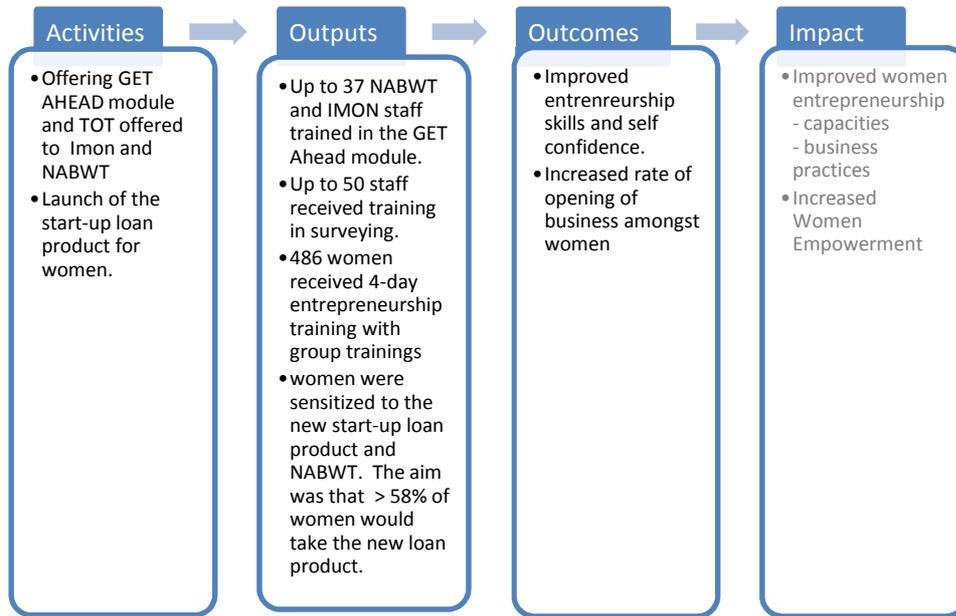
⁴ The latest household census estimated that 37% of the Tajik households have one or members to work abroad. Migrants are predominantly young male workers from rural areas, they often left the country because of low wages and lack of employment opportunities.

⁵ See: ILO (2010:5); Bobokulov (2011:381); Zokirov and Umarov (2011:246)

⁶ See the ILO's Women's Entrepreneurship Development programme for more information: <http://www.ilo.org/empent/areas/womens-entrepreneurship-development-wed/lang--en/index.htm>

3. Intended outcomes

Figure 2: Results chain of the IMON Start-up Loan with training programme, source: ILO.



IMON's entrepreneurship training and start-up loan ultimately was intended to improve women's empowerment and entrepreneurial capacities through improvement of women's entrepreneurial skills and practices. As shown in Figure 2 it was likely to do so via the following results chain.

It is expected that the training may improve women's business skills and confidence through the participatory training. Second, after completing the training several women can take the start-up loan upon approval of their business plan. So we need to identify which women will take up the loan to finance their business idea. It is expected that the impacts are more positive for those who received the training and start-up loan compared to those who received only the training. (See section 5.2)

1. As a first outcome the training and start-up capital are expected to increase income generating opportunities: Women may decide to start-up their business and become self-employed. (See Section 5.3 for results)
2. For women who take the loan product and start-up their business the training may improve women entrepreneurship (See Section 5.4 for results), especially in terms of entrepreneurial activities and positive business practices.

3. Another desired longer term change is empowerment⁷ for women; the training particularly in combination with the loan may improve control over of decision-making over financial services, income and expenses relatively to that of the husband (see section 5.5 for results) It is often believed microfinance in combination with entrepreneurship training may empower women because it creates income generating opportunities and this may improve their self-respect, confidence and control over decision-making. However microfinance (plus) may also disempower, when women take the loan but other family members have control over it. Or when the loan or start-up business activities result into intra household conflicts. Third, the impact effect can be neutral as women are constrained with their business activities by prevailing gendered norms and division of labour.

(See Section **Error! Reference source not found.** for results)

4. The start-up loan product may also have effects on the MFI's business. The start-up loan product can create new customers for IMON. Some studies have shown that entrepreneurship training may improve customer retention and loyalty⁸. The project may inform on risk management of start-up enterprises.

(See Section 0 for results)

4. Surveys, data and evaluation methodology

4.1 Surveys and data

- Sampling and Survey Instrument -

The sample consists of women clients from all sub-offices of IMON. In total 904 women are included in the study of which 486 in Treatment Group (TG) and 418 existing clients were matched as a Control Group (CG). There are two main type of treatments namely 212 women

⁷ Empowerment was broadly identified as *"the process of women to boost their confidence, improve control over decision making, bargaining power and perceptions of possibilities in the household."* (Mayoux 2000:17) This definition relates to household-level empowerment and highlights variables to measure it (control and perceptions of confidence and possibilities).

⁸ See Karlan and Valdivia, 2011

who received training but did not take the loan (TG1) and 275 women who received the training product and also received the start-up loan product. (TG2)

The survey instrument contained questions on socio-economic characteristics, women entrepreneurship and empowerment based on surveys taken from a variety of literature. Questions were selected together with IMON staff and adapted to the Tajik context. The survey was then tested and modified with feedback from staff upon several occasions. Senior staff received training from ILO in conducting the survey. Interviews were conducted in the first language of the interviewees, either Tajik, Uzbek or Russian. The majority of interviews were conducted by female staff (74%) and in most cases women were interviewed alone not in presence of the spouse (97%). Differences in interview setting will be controlled for in the estimations.

- Dates of Data Collection -

Three surveys were undertaken to collect data. The baseline survey was conducted between Oct 2009 to April 2010, the first follow-up survey between May 2010 and Dec 2010 and the second, and final, follow-up survey between Jan 2011 and Oct 2011.

Different branches started their innovations at different points in time throughout the 9 months baseline period. As soon as a training group was formed, a sample of active borrowers would be selected with similar characteristics⁹ through IMON's management information system to function as a control group. While for FS1 the interviews were conducted with a similar time interval, for FS2 there is a lag between the control and treatment group of 2 months. The gap is mainly explained by 36 interviews conducted for FS2 for the offices Dushanbe and Shahrituz. Controlling for month in which the interview was conducted did change the magnitude of some impact estimates but not the (positive or negative) direction of impact.

- Drop-outs -

At the second follow-up survey 70% of the clients in the TG were interviewed against 75% in the Control Group. Drop out is higher for those women who received only the training. The most common reason why several women were not interviewed was migration. In very few cases women did not agree to be interviewed as their husband would not let them. We will

⁹ See part 4.2 for details on the variables that were considered in the matching process of the two groups

estimate the impacts for the full group of completed interviews (904 at BS and 652 at FS2) and for the survivor sample (652 at BS and 652 at FS2).

Table 1: Distribution of control and treatment groups

	<i>Total</i>	<i>Treatment Group</i>		<i>Control Group</i>	
	N	N	N%	N	N%
Base line	904	486	100%	418	100%
Follow-up Survey I	791	423	87%	368	88%
Follow-up Survey II	652	340	70%	312	75%

- Data Quality -

There are occasional gaps in the dataset as surveys were not always completed and this explains varying sample sizes in case we take different indicators into the model. For example, the work activity of the client was not always filled out.

Several indicators were taken out of the analysis or re-interpreted as women were not always able to understand or respond to the questions.

- Several women were not able to estimate their own monthly net income. At BS 264 out of 905 clients reported “hard to say”. This question is not taken up in the final outcome.
- Likewise, 21% of the sample did not answer whether they had expanded their enterprise in the last six months.
- At BS results on entrepreneurial capacities resulted into counter-intuitive data interpretation. Women in the TG who had less business experience self-reported stronger entrepreneurial capacities and this could have been caused by response bias more than their “actual” entrepreneurial capacities.
- The questions on business practices were difficult to answer for women who were not yet self-employed. We therefore report only for the sample of women that were in TG2. One question on separation of household incomes from business incomes was difficult to answer and taken out of the analysis.
- The loan satisfaction question included a forced ranking on importance of product features (loan period, loan amount, interest rates, application time, customer service). However this forced ranking was often incomplete. In this analysis we show a simpler loan satisfaction index.
- For several interviews no date was reported

4.2 Evaluation strategy

As a first step, we plan to assess what type of women in the TG ended up taking the start-up capital by estimating a probability model. Second, we compare women who received only training but not the loan (TG1) and women who ended up receiving training and start-up loan (TG2) with a control group of existing borrowers. It is expected that impacts of the training for TG2 are more positive than for TG1.

