



**MILLENNIUM**  
CHALLENGE CORPORATION  
UNITED STATES OF AMERICA

**IMPACT EVALUATION OF THE PILOT  
'SUPPORT FOR SMALL BUSINESS' PROJECT**

**Final Report – Business**

Innovations for Poverty Action (IPA) Report prepared for the Agency of Partnership for Progress (APP)



**Agency of Partnership for Progress (APP)**

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## Introduction

This report presents the final results of the “Support for Small Business” program. The set of analyses presented in this report use the data of the last survey - the final survey - conducted one year after the end of the training, but also the results of the three follow-up surveys. This enables us to precisely measure the evolution of the program’s impact over the entire course of its implementation and after the end of the training sessions.

This first part (part A) of this report presents surveys from the initial survey up until the final survey. This part also describes the evolution of samples during the five surveys and the problems related to attrition. We also present the statistical methods used to analyze the data.

The second part (part B) of the report pertains to the implementation of the “Support for Small Business” program on beneficiary companies. We initially measure the impact of the program’s offer on the type and volume of training received by the business owners of the treatment group. We analyze the evolution in their participation over time. We are also interested in the satisfaction of beneficiaries with regard to the program.

The third part (part C) is focused on the program’s ultimate impact on beneficiary companies. We compare the set of results measured one year after the end of the training indicated in the final survey with the results of the previous surveys that measured the impact during training sessions (follow-up survey 2) or shortly afterward (follow-up survey 3). We are interested in the program’s effects on the overall management of the company. We analyze effects on changes that occurred within businesses in terms of production, distribution, investment, employment, access to credit, etc., but also on the mindset of the business owners. It is a function of these “intermediate” impacts that we are able to determine the impacts on the final variables such as survival of the businesses, total sales and profits as well as the overall income of business owners. We present the program’s effects on the personal situation of the business owner and of his household in this last section.

## **Part A**

### **Description of the survey data and methodology**

#### **I. SCHEDULE AND DESCRIPTION OF THE SURVEYS**

The evaluation of the “support for small business” program is based on an initial survey, four follow-up surveys and a qualitative survey.

The initial survey was conducted from September 30 through December 23, 2009, before the random drawing of the program and its implementation in the treatment group. The survey has several functions: it makes it possible to ensure that the characteristics between treatment and control groups were statistically identical at the onset. The data gathered also make it possible to verify that there is no differential attrition between the treatment and control groups in the follow-up surveys (this is addressed in detail in the following section of the report). Lastly, most of the regressions include the initial value (at the baseline) of the indicators considered as control variables in order to improve the accuracy of the estimators.

Follow-up surveys 1 and 2 were conducted respectively from November 1, 2010, through January 15, 2011, and from June 24 through July 29, 2011. These surveys were conducted during the deployment of the program, from the diagnostic to the implementation of the supports. The surveys made it possible to verify that the program was indeed implemented and to measure the initial changes with the small businesses. Follow-up survey 1 was conducted on the ground whereas follow-up survey 2 was conducted by phone.

Follow-up survey no. 3, more complete, took place from December 19, 2011 through March 10, 2012, i.e. just at the end of the training sessions. The analyses conducted with the data gathered during the survey made it possible to evaluate the short-term impact of the “support for the small business” program. In parallel with this follow-up survey, a qualitative survey was conducted from January 22 through February 1, 2012 with 10 focus groups in the region of Casablanca and Oujda.

The final survey, conducted from December 3, 2012 through February 16, 2012, took place one year after the end of the training sessions and eighteen months after the start of the support actions. It makes it possible to analyze the impact of these sessions in the medium term.

## II. SAMPLES AND ATTRITION

Table 1 below shows the evolution in the size of samples surveyed from the baseline to the final survey. It was not possible to re-interrogate all respondents of the baseline survey during the follow-up surveys. The attrition rate was equal to around 15% during the first 3 follow-up surveys and almost 28% at the time of the final survey.

**Table 1: Evolution of the sample**

	Number of businesses surveyed
Initial Survey _____	857
Follow-up survey no. 1 _____	726
Follow-up survey no. 2 _____	721
Follow-up survey no. 3 _____	715
Final survey _____	<u>618</u>

We took various actions to limit the risks of attrition during the surveys. We put a great deal of importance with our interviewers on defining the best way possible to organize the conversation with the participant. Fundamental rules such as punctuality, politeness were constantly recalled and our interviewers were selected based on these aspects. The interviewers moreover followed a strict procedure in making contact and setting up meetings with the respondents. We established a regularly updated schedule of planned meetings with them, and small business owners who could not be contacted at the end of several calls were to be indicated to the IPA advisors. We also worked in close collaboration with the section heads and the UGPs, in order to enter into contact or to convince the business owners to agree to respond to the surveys.

The level of attrition remains however relatively high at the endline. The main reason for this higher rate of attrition is refusal of small business owners to participate in this last survey.

The attrition can raise an important problem if it is differential between the treatment group and control group because this can affect our ability to compare the treatment and control groups and therefore affect the quality of the results. Table A1 (Annex 1) makes it possible to test whether the attrition rate differs between the treatment and control groups and if this attrition is differential as a function of the initial characteristics of the small businesses. The results of table A1 are reassuring on two levels. First, the attrition rate – 28% – is exactly the same in the treatment and control groups. Secondly, the attrition is not differential between the treatment and control groups for most of the characteristic variables of the businesses surveyed. Accordingly, it can be reasonably concluded that the results presented during the report are not affected by attrition. We had moreover made the same observation for the results of the three follow-up surveys.

### III. METHODOLOGY OF THE EVALUATION

The impact of the “support for small business” program is measured by comparing the situation of small businesses of the treatment group with that of the control group small businesses. All of the results presented in this report come from regressions of the following type, identical to the regressions made in the previous reports:

$$Y = \alpha + \beta T + \delta X + \varepsilon$$

where  $Y$  is the variable of interest (sales, acquisition of new fixed capital, etc.),  $T$  is the binary variable indicating the treatment or control group, and  $X$  is a vector of binary control variables corresponding to the level of the interest variable during the reference survey and to the stratification variables used for the random drawing: geographic zone, business sector, gender of the business owner, segment of initial investment level and level of difficulties,  $\beta$  is the parameter of interest. It measures the change in  $Y$  induced by an increase in  $T$  of a unit, i.e., the passage from control to treatment.  $\alpha$  is the constant of the equation,  $\delta$  is the vector of coefficients associated with the variables of the vector  $X$ , and  $\varepsilon$  is the residue of the regression (the component of the result variable that is explained neither by its inclusion in the treatment group nor by the control variables).

In part C of the report, the calculations are made either with all of the observations of the sample or by suppressing 1% and 5% of the observations with the highest values of the variable considered when the effect of the presence of outliers on certain estimates seems overly important. Checking the calculations by removing the outliers makes it possible on one hand to remove observations subject to caution and on the other hand to discard the least representative cases. In this way it is possible to test the “robustness” of the results by examining whether the differences observed exist regardless of the sample taken or if they are sensitive to minimum modifications. This procedure is particularly important considering the high level of heterogeneity that characterizes the small businesses of the sample. This high level of heterogeneity had already been indicated in the previous follow-up reports. When the table presented in the text does not concern all of the population, the results on the overall sample are shown in an annex. Moreover, on certain variables we make quantile regressions that are equally robust in the presence of extreme values. We show the results of these regressions in the form of a chart attached to the report.

The results are presented according to the following order. First we show the impact of the program’s offering on the type and volume of training received by business owners from the treatment group (section B). We are then interested in the effects of the program on the performance factors of the small business (section C1). We analyze the effects on the changes that took place within the small businesses in terms of production,

distribution, investment, employment, access to credit, etc. It is as a function of these “intermediate” impacts that we are able to determine the impacts on the final variables presented in section C2. In this section, we present the effects of the program on the survival of the small businesses, total sales and profits as well as on the overall income of the small business owner. Then in the final section (C3) we evaluate the effect of the training on the situation of the household of the small business owner.