The ideal experimental set up would compare clients that are randomly assigned to the target and control groups, but for practical reasons it was not possible to use this methodology¹⁰. The approach chosen for IMON is a quasi-experimental approach matching the control group to the treatment group. Using the management information system of IMON a group of existing young female borrowers were matched to function as control group. At BS the CG sample was adequately matched to TG on the following variables: first time borrowers, branch and sub-office, age category, marital status and highest education level of the women¹¹. Aiming to reduce selection bias further women in the CG were asked whether they would be interested to participate in a four day training on entrepreneurship when they had started their business. Only women who were interested in entrepreneurship training were selected into the CG.

For quantitative evaluation of the start-up loan programme (the innovation), the so-called difference-in-difference estimator is used. The difference-in-difference approach allows yielding causal effects of the innovation on the intended outcomes. Two assumptions need however to be met: First, there must not be contamination of the control group by the target group. Given that the control group did not have access to the training and start-up loan, this assumption does not appear problematic. The control group did receive regular loans from IMON. Second, in the absence of the innovation the average outcomes between clients in TG and CG are the same in each time period, so control and TG observe similar trends. This

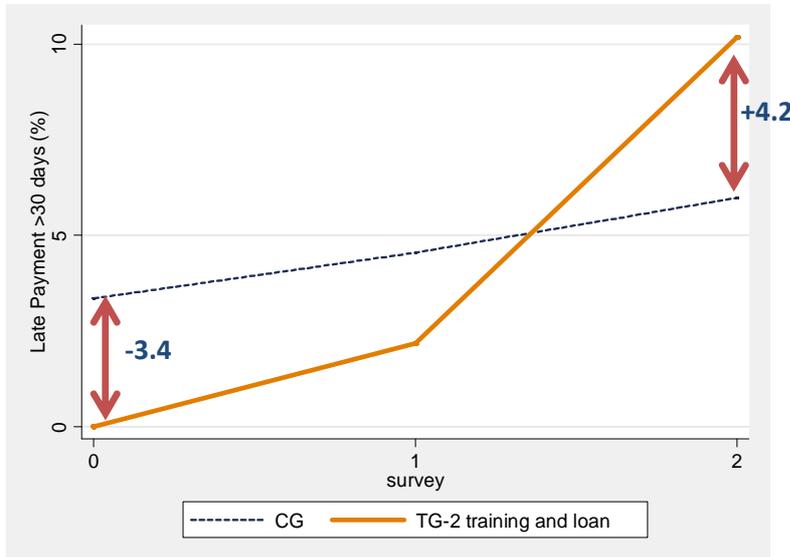
¹⁰ First, controlled randomized sampling requires a large sample, but it was unclear how many women would be interested in the start-up loan product and thus whether we could reach this sample. Second it was viewed risky for MFIs and clients to randomly sample start-up loans across applicants. Third, there were ethical choices, for example it was not the preferred by IMON to randomly (de-)select women for the start-up loan. Also the start-up loan could not be made conditional to the training as this could be harmful for women. Given these constraints the research team opted for the more practical solution of matching the comparison group based on existing new borrowers. Not randomizing CG and TG has implications for the evaluation of impact as it can result in a selection bias.

¹¹These indicators were selected based on other studies that use matching methodology (Heckman et al 1997; Djankov 2008).

assumption is more complicated, while differences in trends for TG and CG are likely reduced by matching on several indicators, matching cannot fully eliminate all of the differences. Some of the observable trends will be controlled for such as migration patterns (from rural and urban location and whether the husband working abroad) and changes in household setting (household size and marital status) or interview setting (gender of interviewer and presence of the spouse). However, it was not possible to control for other trends that are not captured by the data. For example, there is little information on the exact entrepreneurial challenges faced by the two groups. If in reality these “unobserved trends” are very different across groups then it may be hard to defend in that the model actually yields clear causal relationships. See the appendix for a full description of the empirical model.

To calculate the difference-difference, we consider the average default percentages for borrowers in the TG and CG. The difference between TG and CG is -3.4 at Baseline and +4.2 at FS2, then the difference-in-difference at FS2 as $+4.2 - -3.4 = +6.7$. We find the start-up loan to be more risky compared to the loans taken by the control group as the increase in default rate is 6.7% higher compared to normal loans.

Figure 3 Late Payments > 30 days



4.3 Characteristics of CG and TG at baseline

At baseline survey, CG and TG were similar with regard to empowerment indicators¹² as well as nationality, educational level of woman and spouse, region, number and type of income sources, husband and spouse working, and spouse being a migrant worker. CG and TG have similar level of awareness of the NABWT, usage of income and expenditure books and re-investments in incomes.

However there were also strong differences at BS between CG and TG. Women in the TG included wage workers and unemployed women that wanted to start-up a business, while the CG included only self-employed women. While the CG scores better on business experience and management practice, TG clients consider themselves more entrepreneurial during self-assessment. TG and CG differ on their degree of registration of businesses. Women in the CG had already entered in the loan program up to 9 months before the launch of the training for the TG. A full overview of comparison on indicators at baseline survey is given in Appendix 3 and the baseline survey report, while the table below focuses on the main differences.

Table 2: Characteristics of control group and treatment groups at baseline

	TG	TG1	TG2	CG
Description	New female IMON clients that want to start-up a business	Of which women who received the training	Of which women who received training and loan	1 st time female borrowers that have a business and are self-employed.
Loan product		No loan	loan	Received loan after Jan 2009
% Self-employment	54%	50%	58%	99%
Mean Age:	36	35	36	37 years
Mean Years of business	4,7	2,1	2,7	6,7 years
Sample size	487	212	275	418

It is necessary to clarify how the impact of the innovation on intended outcomes has to be interpreted. We compare women who received training and were offered a loan with existing entrepreneurs who have taken a loan (CG) but did not receive entrepreneurship training. We will then make a distinction between TG1 those who received only training but did not access the loan and TG2 those who receive the training and did access the loan. It is expected that TG2 is more comparable to CG as women in both group have an entrepreneurship activity.

¹² Such as: Control over taking a loan in the household; Control over earnings and financial services ; Control over small expenses ; Control over large expenses

5. Results of the evaluation

5.1 A word of caution on the evaluation of the start-up loan innovation

Before we try to evaluate the impact of the innovation on the desired outcomes we would like to know whether the innovation itself was effective, i.e. whether the training had an effect on its participants. We have only minimal quantitative data on this and this makes it very difficult to assess the effect of the entrepreneurship program¹³. Furthermore limitation of the DiD models is that it assumes that the CG and TG experienced similar (observable and unobservable) trends from 2009 to 2011 with exception of the treatment itself. However, it is doubtful that the trends for CG and TG were exactly identical even when using a matching methodology. The quasi-experimental method of matching may not be able to rule out all selection bias for unobservable factors¹⁴. Future research may explore propensity score matching to make the CG more comparable.

5.2 Innovation details

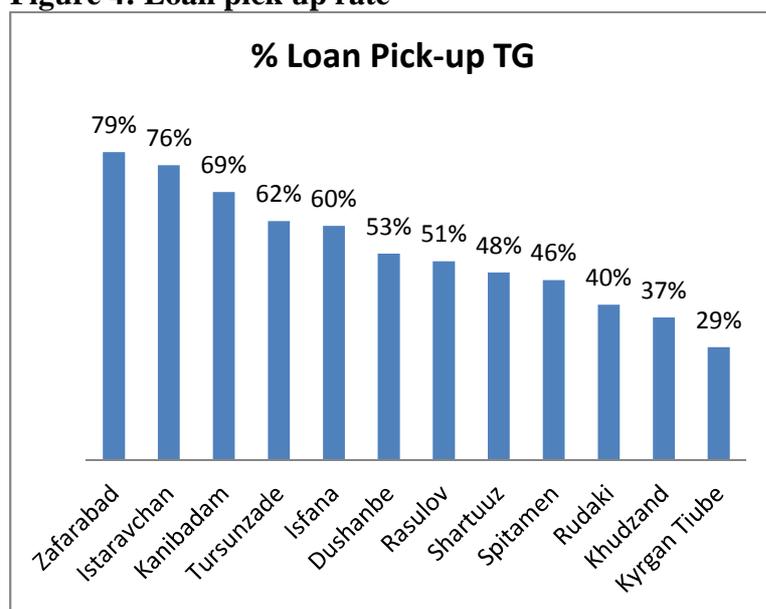
A total of 486 women received the women entrepreneurship training, of which in total 57% of the TG took the loan after the baseline survey. Almost all women took the loan within 3 months after training.

The loan pick-up rate varies per branch. Istaravshan, Zafarabad, Kanibadam and Tursunzade were relatively successful in start-up loan disbursements. While for Dushanbe and surrounding regions it was more difficult to find start-up loan clients.

¹³For example, how much did participants actually learn in the workshop? What did they understand? What did they not understand? The follow-up survey has taken up some questions to establish the success of the training including participant's satisfaction and loan pick up (per branch) after the training, but this survey was conducted 9 months after the training.

¹⁴For more information, see: Heckman et al 1997: Duflo et al 2007

Figure 4: Loan pick up rate

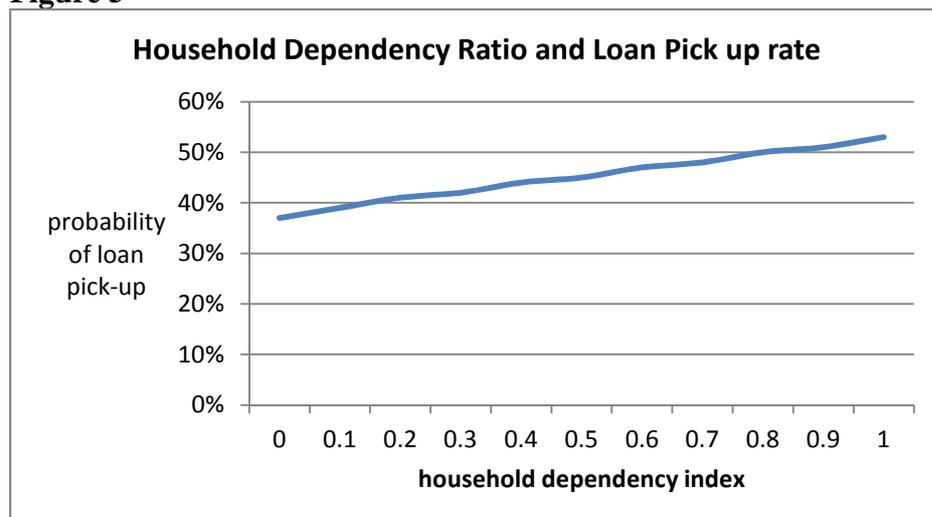


We estimated a probability model to assess the profile of the women in the TG took the loan (See APPENDIX 4). Women who work in agriculture and trade had a significant higher probability of picking up the loan. For example, women who work in agriculture had a 29% higher probability of taking up the loan compared to a similar woman with the same characteristics (average remittances income, being from the same region and with employment activity at baseline survey, household dependency index, and age category, but who worked in the service or manufacturing sector).

When women already owned a registered business at BS there was a higher chance of taking the loan. The loan pick-up rate was significantly higher for the office of Istaravshan and much lower for Spitamen and Kurgan Tube. Indicators that were not significantly related are whether the woman is from a rural area, was wage or un-employment at baseline, whether she is of young age.

Further, families with a higher household dependency index have a higher chance of taking up the loan (Figure 5). For example controlling for the other variables for a household with a dependency index of 0,5 the loan pick rate would be 45%.

Figure 5



5.3 Increased self-employment and income generating opportunities

The majority of women reported to like the training (99%). 258 out of 487 women who were trained reported to have implemented their business idea (see Table 3). This is 62% of women who responded to the question in the TG. The majority of women started their business within 3 months after the training. Reasons for not starting a business were reported to be family member influence, riskiness of the business plan, unforeseen expenses or more time needed to start the business. (See APPENDIX 1)

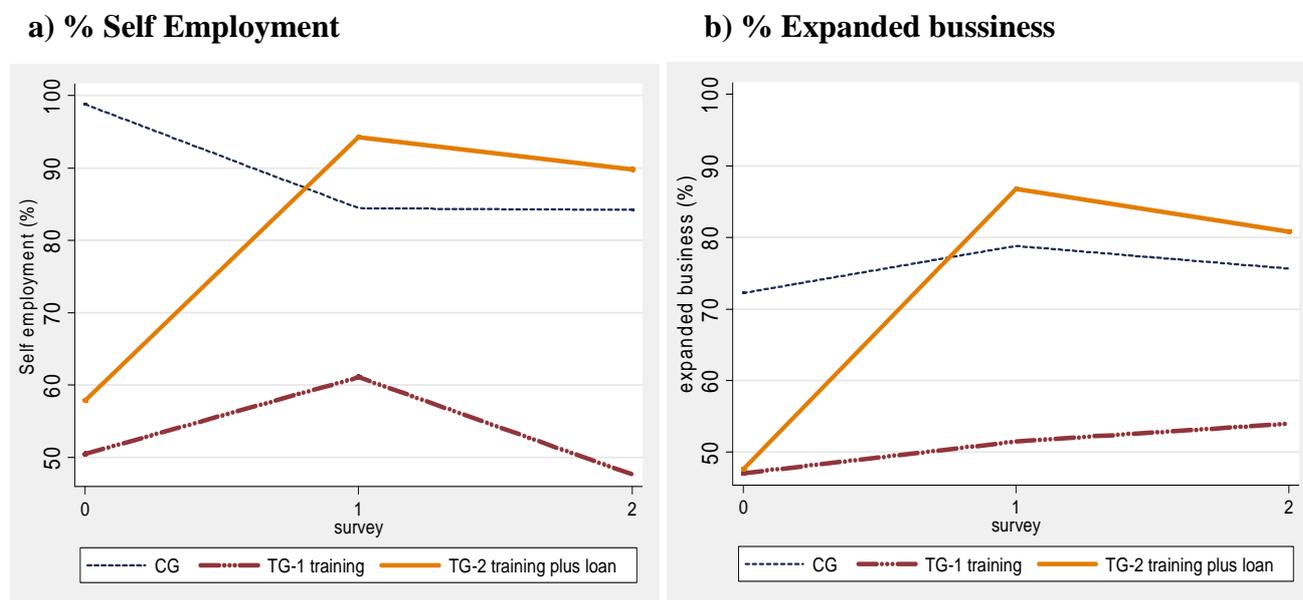
Table 3

<i>Nr of women who reported to have started up a business or not.</i>	<i>N</i>	<i>N%</i>
Implemented Business Idea	258	53%
Did not implement Business Idea	158	32%
No response	71	15%
Grand Total	487	100%

We find strong positive effects on self-employment and business expansion, but mainly for women who received both the training and loan. For women who received the loan and training there is an increase from the BS to the FS2 in percentage self-employment from 58%

to 90% and reported business expansion from 48% to 81%¹⁵. Women in the CG were already self-employed and had businesses, as evidenced by the higher starting point at baseline.

Figure 6 Increased self-employment and income opportunities



5.4 Outcomes: Women entrepreneurship

Women were asked if they relate to statements on positive entrepreneurial characteristics related to self-confidence, decision-making abilities, business planning and intrinsic motivation. They were also asked to self-assess skills in business planning, managing a team of people, bookkeeping, and analysis of business profits. Based on the rank of the outcomes an index was computed varying from 0 (no or very little entrepreneurial characteristics and skills) to 100 (strong affinity with entrepreneurial characteristics)¹⁶.

Surprisingly, at baseline we found the TG to report more entrepreneurial characteristics than the CG even though they had less business experience. However at the follow-up surveys TG seemed to have become less convinced about their entrepreneurial characteristics. It could be

¹⁵ Note business expansion is only shown for these women who were able to estimate it. A significant portion of women (21% of the sample) was not able to assess their own business expansion.

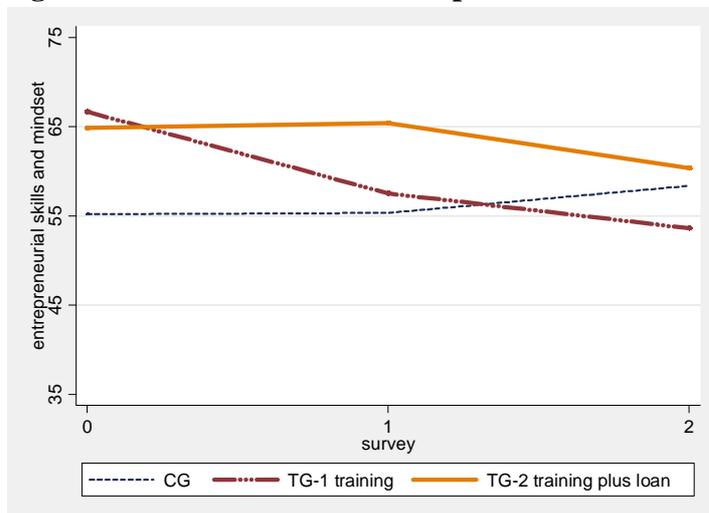
¹⁶ We asked, if the following statements applied to the women:

- I can convince other people in my household (self-confidence); - do you feel comfortable managing other people?; - do you plan two years ahead for your business?; - are you convinced that your success and failure depends mostly on your own efforts? For all statements a score of 100 is given if the specific question applied to them a lot, 70 if it applied normally, 30 if it did not apply, and 0 if it did not apply at all.