## **Part B**

### **Implementation of the “support for small business” program**

#### **I. PRESENTATION OF THE “SUPPORT FOR SMALL BUSINESS” PROGRAM**

The “support for small business” project was implemented with small businesses of the Moukawalati program aimed at offsetting post-creation insufficiencies and difficulties experienced by small business owners during the first years of operation.

According to Triodos Facet, that was responsible for the implementation of the project, the “support for small business” project aims at the viabilization of newly created small businesses through post-creation follow-up actions. These actions aim at contributing an added value thanks to:

- The introduction of new management tools and methods;
- Reinforcement of the skills of small business owners receiving support, notably through the organization of training sessions or through the exchange of experience, expertise and good practices,
- The definition of an action plan aimed at promoting and developing small businesses as well as assisting them in the implementation.

The Support for Small Business project for Moukawalati businesses was implemented by two agencies:

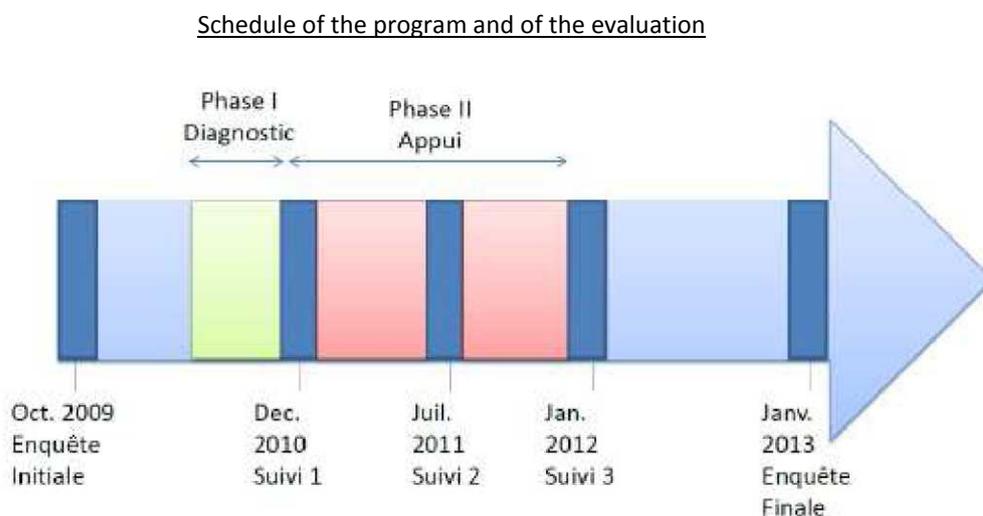
- The National Agency for the Promotion of the Small- and Medium-Size Business (ANPME), responsible for supervising and guiding the post-creation follow-up actions of small businesses being assisted by Moukawalati offices under the Chambers of Commerce, Industry and Services and Microcredit Associations
- The Office of Professional Training and Promotion of Labor (OFPPT), responsible for supervising and tracking the post-creation support services of small businesses assisted by Moukawalati offices under the training institutes (APP source)

In addition to a diagnosis at the onset (and for certain small businesses in the middle), the actions developed by the program (source Triodos Facet, 2010) were broken down into the following activities for around 14 – 15 days of training.

- Coaching
- Technical assistance
- Managerial training
- Networking

## II. SCHEDULE FOR IMPLEMENTING THE PROGRAM

The program was progressively implemented with a diagnostic that started in the second half of 2010 and the four components of the support that were developed during 2011. The diagram below summarizes the main phases of the implementation of the program and the evaluation.

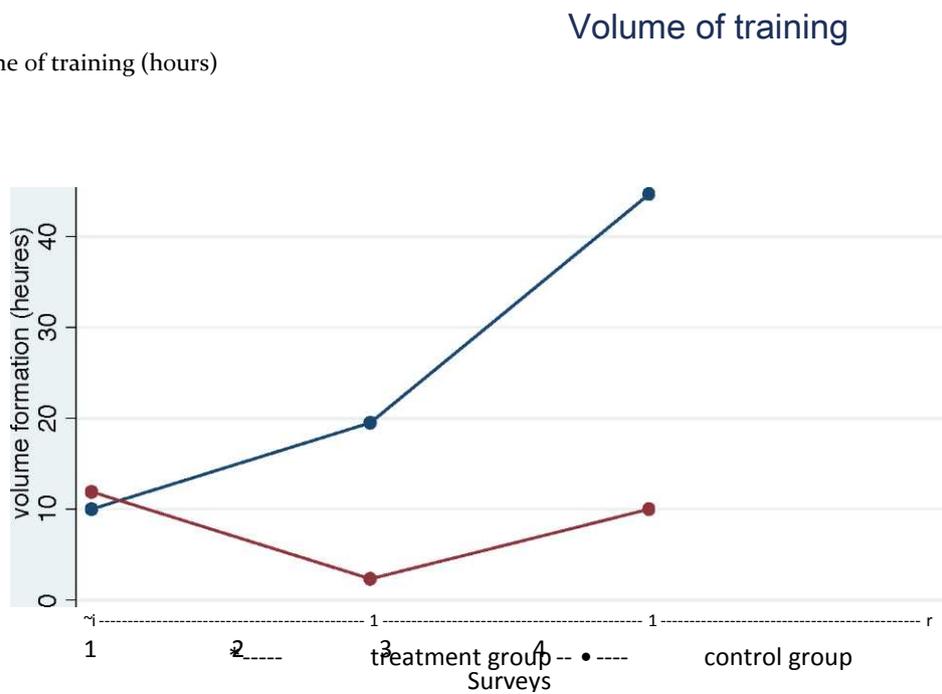


Phase II Support    Initial Survey    *Suivi* = Follow-up    Final Survey

## III. INTENSITY AND ADDED VALUE OF THE SUPPORT FOR BUSINESS PROGRAM

Chart 1 below describes the evolution in the total training (in hours) during the first three follow-up surveys for the treatment and control groups (there was no additional training between follow-up survey 3 and the final survey). During the first follow-up survey in December 2010, the treatment and control groups have the same number of training hours, supplied by an offer other than the 'support for small business' project since the project had not yet begun, except for diagnostic activities. At follow-up survey no. 2 (six months later) the differential was established at approximately 17 hours. Lastly, at the end of the training, the small businesses of the treatment group had received 44 hours of training since the beginning of the program versus 10 hours for the control group businesses, therefor representing a net difference of around 35 hours of training.

Chart 1: Evolution of the number of training hours during follow-up surveys no. 1, 2 and 3



This evolution suggests there was no major substitution on the part of small businesses of the control group from the support program to the small business with another training program. The implementation of the program therefore significantly increased the training received with respect to the training that might have existed in the absence of the ES2 program. However, the net effect of 35 hours of training is relatively different from the 14 days initially planned by the program and remains overall an average intensity. It is however probable that the respondents underestimate the number of hours of training actually received.

Another indicator of interest to analyze the implementation of the program is the response of those interviewed to the question of knowing whether the small business participated in the “support for small business” program and if it received other training programs. Table 2 shows that at the time of follow-up survey no. 3, 72% were treated in the treatment group compared to 4% in the control group, this difference (68 percentage points) was very significant (column 2, treated by ES2). These results are very close to what had been observed during follow-up survey 2 where the rates of participation were respectively 68% and 2% for the treatment and control groups. As a reminder, the difference was only 36% at the first follow-up survey

**Table 2: effectiveness of the treatment (follow-up survey no. 3)**

Explanatory variables	(1) received at least one treatment	(2) Treated by ES2	(3) received at least one treatment outside of ES2	(4) Total training time
Effect of the Support for Small Business program	0.64*** (0.029)	0.68*** (0.026)	-0.00 (0.020)	34.69*** (5.839)
Average control group value of the initial survey	0.115 yes	0.0405 Yes	0.0748 Yes	9.994 yes
indicators of strata	yes	Yes	Yes	yes
Variance explained (R2 adjust)	0.384	0.466	-0.0142	0.0176
Standard deviation in the sample	0.499	0.493	0.255	88.54
Mean in the sample	0	0	0	0
Sample	715	715	715	701

*Coefficients reported in this table are from a regression of the least ordinary squares. The standard deviations are between parentheses.*

*\* means that the coefficient is significantly different from zero at the trust threshold of 90% \*\* at the threshold of 95% and \*\*\* at the threshold of 99%*

*Regression includes an indicator of each stratum as control variable*

In terms of type of training received, the results from follow-up survey 3 enable us to identify the various support received within the framework of the training (all training together). The results are presented in table 3. 34% received training in networking, 62% received coaching, 58% received technical assistance and 62% managerial training. The rates of participations in the various types of support are of the same order of magnitude as the rate of participation in the ES2 training, except for networking that seems to have affected fewer people. The results on this type of training indeed correspond to the offer delivered within the framework of the program.

**Table 3: Type of training received (follow-up survey no. 3)**

	(1)	(2)	(3)	(4)
	Networking forum	Managerial Training	Individual Coaching	Technical Assistance
Explanatory variables				
Effect of the Support for the Business program	0.34***	0.55***	0.60***	0.52***
	(0.026)	(0.029)	(0.027)	(0.029)
Average control group	0.00935	0.0685	0.0187	0.0654
Value of the initial survey	Yes	Yes	yes	yes
Indicators of strata	Yes	Yes	yes	yes
Variance explained (R2 added)	0.181	0.298	0.396	0.277
Standard deviation in the sample	0.398	0.482	0.476	0.475
Mean in the sample	0	0	0	0
Sample	715	715	715	715

*Coefficients reported in this table are from a regression of the least ordinary squares. The standard deviations are between parentheses.*

*\* means that the coefficient is significantly different from zero at the trust threshold of 90% \*\* at the threshold of 95% and \*\*\* at the threshold of 99%*

*Regression includes an indicator of each stratum as control variable*

#### IV. DEGREE OF SATISFACTION WITH REGARD TO THE PROGRAM

The qualitative analysis<sup>1</sup> conducted within the framework of the third follow-up survey suggested there was a certain heterogeneity of the satisfaction of small business owners with respect to the program. Even though it is difficult to generalize considering the limited number of persons surveyed, it appears that certain beneficiaries had a problem in understanding the nature of the program and of the training provided, which could have created a discrepancy between the expectations of the small business owners and the proposed content. Moreover, certain training sessions were considered as overly theoretical or not sufficiently adapted to the needs of the small business (when for example the initial diagnostic was not properly carried out). On the other hand, many comments by participants underscored the quality and the involvement of the experts, the importance of the coaching or the responsiveness of those responsible for the program.

This heterogeneity is also present in the final survey (quantitative) at the time the training had for a year already been completed. In fact, table 4 shows the general degree of satisfaction with regard to the program for the participants.

<sup>1</sup> Report of the qualitative survey conducted within the framework of the follow-up survey

**Table 4: General satisfaction with regard to the support for business program** \_\_\_\_\_

(1)

Are you satisfied with the support for business program? (%)

VARIABLES	
Not at all satisfied	18.5
Not very satisfied	21.1
Neutral	5.7
Satisfied	34
Very satisfied	20.7
Number of observations _____	265 _____

Although the majority of the respondents are satisfied or very satisfied with the program, there are however 40% who declare they were not satisfied with the program. These results seem to show that for a significant part of the small businesses, the training was not adapted to their needs.

## **Part C**

### **Final Impact of the “Support For Small Business” program**

In this section, we analyze the effect of the “support for small business” program one year after the end of the training sessions, which gives us a medium-term effect. For most of the results, we contrast the medium-term effects with those measured just after the end of the training (follow-up survey 3) and those measured during the implementation of the training (follow-up survey no. 1 and 2). These comparisons allow us to follow the evolution of the effect of the program over time and to evaluate the long-lasting characteristic of certain effects.

We first present the impacts on the factors of performance of the small businesses (I), we then analyze the effect on the economic performance of the small businesses (II). We are lastly interested in the impact of the program on the household of the small business owner (III).

#### **I. IMPACT OF THE PROGRAM ON PERFORMANCE FACTORS OF SMALL BUSINESSES**

The ES2 program had various components including technical assistance, managerial training or coaching. The various training sessions given to the small businesses can have direct effects on the performance factors of the small businesses. As in the previous reports, we distinguish several categories that we subsequently address and this part: the accounting of the small business, the organization of production, and distribution, investment, employment and how small business owners spend their time working, the debt level and the mindset of the small business owners. All of these intermediary variables are susceptible to being affected directly by the program. An important question is also in the long-lasting ability of the potential changes brought about this type of training. The comparison of the results among the various points of survey will make it possible to determine the long-lasting ability of the effects.

It is as a function of these intermediate changes that it is possible to expect a modification in the final variables such as sales, profit or income of the small business owners.

##### **I. Effect on the business’ accounting**

First of all, we are interested in the effect of the training on accounting. This represents a central element of the ability of small business owners to manage their business and has been the subject of specific training sessions for a small business owners who needed it.

The analysis of data from the final survey shows that overall, the program had no effect on accounting. Table 5 shows in fact that the program had no effect on the use of an accounting (column 1) the type of accounting existing in the small business (column 2) or on the knowledge of elements included in the accounting declared by the small business owners (column 6).

**Table 5 : Accounting**

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	existence of a written accounting	existence of a modern accounting	separate accounting of personal accounts	setup of an accounting	improvement of the existing accounting	no. of known acct'g. categories
Effect of the Support for Bus. Program	0.03 (0.035)	0.01 (0.040)	0.04 (0.042)	0.01* (0.007)	0.02 (0.014)	0.25 (0.183)
extreme values at 5%	with	with	with	with	with	With
extreme values at 1%	with	with	with	with	with	With
Average in the control group	0.745	0.623	0.541	0	0.0214	3.079
R2	0.0659	0.121	0.0177	5.07e-05	-0.0273	0.0777
Standard deviation in the sample	0.430	0.489	0.497	0.0806	0.164	2.241
Mean in the sample	1	1	1	0	0	4
Number of observations	612	618	618	613	613	607

*The coefficients reported in this table are from a regression of least ordinary squares.*

*\* means that the coefficient is significantly different from zero at the trust threshold of 90%*

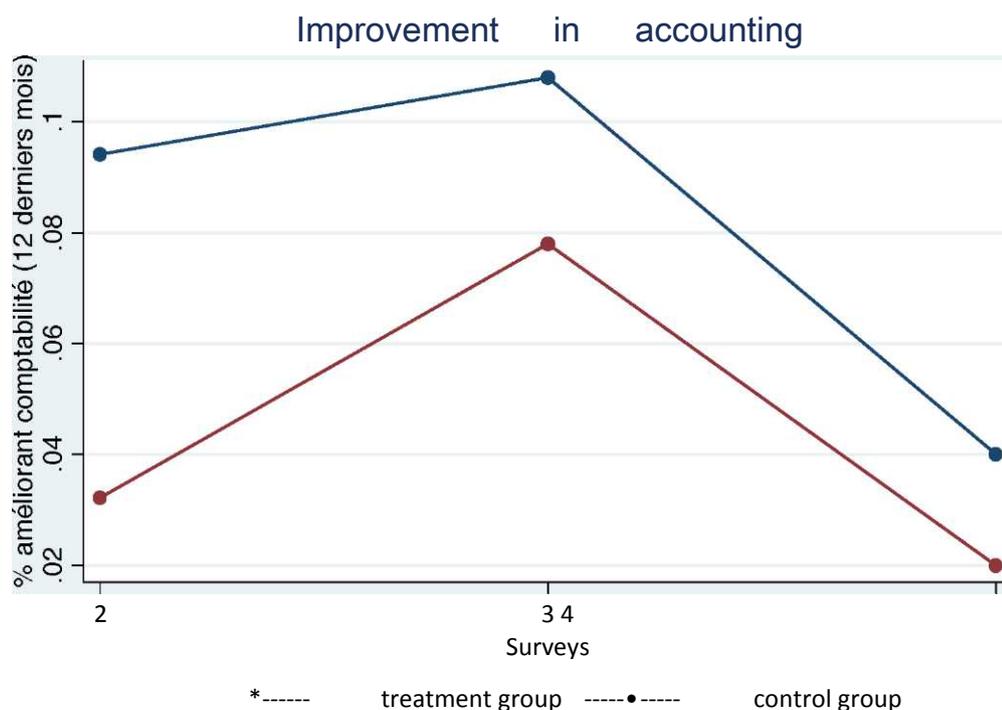
*\*\* at the threshold of 95% and \*\*\* at the threshold of 99%*