Second, Clients were also asked to self-assess their skills in business planning, managing a team of people, bookkeeping, and analysis of profitability. (Q33a-d) A score of 0 was used for low skill, 50 medium and 100 high. Adding up the scores and dividing by the maximum score creates an entrepreneurship index with a 0 implying the women finds herself strongly entrepreneurial and 100 not so entrepreneurial.

that the training made women more aware of their – lack of –entrepreneurial characteristics. Those who received only the training (TG1) experienced a sharper reduction in the index when compared to those who received loan and training (TG2).

Figure 7 Self-assessment of entrepreneurial skills



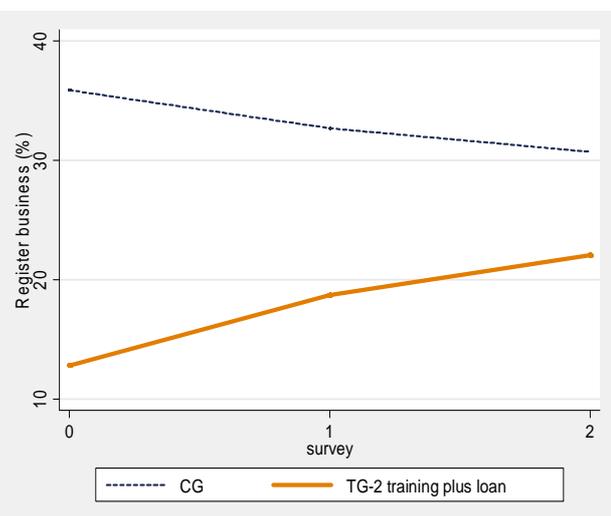
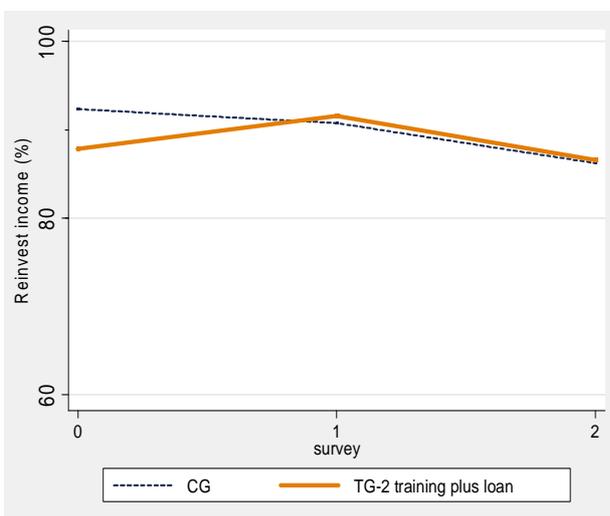
We show the effects of the innovation on business practices only for TG2 as these women own businesses. Results are mixed, there is a positive impact on business registration (weakly significant) observed for the TG2. However, we find no significant effect on whether women reinvest profits into their business.

One of the intentions of the project was to improve awareness amongst women of the NABWT, the association that provided the entrepreneurship training. We find evidence of increased awareness and usage of products and services from the association with the long term effect being smaller than the short term effect.

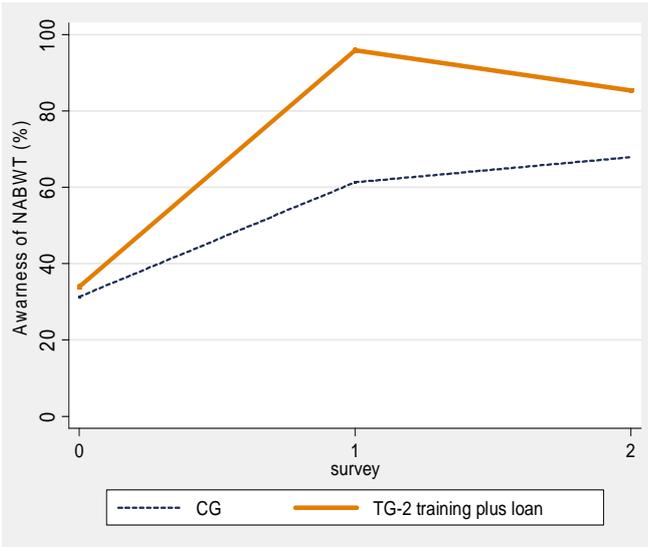
Figure 8 Business practices

a) Reinvest income into the business (%)

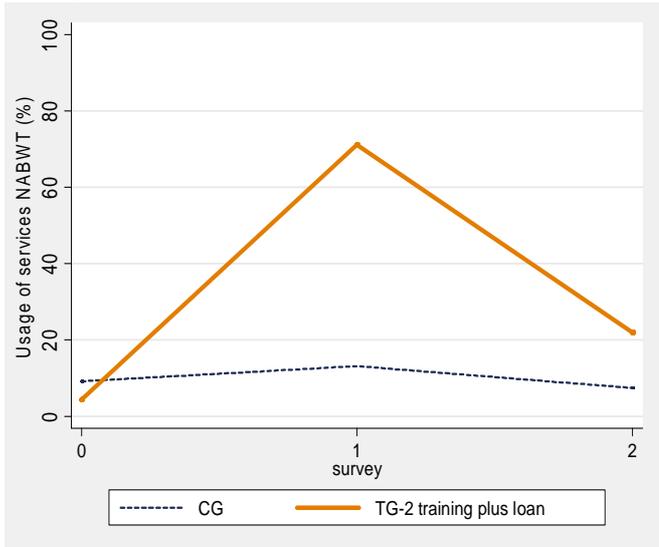
b) Registered business (%)



c) Awareness of NABWT (%)



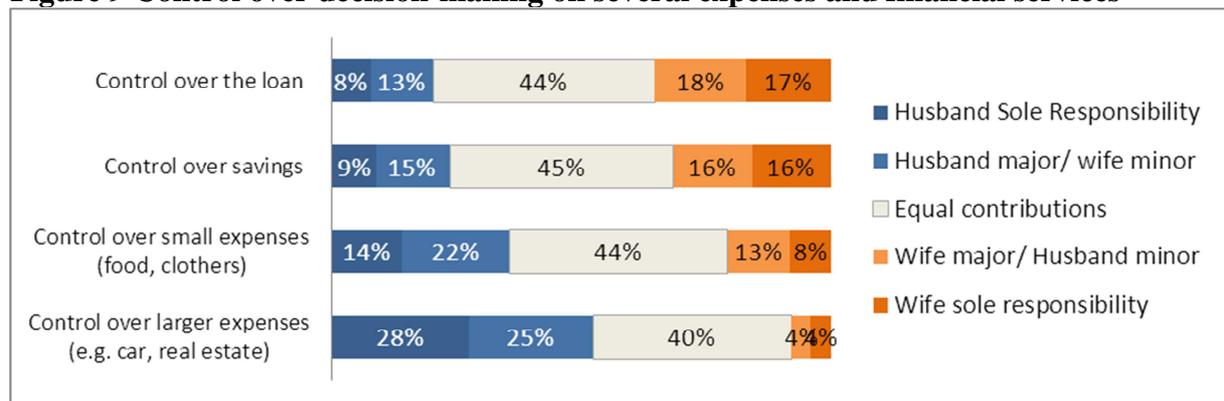
d) Usage of NABWT services (%)



5.5 Outcomes: Empowerment

Married women were asked who in the household decides about the use of income and expenditures and financial services for married couples¹⁷. Figure 9 shows the distributions for several types of expenses and financial services for the entire sample. We can see that for 21% of the sample the husband was mainly in control of the loan (blue colour) for 44% there was an equal decision making and 35% of the cases the women was in control of the loan. Interestingly we see women have more control over financial services, less control over small expenses and the least control over large purchases.

Figure 9 Control over decision-making on several expenses and financial services



¹⁷ Empowerment was broadly identified as “the process of women to boost their confidence, improve control over decision making, bargaining power and perceptions of possibilities in the household.” (Mayoux 2000:17) This definition relates to household-level empowerment and highlights variables to measure it (control and perceptions of confidence and possibilities).