*The regression includes an indicator of each stratum as control variable. The control regression also by the presence of baseline variables*

In follow-up surveys 2, 3 and the final survey, the respondent is requested if he/she had improved his/her accounting during the previous year of the survey. Chart 2 shows the evolution of this indicator during the last three surveys. We observe that the those in the treatment group - more than those in the control - consider they improved their accounting over the three past surveys, however the difference diminishes over time, in effect this difference was 6 pp (significantly different from zero) at follow-up survey 2, i.e. when the training was in the process of being given but is only 2 pp (and not significantly different from zero) at the final survey. Logically, the training has an effect on the short-term change. However, when we look at the evolution of the more objective criteria during the three surveys, we see there is never any significant difference in terms of existence of written accounting or modern accounting; the only noteworthy but insignificant difference was measured during the second follow-up survey<sup>2</sup>. In the end, the number of accounting categories known is the same for treatment as well as control group businesses over time (column 6, table 5). The program also had no effect on the proportion of business owners who had a modern accounting (computerized or outsourced) system and at the final survey as well as at the third follow-up survey. In the end, one can conclude the knowledge in accounting does not seem to have been significantly modified with the program.

<sup>2</sup> The proportion of business owners with a written accounting as of the second follow-up survey was 59% for treatment businesses versus 55% for control businesses. At the third follow-up survey, this proportion was equal to 58% for treatment and control groups.

Chart 2 : Evolution of the improvement in accounting



% improvement in accounting (last 12 months)

This lack of a long-lasting effect on the accounting is surprising considering that there is a significant margin of maneuver (only 63% of the treatment businesses have a modern accounting) and that the business owners of the treatment group normally benefited from a training related to accounting.

## 2. Organization of production and distribution

Over the 12 months preceding the final survey, businesses in the treatment group did not make any change with regard to the production or distribution. In fact, for all variables related to changes (Tables 6 and 7) in the production and distribution process, there is no significant difference between the treatment and control groups at the time of the final survey.

Training made it possible to make changes in the short term (that were not made subsequently) that can only be observed at the time the training was underway<sup>3</sup> (surveys 2 and 3, charts 3 and 4). Moreover, if one observes the magnitude of the effects detected, even if many are significant at the time of follow-up surveys no. 2 and no. 3, the magnitude remained relatively low.

<sup>3</sup> The training had not yet started at the time of the first follow-up survey. It is therefore logical for there not to be any effect detected at that time.

For example, the proportion of business owners who declared a change during the previous 12 months goes from 17 to 25% for follow-up survey 2 and from 54 to 62% for follow-up survey no. 3 (chart 3). The results in terms of distribution are fairly close

**Table 6: Change in production**

VARIABLES	(1)	(2)	(3)	(4)	(5)
	Change in production	New production tool	New organization of production	Change of suppliers	Improvement of existing product
Effect of the Support for Bus. Program	0.01 (0.035)	0.01 (0.024)	0.02 (0.021)	0.00 (0.017)	-0.01 (0.027)
extreme values at 5%	with	with	With	with	with
extreme values at 1%	with	with	With	with	with
Average in the control group	0.218	0.0870	0.0616	0.0399	0.116
R2	-0.00379	-0.00629	-0.0119	0.00357	-0.0160
Standard deviation in the sample	0.414	0.281	0.257	0.203	0.316
Mean in the sample x	0	0	0	0	0
Number of observations	613	605	605	605	605

The coefficients reported in this table are from a regression of the least ordinary squares.

\* means that the coefficient is significantly different from zero at the trust threshold of 90%

\*\* at the threshold of 95% and

\*\*\* at the threshold of 99%

The regression includes an indicator of each stratum as control variable

The control regression also by the presence of the baseline variables

**Table 7: change in distribution**

VARIABLES	(1)	(2)	(3)	(4)
	Changes In the distribution	Technical Improvements of sale	New organization of distribution	Deployments on New Markets
Effect of the Support for Bus. Program	0.03 (0.036)	0.03 (0.029)	-0.02 (0.023)	-0.00 (0.023)
Extreme values at 5%	with	with	with	with
Extreme values at 1%	with	with	with	with
Average in the control group	0.248	0.136	0.0932	0.0860
R2	0.0221	0.00936	0.00403	0.0277
Stand. deviation In the sample	0.434	0.350	0.275	0.275
Mean in the sample	0	0	0	0
Number of observations	611	609	609	609

The coefficients reported in this table are from a regression of the least ordinary squares.

\* means that the coefficient is significantly different from zero at the trust threshold of 90%

\*\* at the threshold of 95% and

\*\*\* at the threshold of 99%

The control regression also by the presence of the baseline variable

(chart 4)

Chart 3 : Evolution in the change of production

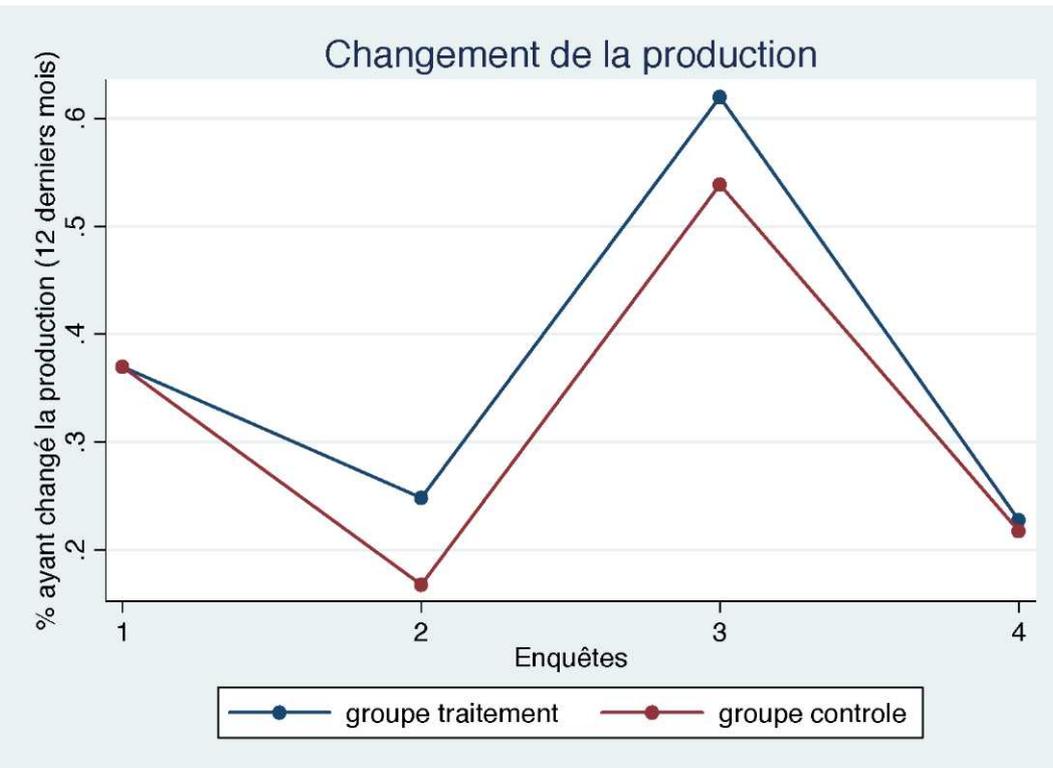
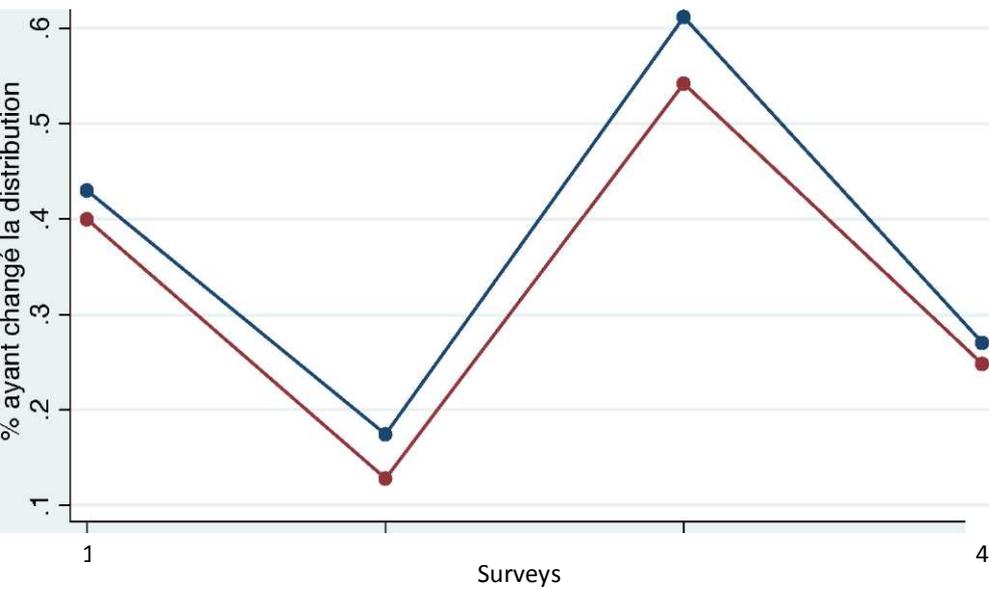


Chart 4: Evolution in the change of the distribution

% having changed production (last 12 months)  
surveys treatment group control group



Change in distribution

treatment group  
% having changed distribution

control group

One year after the end of the training, as at the time of the other surveys, training however did not lead to a change of the productive framework with the acquisition or use of new production or management tools (column 2, table 6). These declarations are consistent with the information on the fixed capital (section II) where significant modifications are also not detected during the course of these surveys.

### 3. Investments and expenses

As for all of the follow-up surveys, at the final survey there is no effect on the investments and expenses of the businesses. Considering the observations with extreme values, here we have decided to only show the results by removing from the sample the observations including 5% of the highest values. The results with the entire sample and without the observations include 1% of the highest values are available in Annex 1 (Table A1 and A2). We also supply results from the quantile regressions (chart A1). The conclusion remains exactly the same in all cases.

For all of the expense categories indicated in Table 8, the coefficient associated with the treatment is systematically negative but insignificant (with relatively significant standard deviations). There is no effect on the investments) (column 1), the expenses for leasing machines (column 2) or yet for raw materials (column 3). These results are consistent with the changes declared by the small business owners during the surveys that show a change in the organization of production with no modification of the production apparatus. The total expenses (calculated by totaling the various categories or estimated overall by the respondent) are also not affected by the program.

**Table 8: Expenses of the business in 2012**

	(1)	(2)	(3)	(4)	(5)	(6)
	Investments	Lease	Inputs	Employment	total calculated	Total Estimated Expenses
<b>VARIABLES</b>						
Effect of the Support for Bus. program	-326.92 (651.085)	-1,454.82 (1,972.919)	-6,278.69 (7,320.854)	-2,642.45 (5,768.939)	-19,634.95 (16,629.239)	-3,953.00 (13,979.228)
extreme values at 5%	without	without	without	without	Without	withou t
extreme values at 1%	without	without	without	without	Without	Withou t
Ave. In control						
Group	2984	20823	39048	45602	148898	131853
R2	-0.0112	0.0352	0.0475	0.0160	0.0356	0.0423
Stand. Deviation in the sample	7850	22831	78794	64162	177462	164525
Mean in the sample	0	14500	0	18000	65750	62720
Number of observations	583	567	554	532	486	566

*The coefficients reported in this table are from a regression of the last ordinary squares.*

*\* means that the coefficient is significantly different from zero at the trust threshold of 90%*

*\*\* at the threshold of 95% and \*\*\* at the threshold of 99%*

*The regression includes an indicator of each stratum as control variable*

*The regression also controls by the presence of the baseline variable*

#### 4. Employment

Table 9 shows the results from the effect of the program on the number of regular employees of the small businesses and the use of temporary staff. The program has no effect on full-time employment. This result is in line with the results of the various follow-up surveys where no impact on full-time employment was detected. The control businesses have on average 2.6 employees (2.5 during the third follow-up survey) and the number of treatment group employees was not significantly different. The training had had an effect on the use of occasional workers during the third follow-up survey (as a recall, the use for occasional workers increased by 14 percentage points with the program) but this effect did not seem to be long-lasting, since the difference between treatment and control groups during the final survey was indistinguishable from zero

**Table 9: employment**

VARIABLES	(1) Number of regular employees	(2) Use of occasional labor
Effect of the Support for Bus. Program	-0.07 (0.341)	0.02 (0.041)
Extreme values at 5%	with	with
Extreme values at 1%	with	with
Average in control group	2.627	0.417
R2	0.0240	0.0128
Stand. Deviation in sample	4.356	0.495
Mean in sample	1	0
Number of observations	609	608

*The coefficients reported in this table are from a regression of the least ordinary squares.*

*\* means that the coefficient is significantly different from zero at the trust threshold of 90% \*\* at the threshold of 95% and \*\*\* at the threshold of 99%*

*The regression includes an indicator of each stratum as control variable*

*The regression also controls by the presence of the baseline variable*

## 5. Debt level of the businesses

As during the other follow-up surveys, the effect of the program on access to formal credit is null at the time of the third follow-up survey. As shown by table 9, 78% of the control group small business owner have at least one active line of credit under way (column 1), 76% have at least had access to a bank line of credit (3), these proportions are identical in the treatment group businesses. These orders of magnitude are very similar to those measured during the third survey. We note however a notable difference in the use of informal credits that is 8 pp higher in the treatment group (column 2). The small businesses also benefit more from advances on working capital on the part of their suppliers (column 4).

**Table 9: access to credit**

VARIABLES	(1) Has at least one active line of credit	(2) Has at least one informal line of credit	(3) Has at least one bank line of credit	(4) advance working capital
Effect of the Support for Bus. program	0.01 (0.034)	0.08** (0.033)	-0.01 (0.036)	0.04* (0.027)
Extreme values at 5%	With	With	with	with
Extreme values at 1%	With	With	with	with
Average in the control group	0.779	0.157	0.758	0.0964
R2	0.0197	0.00787	0.0336	0.00444
Stand. Deviation in the sample	0.409	0.396	0.429	0.328
Mean in the sample	1	0	1	0
Number of observations	613	613	613	613

*The coefficients reported in this table are from a regression of the least ordinary squares*

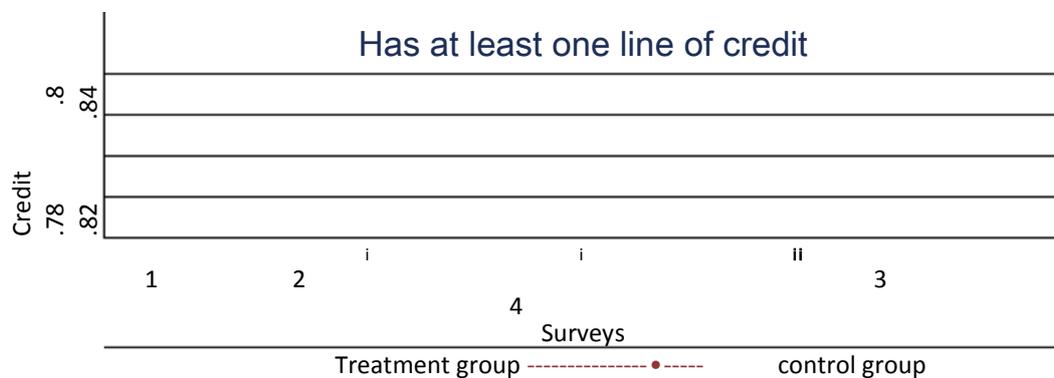
*\* means that the coefficient is significantly different from zero at the trust threshold of 90% \*\* at the threshold of 95% and \*\*\* at the threshold of 99%*

*The regression includes an indicator of each stratum as control variable. The regression also control by the presence of the baseline variable*

Chart 5 shows the evolution in the access to credit during the various survey points for the two groups. It very clearly appears that there is a trend downward, it is similar for the two groups that seem to very slowly get clear of debt taken out before the start of the program.