Based on exploratory factor analysis, three indexes for women empowerment were designed varying from 0 (husband in full control) to 100 (wife in full control) for small expenses, large expenses and control over financial services and earnings¹⁸.

¹⁸ The responses were scored with: 0 if husband sole responsibility; 20 if husband major and wife minor responsibility; 60 if equal responsibility; 80 if wife major and husband minor; 100 if Wife sole responsibility. An equal responsibility and control of the woman has been given a larger weight as the index intends to measure women empowerment.

Factor analysis was used to observe what income and expense groupings were highly correlated. Three indexes were computed summarizing

- (1) financial services such as loans and savings and earnings including profits and working time.
- (2) small expenses such as food, clothes and other small consumption, school fees and health expenses
- (3) large expenses such as larger purchases of cars, real estate, and larger business expenses such as inputs and equipment.

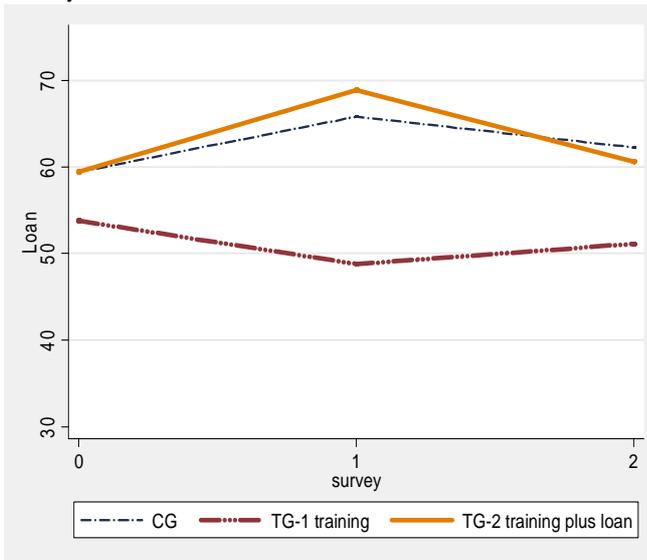
Figure 10 shows that there is no impact of the innovation on women empowerment indicators for TG2 (training plus loan), but a small negative impact for TG1 (loan only). The exclusion from IMON start-up loan could have led women in the TG1 to feel less in control of decision-making on financial services. For the longer term women who received only the training experienced a reduction in control over large and small expenses¹⁹. Interestingly, (as also shown in Figure 9) women have more control over financial services and earnings, less control over small expenses and very little control over large expenses.

Other variables that influenced control over household decision making were whether the woman lives and migrates into a rural area (small negative effect), husband works abroad (small positive effect). In certain regions the level of control of women over household decision making was higher, namely Khudzand, Istaravshan, Isfara, Kanibadam. Furthermore when a woman is interviewed by a male senior staff member the reported control over household decision making is significantly higher than when she is interviewed by a woman.

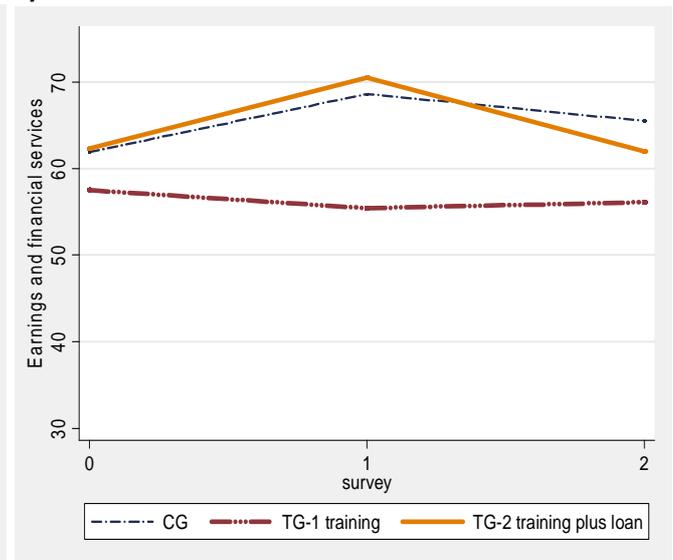
¹⁹ The negative effect was smaller in magnitude for women that were already self-employed at baseline survey.

Figure 10 empowerment indexes

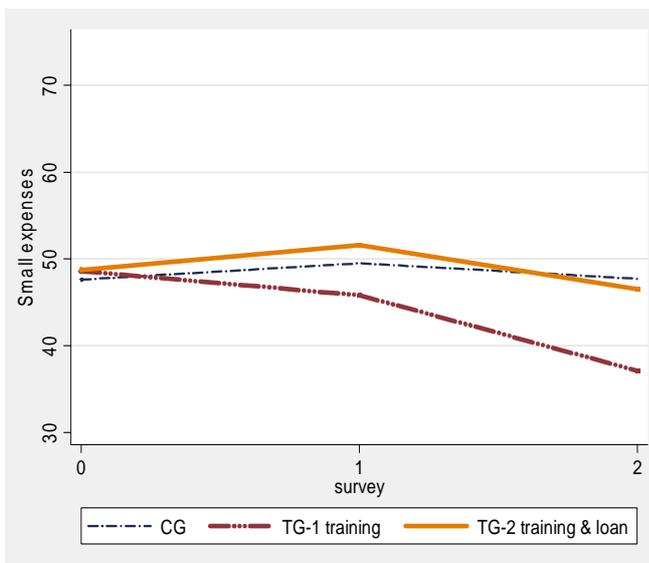
a) Control over loan



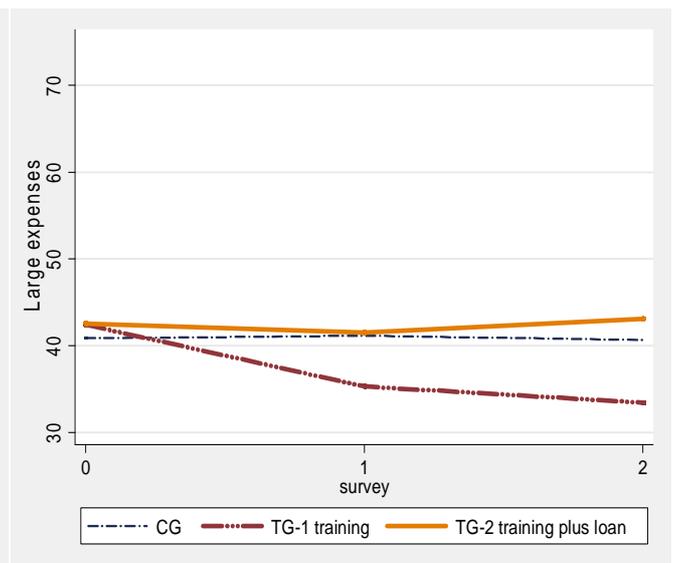
b) Control over Financial services and



c) Control over small expenses



d) Control over large expenses



5.6 Outcomes: Business Case

To what degree may there be a business case for the start-up loan product? Theoretically there is a business case for addressing decent work when it benefits clients as well as the MFI. For example, the decent work innovation may increase customer satisfaction, reduce client exit and improve risk-management. In other cases, there will be trade-offs as the decent work innovation goes at the direct expense of achieving financial sustainability because of costs of financial and human resources.