The results

Chart 5 : Evolution in access to credit



shown in Table 10 show that the program also has no effect on the total outstanding bank (format) debt but on the other hand has an effect on the outstanding informal debt in accordance with the results of the previous table. It should be noted that businesses are above all in debt to the banking sector (column 2, table 10) as observed during the previous surveys, the beneficiary small businesses do not reimburse their credit faster than the control businesses; the businesses had access to a consequent line of credit before the start of the program that they continued to reimburse. The training sessions do not make it possible at this stage for small businesses to clear their debt more quickly. It should be noted that the debt variables are relatively close to those observed during the three previous follow-up surveys, the total outstanding debt is very close and the debt clearance process is as long for trained businesses as for the control businesses. On the other hand, the trained businesses increased their access to informal credit by going from 4,159 to 6,389 Dhs, i.e. an increase of more than 50%, the outstanding informal credit is however very low compared to bank credit.

VARIABLES	(1) total amount of informal credit	(2) Total amount of bank credit	(3) Outstanding business loans	(4) Outstanding supplier debt
Effect of the Support for Bus. Program	2,228.93* (1,233.809)	8,244.28 (9,168.688)	1,179.70 (5,663.240)	855.53 (2,006.279)
Extreme values at 5%	with	with	with	With
Extreme values at 1%	without	without	without	Without
Average in the control group	4159	144853	28938	10367
R2	0.0215	0.184	0.129	0.124
Stand. Deviation in sample	14963	121619	66051	24484
Mean in sample	0	160000	1500	0
Number of observations	583	579	575	578

*The coefficients reported in this table are from a regression of the least ordinary squares. \* means that the coefficient is significantly different from zero at the trust threshold of 90% \*\* at the threshold of 95% and \*\*\* at the threshold of 99%*

*The regression includes an indicator of each stratum as control variable. The regression also controls by the presence of the baseline variableLa*

In summary, training had no effect on the debt clearance of the small businesses, characterized by a high rate and level of debt from before the start of the program.

## **6. Occupation and intensity of the work of business owners**

Table 11 below describes the effect of the program on the type of occupation of the respondents. Small business owners of the treatment group have a higher probability (even though marginally significant) of being involved in the business of origin (Moukawalati business) and of having an occasional salaried position. Very few business owners are invested in another business and this low proportion is similar in the treatment and control groups. As we will see further on, this higher involvement in the small business initially sustained comes from a survival rate that is higher with treatment group small businesses.

**Table 11: Occupation of businessmen**

VARIABLES	(1)	(2)	(3)	(4)	(5)
	Businessman (Moukawalati business)	Businessman (other business)	Employed in the private or public sector	Occasional salaried work (formal or informal)	Other activity
Effect of the Support for Bus. Program	0.04 (0.033)	-0.00 (0.015)	0.01 (0.012)	0.04 (0.027)	-0.01 (0.020)
Average in the control group	0.779	0.0356	0.0142	0.114	0.0641
R2	0.0265	-0.0234	0.00301	0.0410	0.0189
Stand. Deviation in sample	0.401	0.190	0.149	0.340	0.238
Mean in the sample	1	0	0	0	0
No. of observations	617	617	617	617	617

*The coefficients reported in this table are from a regression of the least ordinary squares. \* means that the coefficient is significantly different from zero at the trust threshold of 90%*

*\*\* at the threshold of 95% and \*\*\* at the threshold of 99%*

*The regression includes an indicator of each stratum as control variable*

*The regression also controls by the presence of the baseline variable*

The allocation of time of the business owners can also be affected by the training program if the small business owners reinforce their personal investment in the business operation. Table 12 shows the effect of the program on the number of hours worked per week among the various types of occupation described in the previous table. Overall, the program has an effect on the time worked equal to 4 hours per week from a reinforcement of the salaried work, essentially temporary (column 3 and 4). On the other hand, there is no effect on the intensity of the work allocated to the business sustained by the training (column 1). These results are stable with respect to follow-up survey 3. Even though the intensification of the salaried work is not easy to interpret, it is possible that the training permitted the small business owners of the treatment group to diversify their sources of income.

**Table 12 : hours of work per week**

VARIABLES	(1) Moukawalati business	(2) Other business	(3) Employed in the private or public sector	(4) Occasional salaried work (formal or informal)	(5) Other activity	(6) total
Effect of the Support for Bus. program	1.71 (2.101)	-0.13 (0.726)	0.59** (0.284)	1.82* (0.974)	0.30 (0.559)	3.78* (2.143)
Extreme values at 5%	With	with	With	with	with	with
Extreme values at 1%	With	with	With	with	with	with
Average in the control group	32.27	1.534	0.121	2.516	1.057	36.92
R2	0.0770	-0.0365	0.0232	0.0402	-0.00775	0.0503
Stand deviation in sample	25.79	9.139	4.251	12.02	6.917	25.97
Mean in sample	40	0	0	0	0	44
No. of observations	600	616	617	610	616	591

*The coefficients reported in this table are from a regression of the least ordinary squares.*

*\* means that the coefficient is significantly different from zero at the trust threshold of 90%*

*\*\* at the threshold of 95% and*

*\*\*\* at the threshold of 99%*

*The regression includes an indicator of each stratum as control variable*

## 7. Mindset of business leaders

An important component of the training consisted of coaching sessions aimed at developing the entrepreneurial spirit, motivation and self-confidence. These relatively intangible inputs are susceptible of affecting the operation and development of businesses at the same level as in depth knowledge regarding management. The results of the qualitative work performed in parallel to follow-up survey 3 showed that certain business owners drew important benefits from the coaching sessions.

The mindset of the small business owners is evaluated in several ways. In a first series of questions, we seek to determine how they see themselves in the future, essentially if they see themselves doing the same business or being salaried in the private sector in 10 years and how many employees they think they will have in five years. As during the previous surveys, table 13 shows a very large majority seeing themselves in the entrepreneurial activity in the future (61% of the control group had expanded the business and 20% had kept it at the same point) and only a small proportion sees themselves in a salaried job (10% of the control group people). But the program does not affect these projections, the proportions are identical in the two groups. The result is similar if we look at the number of employees estimated in 5 years (column 3, table 13). On average, the small business owners of the control group anticipated employing 12 persons in five years while they on average only had 2.6 today; this number is similar in the treatment group. The slight impact of the program on the general optimism of the business owners essentially comes from the fact that the level of optimism is already very high without the training. It is however possible to wonder if certain expectations are realistic.

Small business owners also responded at two psycho metric scales for measuring the “self-reliance”, i.e. the feeling that people have of being capable of accomplishing projects that they have and having their life under control. Columns 4 and 5 of Table 13 show that the average scores obtained by the two groups are not significantly different.