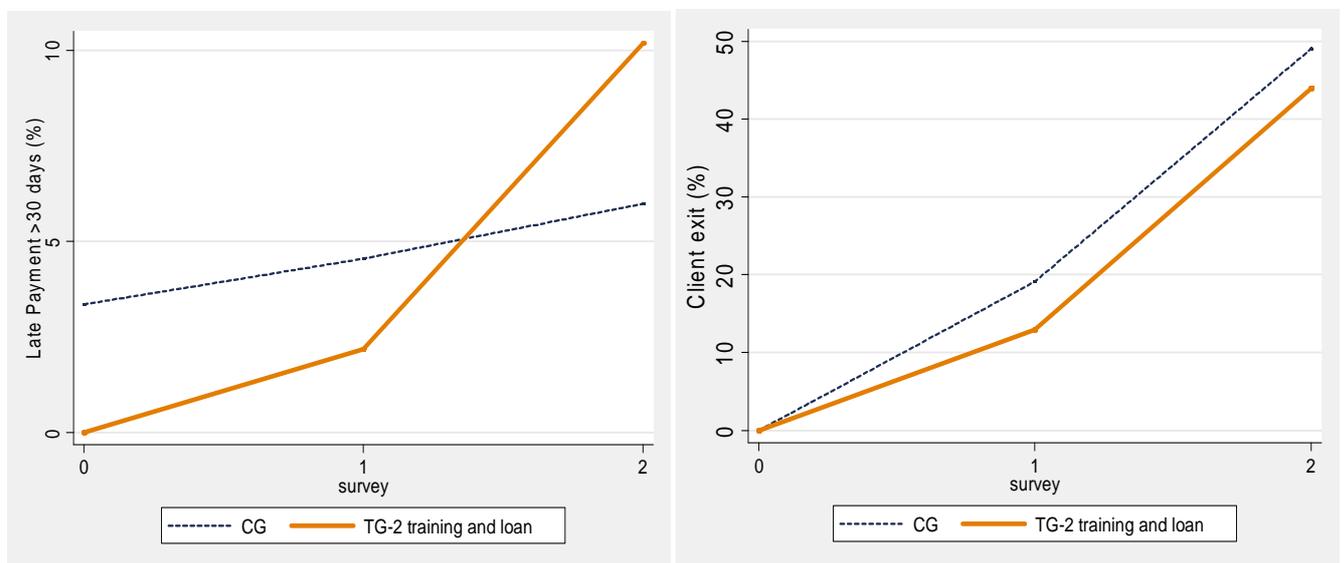
The training was free of charge for participants. For IMON there is an average cost of the training of US\$ 194 per training for 12 women. Given the loan pick up rate of 57% this would be approximately US\$ 28 additional costs per start-up loan²⁰.

In terms of economic benefits of innovation we find mixed results. Women in TG2 were equally in terms willing to consider a new loan after repayment as the CG. We find the start-up loan to be more risky as there is a higher percentage of late payments. However we find exit rates for the TG2 to be lower than the CG, which is an important finding given high customer exit rates of 49% for the CG and 44% for TG1 at second follow-up survey.²¹

Figure 11 Customer Satisfaction

a) Late Payment > 30 days (%)

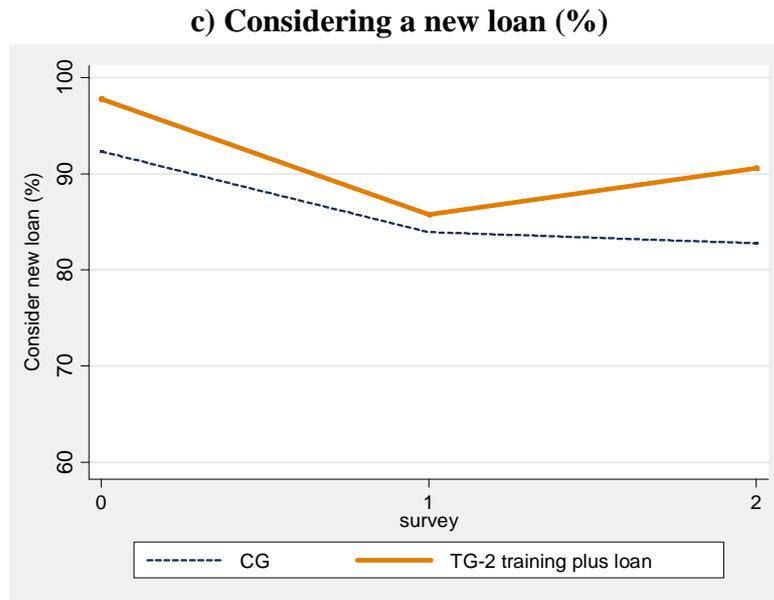
b) Client Exit (%)



²⁰57% of the women will take a loan out of a group of 12. The cost of the trainings were US\$194 per training on average for 10-12 women for 3 days. The average costs is then $US\$ 194 / (0,57 * 12) = US\$ 28$. Such costs are somewhat similar compared to other entrepreneurship training programs. (Bruegge et al 1999:6).

²¹This is similar to the conclusion in Karlan and Valdivia (2006, 2011 march)

Other variables that significantly influenced client exit are rural (higher exit rates when compared to non-rural), husband working abroad (higher exit rates but weakly significant) and if the woman is married (lower exit rates and weakly significant). Furthermore time itself is strongly related to client exit, the longer one stays into the program the higher the exit percentage. We are cautious about the impact estimates for client satisfaction as the time of entry of the program for TG2 and CG is different. Given that the TG2 entered the program at later stage than the CG this may also have affected outcomes.



Customer satisfaction for loans is assessed by computing a simple loan satisfaction index that sums up recoded scores for product features²². A score of 0% indicates women are completely unsatisfied, if women value all product features “normal/satisfactory” the score would be 70 and a score of 100% means extremely satisfied. We find the two groups to be equally satisfied on the customer satisfaction index.

Table 4 Transition Loan Satisfaction Index

	<i>FS1</i>	<i>FS2</i>
Control Group	78.7	77.5
TG-2 Training and Loan	81.2	78.9

6. Concluding remarks

This report presents findings from an evaluation of a start-up loan plus entrepreneurship training. We employ a difference-in-difference approach to evaluate the effect of the innovation on outcomes such as business start-up and self-employment, changes in entrepreneurial skills and business practices, an improvement in association, control over household decision making and improved customer satisfaction.

²² The product features are loan period, loan amount, customer service, interest rates and time awaiting the loan application. Women could value these product features with 0 very bad, 30 bad, 70 good and 100 very good. It was not possible to set up a ranked index as many interviews had incomplete rankings.

A total of 486 women received gender training of which in total 57% took a start-up loan after the baseline survey and the remainder only training. Almost all women took the loan within several months after training. Women who work in agriculture and trade, who owned a business at baseline and had families with a higher household dependency index had a significantly higher chance of accessing the loan.

We find positive impacts on self-employment and business expansion, but mainly for women who received both training and loan. Surprisingly at baseline we found the TG to self-report more entrepreneurial characteristics than the CG, despite having less business experience. From baseline to FS2 we then observe women in the TG to be less convinced about their entrepreneurial characteristics. There is a positive impact on business registration observed for the training and loan group, but no effects on reinvesting income into the business. We find evidence of an increase in awareness and usage of products and services from the association also in the long term. There is no impact of the innovation on women empowerment indicators for women who received both training and loan, and a small negative impact for women who received only the training. Women had more control over financial services and earnings, fewer control over small expenses and much less control over large expenses.

In terms of economic benefits of innovation for the MFI we find mixed results. Women in TG2 were equally satisfied about the start-up loan product as the CG. The start-up loan seems more risky with a higher percentage of late payments, but on the other hand we see positive effects on client retention rates.

Recommendations

Based on the overall research process and conclusions, the ILO would like to make the following recommendations to IMON regarding the future of the BDS training and formalization of clients:

- 1) Continue providing support through training to potential women entrepreneurs, which should include multiple follow-up sessions with the group so that after the start-up training the women can continue to meet with each other and discuss gender topics;
- 2) Inquire further on the business case to develop a sustainable business development service model; and

3) Share their tools methodologies, experiences, and findings through national and international networks of microfinance institutions in order to encourage similar work in the promotion of formalization and the campaign for Decent Work around the world.

What happened to the start-up loan after the pilot?

The start-up loan has now become a regular product of IMON International, as per June 2012 2'164 women have been trained and 1'245 start-up loans have been disbursed improving/reducing the loan pick up rate from 57% to 61%. The membership of the association has increased from 380 in 2009 to 2'150 in 2012. Several initiatives were undertaken to make the product and its delivery more effective:

Year	Number of training participants	Number of disbursed loans	Pick up rate
2009	149	63	42%
2010	598	365	61%
2011	901	542	60%
June 2012	516	315	61%
Total	2164	1285	

- IMON has organized meetings with the local municipality with aim to inform them about the product and generate more acceptance for women entrepreneurship and reduce barriers for women to start-up their business.
- Family members are now allowed to join for the last session of the training when women receive a training certificate. Involving family members builds acceptance for women entrepreneurship.
- Women from earlier trainings that started their businesses are invited to the new trainings to share their experiences. Also every year there is an award for best women entrepreneur handed by the Tajik ministry.
- IMON made several modifications with the aim to improve access to finance. As training groups are now formed more frequently the processing time of the loan reduced improving the access to finance/ loan pick up rate. The training duration was reduced from 4 days to 3 days to make it easier for women to attend and reduce costs. Furthermore collateral requirements were reduced by allowing group guarantee schemes.

- IMON incorporated the product into its social performance management systems. By the end of 2012/ 2013 the company aims to train 1200 women and achieve a loan pick up rate of 70%. The number of trainers within IMON increased from 13 to 46.

As a result of modifications of the product and its delivery the start-up loan is now a sustainable as highlighted in Table 5.

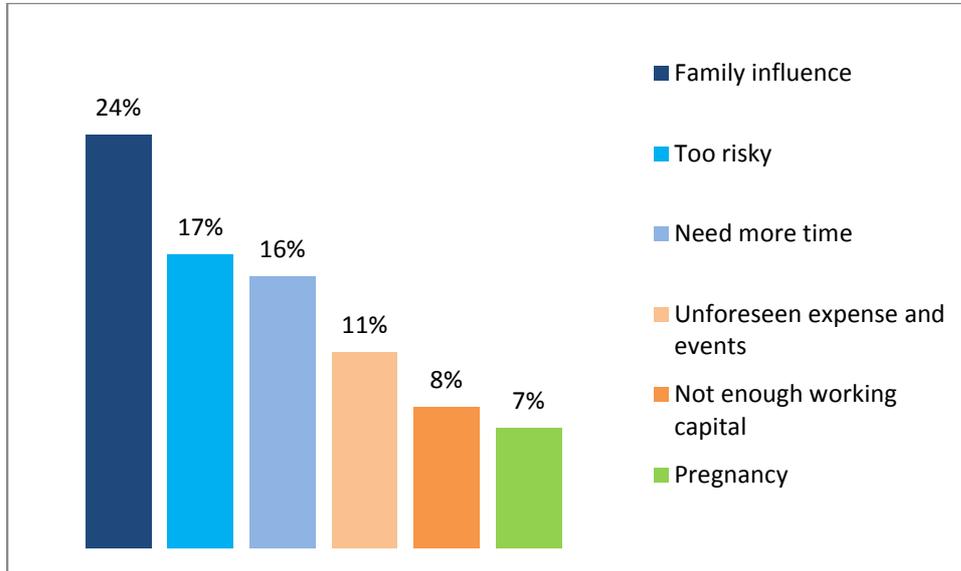
Table 5 Business Case as per June 2012

	Start-up Loan	Other loans
Portfolio at Risk >30 days	1,5%	5%
Retention rate	77 %	18 %
Net Profit Margins	3.2%	6%

A. References

- Bobokulov, I. I. (2011). The Fergana Valley and the International Community Ferghana Valley: The Heart of Central Asia. F. Starr, B. Beshimov, I. I. Bobokulov and P. Shozimov, M.E.Sharpe: pp373-393.
- Bruegge, E. v., J. E. Dickey, et al. (1999). "Cost of Education in the Freedom from Hunger Version of Credit with Education Implementation." " Freedom from Hunger Research Paper No. 6, <https://www.freedomfromhunger.org/bytes/publications.php>.
- Djankov, S., Y. Qian, et al. (2008 January). "What Makes an Entrepreneur?"
- Duflo, E., R. Glennerster, et al. (2007 January). "Using Randomization in Development Economic Research: A Toolkit." CEPR Discussion Paper, MIT No 6059: pp 1-73
- Heckman, J., H. Ichimura, et al. (1997). "Matching As An Econometric Evaluation Estimator: Evidence from Evaluating a Job Training Programme." Review of Economic Studies, 64.605-654.
- ILO (2010). Migration and Development in Tajikistan – Emigration, Return and Diaspora. Moscow, International Labour Organization: pp1-92.
- Karlan, D. and M. Valdivia (2011, March). "Teaching Entrepreneurship: Impact of Business Training on Microfinance Clients and Institutions ": p510-527.
- Karlan, D. S. and M. Valdivia (2006). Teaching entrepreneurship : impact of business training on microfinance clients and institutions. New Haven, Economic Growth Ctr Yale.
- Mayoux, L. (2000) "Micro-finance and the empowerment of women, A review of the key issues." ILO Social Finance Program
- Zokirov, S. and K. Umarov (2011). Economic Development in Ferghana Valley Since 1999. Ferghana Valley: The Heart of Central Asia. F. Starr, B. Beshimov, I. I. Bobokulov and P. Shozimov, M.E.Sharpe: pp232-252.

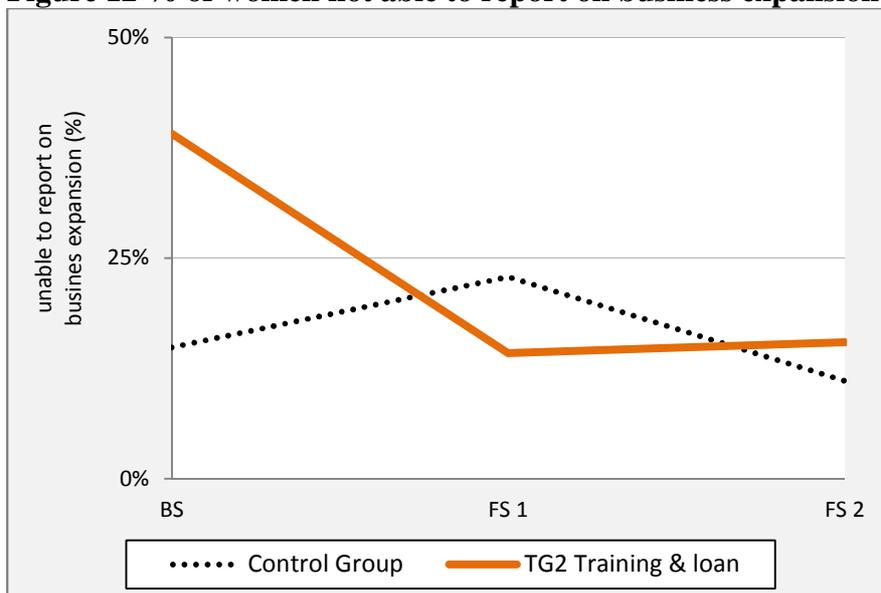
B. APPENDIX 1 REASONS FOR NOT STARTING BUSINESS



C. APPENDIX 2 DATA QUALITY BUSINESS EXPANSION

As shown below the percentage of the women in the TG 2 who were unable to say whether their business expanded reduced over time.

Figure 12 % of women not able to report on business expansion



D. APPENDIX 3 DESCRIPTIVE STATISTICS

Table 6 Descriptive at Baseline

	Mean	Std. Dev	Mean	Std. Dev	Minimum	Maximum	N
	CG	CG	TG	TG			
Control over the Loan	59.4	28.2	57.2	32.5	0	100	616*
Control over financial services and earnings	61.9	24.7	60.4	27.0	0	100	610*
Control over large expenses	40.8	26.6	42.5	30.0	0	100	603*
Control over small expense	47.6	26.0	48.7	31.4	0	100	581*
% of self-employed women	98.8	10.9	54.6	49.8	0	100	905
% reinvest income into business	92.3	26.6	85.3	35.5	0	100	784
% keep income books	46.2	49.9	49.1	50.1	0	100	791
% registered their business	35.9	48.0	12.0	32.5	0	100	793
% of business expansion	72.2	44.8	47.4	50.0	0	100	581
% of women aware of NABWT	31.3	46.4	32.7	47.0	0	100	901
% of women use services of NABWT	9.2	28.9	3.5	18.4	0	100	901
% of women considering a new loan	92.3	26.7	97.3	16.2	0	100	903
% of clients with late payments > 30 days	3.4	18	0	0	0	100	693
% interviews conducted by women interviewers	67	47	84	37	0	100	905
% interviews where spouse was present	3	16	1	8	0	100	858
Number of people in the household	5.1	2.0	5.7	2.3	1	16	904
% of clients living in rural areas	41	49	54	50	0	100	905
% of women with husband working abroad	27	44	30	46	0	100	577
% of women that are married	76	43	65	48	0	100	905

* *sub-sample of women that are married.*

The below tables show the statistical comparison for respectively: nominal variables, scale variables and ordinal variables at baseline survey.

Variable Nominal Data	Pearson Chi-square for cross tabulation with CG and TG	Statistically similarity at BS
Branches and Suboffices	6.0	Yes
Nationality of the women	2.3	Yes
Rural Area/ City/ Secondary City/ Village	19.2	No
Marital Status	14.7	No
Household receives income from self employment	175.3	No
HH receives income from wage employment	9.95	No
HH receives income from pensions	0.03	Yes
HH receives Income from remittances	0.28	Yes
Highest education level of woman	2.32	Yes
Type of Work Activity of woman	235.27	No
Interviewer is female	2.30	No
Awareness of NABWT	1.57	Yes
Age Category	14.63	No
For sample of women that are married		
Education level of spouse	4.4	Yes
Both husband and spouse work	1.9	Yes
Husband works abroad	0.9	Yes
Spouse present at Interview	3.92	No
For sample of women that are self-employed		
Women reinvest their income into business	22.22	No
Woman hold income and expenditure books	5.29	Yes
Woman had to manage a crises registration of business	3.315	Yes
44.09	No	
Type of work activity	49,10	No

Table 7 compares the TG and CG at BS using test for equal means and distributions.