Lastly, the access to the program also had no significant effect on the problems that business owners came up against (Table 14)

**Table 13 : projection and self-reliance**

	(1)	(2)	(3)	(4)	(5)
					Average
	In 10 years, anticipates enlarged business activity	In 10 ans, anticipates ceasing business activity	In 5 years, number of employees	Average score at the self-reliance scale I (min= 1 max= 4)	Score at the self-reliance scale II (min =1 max=4)
VARIABLES					
Effect of the Support for Bus. Program	0.02 (0.041)	-0.01 (0.026)	-1.08 (1.763)	-0.01 (0.040)	0.01 (0.029)
Extreme values at 5%	with	with	With	with	with
Extreme values at 1%	with	with	With	with	with
Average in control group	0.608	0.104	12.22	2.832	3.118
R2	0.0635	0.0299	0.00692	-0.0207	0.00292
Stand. deviation in sample	0.489	0.303	19.42	0.459	0.341
Mean in samples	1	0	6	2.800	3.125
No. of observations	587	587	545	594	595

*The coefficients reported in this table are from a regression of the least ordinary squares.*

*\* means that the coefficient is significantly different from zero at the trust threshold of 90%*

*\*\* at the threshold of 95% and*

*\*\*\* at the threshold of 99%*

*The regression includes an indicator of each stratum as control variable*

contrary to what had been observed in the third follow-up survey. In fact, small business owners of the treatment group had a probability of 14 pp lower of having problems due to the demand and 16% lower of having problems with respect to the competition during the third follow-up survey. These effects do not however seemed long-lasting over time. At the time of the final survey, small business owners of the treated group had however as many problems as those of the control group regarding these topics .

Table 14: Difficulties

	1	2	3	4
Variables	Difficulties to produce more	Financial difficulties	Problems due to demand	Problems due to competition
Effect of the Support for business program	-0.02 (0.092)	-0.08 (0.097)	-0.02 (0.099)	-0.02 (0.098)
Average in the control group	1.022	2.080	1.292	1.529
R2	0.0150	0.0220	-0.00697	0.0389
Standard deviation in the sample	1.120	1.169	1.166	1.201
Mean in sample	1	3	1	2
Number of observations	605	606	607	606

*The coefficients reported in this table are from a regression of the least ordinary squares.*

*\* means that the coefficient is significantly different from zero at the trust threshold of 90%*

*\*\* at the threshold of 95% and*

*\*\*\* at the threshold of 99%*

*The regression includes an indicator of each stratum as control variable*

Overall, the program had no long-lasting effect on the optimism and the mindset of the small businessman as measured in the questionnaire. Small businessmen – in both groups – for the most part see themselves in business, seem to anticipate a growth in their business and fel the same level of difficulties.

## **8. Conclusion on the effect of the program on performance factors**

In conclusion, one year after the end of the training, the impact of the "support for small business" program on factors of performance seems very limited. The few efforts intensified in the short term on the organization of production, distribution or accounting (compared to previous surveys) did not translate into structural changes. Small businesses of the treatment group do not have a better accounting, do not invest more, have no more employees and have not cleared their debt more than businesses of the control group. We could have anticipated that the training would affect the mindset, optimism or the problems encountered by business owners specifically due to the coaching sessions. Again, the effect of the program on the indicators supposed to measure psychological variables is never different from zero. The only notable changes are an intensification of the occasional salaried work of trained business people and more significant use of informal credit.

## II IMPACT ON THE ECONOMIC PERFORMANCE OF THE SMALL BUSINESSES

### I. Survival of small businesses

The positive trend during the previous follow-up surveys seems to be confirmed at the end line survey. As shown in table 15, the program significantly affects the definitive shutdown rate (column 3) an effect on the rate of survival of small businesses is positive (even if not significant, column 1). It should be noted that 73% of small businesses in the control group were still in operation whereas this rate climbs to 77% in the treatment group. 17% of small businesses of the control group are definitively closed down. For the program this proportion goes down to 12%, which corresponds to an effect of 30% approximately.

Chart 6 shows the evolution in the difference of the survival rate between the treatment and control groups during the last three follow-up surveys. While the deviation between treatment and control group businesses was similar to the second follow-up survey, we then see that the gap increases between the two groups.

It is therefore possible to conclude that the support for small business program had a significant effect on the survival, which also constitutes its most important impact.

**Table 15: Survival des small businesses**

Explanatory Variables	Dependent Variable					
	(1) Business as normal	(2) Business with a new activity	(3) Business shut down definitively	(4) Business recovering from shutdown	(5) Business not initiated	(6) Business sold
Effect of Support for Bus. Program	0.04 (0.036)	-0.01 (0.010)	-0.05* (0.029)	0.00 (0.021)	0.00 (0.013)	0.01 (0.009)
Extreme values at 5%	yes	yes	yes	yes	yes	yes
Extreme values at 1%	yes	yes	yes	yes	yes	yes
Average in control group	0.733	0.0214	0.174	0.0676	0.0178	0.00712
Variance explained (R2 adjusted)	0.000370	0.000130	0.00356	-0.00304	0.0554	-0.00440
Stan. deviation in sample	0.434	0.120	0.356	0.258	0.149	0.0897
Mean in sample	1	0	0	0	0	0
Sample	617	617	617	617	617	617

*The coefficients reported in this table are from a regression of the least ordinary squares.*

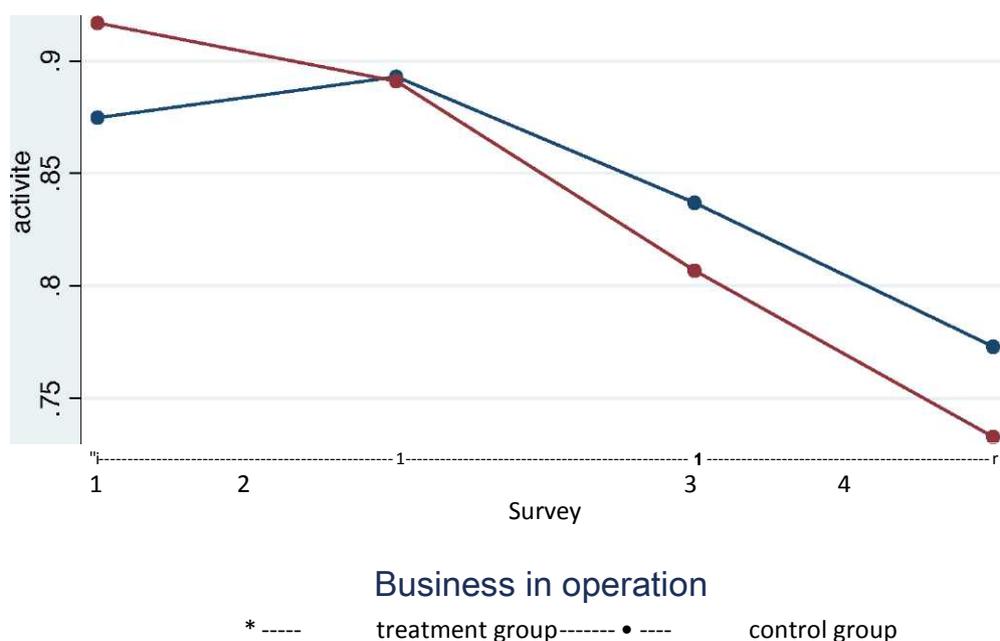
*\* means that the coefficient is significantly different from zero at the trust threshold of 90%*

*\*\* at the threshold of 95% and*

*\*\*\* at the threshold of 99%*

*The regression includes an indicator of each stratum as control variable*

Chart 6: evolution in the rate of survival of small businesses



## 2. Total sales and profits

As during the previous follow-up surveys, the total sales in the profits of the small businesses constitutes focal items in the analysis of the effectiveness of the training program. In a first phase, we analyze the evaluation that small business owners have of the changes that occurred on the total sales and the profits during the last 12 months. In a second phase, we look at the amounts of the total sales and the profits.