Table 7

	Two Sample Mean Test T-Statistics	Equal Means 95%	(iii) Mann- Whitney U	Similar distributi on (ranks)	(iv) <u>Two-sample Kolmogorov- Smirnov Z-Statistic</u>	Similar Distributi ons
Number of people live in household	3.93	No	-3.832	No	1.84	No
Number of people with income	0.689	Yes	-0.16	Yes	0.83	Yes
Amount of remittances	-2.697	No	-4.277	No	2.38	No
Age in years	-2.33	No	-2.114	No	1.70	Yes
Business experience in years	-4.38	No	-6.29	No	2.77	No
Control earnings financial services	-0.46	Yes	-0.67	Yes	0.65	Yes
Control smaller expenses	0.66	Yes	-0.82	Yes	1.09	Yes
Control larger expenses	0.94	Yes	-0.73	Yes	0.72	Yes

Means for survey

	<i>Group</i>	<i>bs</i>	<i>fs1</i>	<i>fs2</i>
% of Self-employed women	CG	98.8	84.5	84.2
	TG1-training only	50.5	61.1	47.6
	TG2 training and loan	57.8	94.2	89.8
Expanded the business	CG	72.2	78.8	75.7
	TG1-training only	47.1	51.5	54.0
	TG2 training and loan	47.6	86.8	80.8
Reinvest income into business (%)	CG	92.3	90.8	86.2
	TG2 training and loan	87.9	91.6	86.6
Keep income books (%)	CG	46.2	44.0	51.2
	TG2 training and loan	51.9	43.8	59.8
Registered business (%)	CG	35.9	32.7	30.7
	TG2 training and loan	12.8	18.7	22.1
Percentage of women who know the NABWT (%)	CG	31.3	61.4	67.9
	TG2 training and loan	33.9	96.0	85.5
Percentage of women that uses services from NABWT (%)	CG	9.2	13.1	7.4
	TG2 training and loan	4.4	71.2	22.0
Control over large expenses	CG	40.8	41.2	40.7
	TG1-training only	42.4	35.3	33.4
	TG2 training and loan	42.5	41.5	43.0
Control over small expenses	CG	47.6	49.5	47.7
	TG1-training only	48.6	45.8	37.1
	TG2 training and loan	48.7	51.6	46.5
Control over the loan	CG	59.4	65.8	62.3
	TG1-training only	53.8	48.8	51.1
	TG2 training and loan	59.5	68.9	60.6
Control over earnings and financial services	CG	61.9	68.6	65.5
	TG1-training only	57.5	55.4	56.1
	TG2 training and loan	62.3	70.5	62.0
Considering a new loan	CG	92.3	83.9	82.8
	TG2 training and loan	97.8	85.8	90.6
Percentage of loan clients exiting from the loan program	CG	0.0	19.1	49.0
	TG2-training and loan	0.0	12.9	44.0
Late payment > 30 days	CG	3.4	4.6	6.0
	TG2-training and loan	0.0	2.2	10.2
Customer satisfaction	CG	74.6	78.7	77.5
	TG2 training and loan		81.2	78.9

E. APPENDIX 4 PROBABILITY MODEL

Error! Reference source not found. shows three different ways of estimating the overall model. Sensitivity analysis particularly on drop out showed that magnitudes of coefficients can vary. In several equations the indicator for wage employment at BS and Kyrgan Tiube became insignificant.

Table 8

<i>Variable, characteristics of training participant</i>	<i>Probabilities</i>	
	<i>(marginal effects) of loan pick-up for TG</i>	<i>Std. Err.</i>
If woman is Married	-6%	5.6%
Work activity is agriculture	29%***	5.7%
Work activity is trade	26%***	5.1%
Amount of remittances in 1000nds TJS (Q7)	0.2%	0.4%
Woman lives in rural area	5%	5.0%
Woman is wage employed at BS	6%	8.4%
Woman is unemployed at BS	5%	10.5%
Woman owns a registered business at BS	14%**	5.9%
Household dependency index	24%**	10.1%
Age of woman <25 years old	-8%	6.2%
Branch Istaravchan	14%**	7.0%
Branch Khudzand	-11%	8.0%
Branch Isfara	2%	7.9%
Branch Kanibadam	13%	8.0%
Branch Spitamen	-26%***	7.4%
Branch Kyrgan tiube	-25%***	8.6%
time trend variable (BS=0. FS1=1. FS2=2)	45%***	3.4%
Number of interviews	914	
Number of woman	416	
Wald Chi-squared	251	

Notes: heteroskedastic consistent standard errors in parentheses.

*** significant at 1% ; ** significant at 5% **; * significant at 10%.

F. APPENDIX 5 EMPIRICAL MODEL

The data at hand allows for the comparison of treatment and control groups before and after the innovation took place. This is important, because it allows detecting and correcting potential imbalances in the innovation versus control group prior to the innovation. Even though the balancing tests in the data section suggest that treatment and control branches are different on variables such as entrepreneurial experience and outcomes, we can still try to improve the estimation by controlling for some of the differences. Methodologically this is achieved using a difference-in-difference estimator. It requires that outcomes innovation and control group must follow a common trend. As the innovation is not randomized it is especially important to control for some of the possible different trends. We have relatively detailed information on the economic situation of the household and its members. We can use this information to control for unbalanced trends that work through these variables.

The following equation was estimated:

$$Y_{ijt} = \alpha_i + T1 + T2 + \gamma TG_i + DID_{it}1 + DID_{it}2 + u_{ijt} \quad (1)$$

The first term is client-specific and fixed over time, $T1$ and $T2$ s are time dummies for when it when respectively the first and second follow-up survey were conducted. The variable TG_i is a binary indicator equal to one for when the woman is in TG and zero for the control group. The coefficient $DID_{it}1$ is the interaction term between TG_i , and the time dummy variable $T1$ and calculates the short term difference-in-difference effect. Likewise $DID_{it}2$ is the interaction term that calculates the long term difference-in-difference effect²³. For other equations control variables were added to the equations.

There are two key identifying assumptions required for the estimation of a causal effect for the innovation. First, in the absence of the innovation the average outcomes between clients in TG and CG are the same in each time period, so control and TG observe similar trends. However, even in the absence of the innovation, outcomes may evolve differently for clients in the two groups. Therefore we thoroughly examine other possible channels that may have affected outcomes over the innovation period below. Second, we assume that the innovation in the TG does not alter outcomes in the CG. This assumption may be violated by the existence of spillovers from the target into the control group.

²³Depending on what TG was used in the equation TG2 or both TG1 and TG2 each had their own sets of dummy variables.

We modify the basic specification in equation (1) in a number of ways to check the stability of our estimated coefficients. We estimate the model in several ways:

(1) is the basic model that shows the simple Difference-in-Difference estimate, (as portrait in the graph above)

(2) Also includes control variables at client level that change over time, specifically interview setting, household size, whether the woman is from a rural area and whether her husband works abroad.

(3) shows the DID estimate for model 2 but only includes the sample for which all 3 interviews have been completed. The estimation gives some indication of for possible drop out bias.

(4) shows the DID estimate for model 2 but controls for branches and timely trends in branches, as well as more in-depth household level variables such as type of non-marital status (divorced, never married, widow), type of urban area (large city, secondary city, town) and type of employment status at baseline (unemployed, wage employed, income generating activity, business income) and work activity at baseline (trade, services, production, agriculture). Equation 4 gives up a considerable sample size because of data gaps in the work-activity variable.

Additional sensitivity analysis was conducted but this is not shown in this document. For example, by estimating models (1) to (4) for subsamples of women who were self-employed at baseline survey. However these estimations are not shown in this document and did not strongly change results.

All coefficients are OLS estimated with robust standard errors in parentheses. *, **, *** denote significance at the ten, five and one percent level. The estimated effect for beta captures the difference in outcomes before and after the innovation in the TG minus the difference in outcomes before and after the innovation in the control group. The coefficients can be interpreted as percentages. Given matching methodology and possible selection bias the magnitudes of the impact estimates should be interpreted with caution. While the magnitudes for equation (1), (2), (3) and (4) vary the direction of the impact (,whether it is a negative or positive impact,) is often similar.