First of all, the changes are evaluated by asking small business owners if their profits and total sales improved or stayed stable during the last 12 months<sup>4</sup> (Table 16). One year after having benefited from the program, the business owners of the treatment and control groups report the same evaluation on the change in their total sales and profits during the previous 12 months of the survey. 25% of business owners of the control group report that their total sales improved and 14% that they stayed stable. These proportions are not

<sup>4</sup> Contrary to other follow-up surveys, the category "deterioration" of total sales cannot be used due to the problem of effect of potential composition (a specific answer cannot be attributed for businesses that ceased their operation).

significantly different in the group that received the training. This result is different from the previous follow-up survey where the program, according to the business owners, seems to allow their businesses to stabilize. This effect was therefore essentially played in the short term and does not seem to be long-lasting.

**Table 16 : evaluation of business since January 2012**

VARIABLES	(1) Improvement in profit	(2) stable profit	(3) Improvement in sales	(4) Stable sales
Effect of the Support for Bus. Program	-0.02 (0.036)	0.02 (0.031)	-0.01 (0.038)	0.02 (0.028)
Extreme values at 5%	with	with	with	with
Extreme values at 1%	with	with	with	with
Average in control group	0.247	0.142	0.281	0.117
R2	0.0146	-0.0154	-0.00333	0.000449
Stan. deviation in sample	0.423	0.359	0.444	0.337
Mean in sample	0	0	0	0
No. of observations	602	602	599	599

*The coefficients reported in this table are from a regression of the least ordinary squares.*

*\* means that the coefficient is significantly different from zero at the trust threshold of 90%*

*\*\* at the threshold of 95% and*

*\*\*\* at the threshold of 99%*

*The regression includes an indicator of each stratum as control variable*

The levels of total sale and profits are evaluated by two different measurements (table 17): the amount of the month prior to the survey relates to the year (by multiplying by 12) and the amount during the last 12 months.

The difference in the total sales between treatment and control groups is positive but very broadly insignificant due to the size of the corresponding standard deviations, and regardless of the definition chosen. It is significant to note that the total sales is characterized by a very high level of heterogeneity, which was also observed during all the previous surveys. This reflects the significant diversity of the small businesses assisted by the program and not an error of measurement. Here we are choosing only to show the results by removing from the sample the observations including 5% of the highest values. (The results with the entire sample and without the observations including 1% of the highest values are available in Annex 1, Table A3 and A4). The conclusion is the same but the results are less precise. The graphic comparison of the densities of the treatment and control groups (chart A2, annex 1) also show that there is no significant difference.

On the other hand, the results of the quantile regressions (charts A4, annex 1) show that there is no significant effect on any quantile of the distribution.

Overall, it can be concluded that the average effect of the program on total sales is not different from zero, as for the previous follow-up surveys. If we look at the estimates that do not include the observations whose values are part of the highest 5% during the last three surveys, we observe that the coefficients go in the right direction and gradually but that the results still remain insignificant.

As far as the profits are concerned, the coefficients are positive but insignificant, in line with the results of the previous surveys. Again the graphic representation of the distributions of the treatment and control groups shows that the program has no effect on the profits (chart A3, Annex 1). The quantile regressions also confirm these results (chart A5, annex 1).

**Table 17: Profit and Sales in 2012**

VARIABLES	(1) Annual added value	(2) Profit of last month reported to an annual amount	(3) Profit on the year	(4) Sales of the last month reported to an annual amount	(5) Sales in the year
Effect of the Support for Bus. Program	8,031.69 (12,152.183)	7,338.19 (6,255.730)	3,389.70 (4,858.422)	22,697.86 (25,348.491)	11,764.91 (19,693.691)
Extreme values at 5%	without	without	without	without	without
Extreme values at 1%	without	without	without	without	without
Average in control group	21899	40806	38517	208539	180977
R2	0.0172	0.0269	0.0260	0.0787	0.0818
Stand. deviation in sample	139408	72972	56709	305731	243496
Mean in sample	12167	0	20803	84000	93913
No. of observations	566	573	558	560	553

*The coefficients reported in this table are from a regression of the least ordinary squares.*

*\* means that the coefficient is significantly different from zero at the trust threshold of 90%*

*\*\* at the threshold of 95% and*

*\*\*\* at the threshold of 99%*

*The regression includes an indicator of each stratum as control variable*

*The regression also controls by the presence of the baseline variable*

In summary, the Support for Business program had no effect on the sales and profits, in spite of a larger proportion of treatment businesses that have remained in operation.

### 3. Overall income of business owners.

Table 18 describes the effect of the program on the total annual revenue of the small business owner. The revenue can come from different sources, the business that was supported by the program, other independent businesses, salaried employment or temporary work or other sources (such as transfers of the family for example). The business owners get most of their revenue from the activities supported by the program. It is therefore not surprising to observe that the effect on the revenue was not significantly different from zero considering that the program had no impact on the total sales and profits. The results shown here are without observations that have extreme values (at 5% and 1%). When they are included, the results change significantly due to some observations that have very high values of income (see table A6, annex 1). When we estimate the quantile regressions on the entire population (chart A6, Annex 1) we do not observe any effect for most of the quantiles and a marginally significant increase in the quantiles on the order of 60 and 70, i.e. for individuals at the top of the distribution. This effect does not however come from an increase in revenue of the business supported,. Lastly, the intensification of the temporary work presented in the previous section does not translate here into an increase in revenue.

### 4. Conclusion on the effect of the program on the economic performance of small businesses

In conclusion, the most important impact of the “support for small business” program was the survival of small businesses with a difference on the order of 4 – 5 percentage points one year after the end of the training program. The program therefore

**Table 18: Income since January 2012 from**

VARIABLES	(1) Moukawalati activity	(2) Other activity	(3) Employment private or public sector	(4) Occasional work	(5) Other source of income	(6) Total Income
Effect of the Support for Business program	-114.85 (2,363.060)	5.09 (452.661)	-754.48 (900.664)	264.63 (231.564)	1,639.09* (918.425)	3,449.71 (3,478.599)
Extreme values at 5%	Without	without	without	without	without	without
Extreme values at 1%	Without	without	without	without	without	without
Average in control group	23899	1306	2879	474.0	2989	43322
R2	0.0593	0.0342	-0.0216	0.0263	-0.00177	0.0264
Stan. deviation in sample	28610	5700	10234	2995	10948	39492
Mean in sample	13600	0	0	0	0	36000
No. of observations	574	578	584	580	573	553

*The coefficients reported in this table are from a regression of the least ordinary squares.*

*\* means that the coefficient is significantly different from zero at the trust threshold of 90%*

*\*\* at the threshold of 95% and*

*\*\*\* at the threshold of 99%*

*The regression includes an indicator of each stratum as control variable*

makes it possible to reduce the definitive closures by 30%. The data do not permit us to characterize this population of small businesses that survived thanks to the program.

However, the effects on the total sales and the profits were close to zero (and they include therefore the businesses closed down by giving them the value of 0), it is probable that businesses which kept in operation due to the program were perhaps not the best-performing.

Lastly, the program logically had no effect on the revenue gained from the businesses that benefited from the training program. We however find an effect on the overall revenue in the upper part of the distribution.

### **III IMPACT ON THE BUSINESS OWNER AND HIS HOUSEHOLD**

In a last section, we analyze the effect of the program on the living conditions of the business owners by focusing on certain measurements of well-being. Considering that the economic activity – and the revenue generated – was generally not affected by the training program, the impact on the wealth of the household has little chance of being affected. However, certain other measurements of well-being such as stress or the capacity to project into the future can be modified by the program.

#### **I. Wealth of the household**

The material wealth of the household is evaluated by two measurements: the level of consumption and the ownership of durable goods. Columns (1) through (4) of Table 19 show all of the differences between treatment and control groups according to item of consumption; column (5) gives the total aggregate consumption. All expenses are expressed by year. Food expenses, regular or more occasional expenses are not affected by the training. Logically, the total level of consumption during the last 12 months is not affected either.

An index of ownership of goods is also calculated from all of the durable goods owned by the household (column 6). A higher index indicates a higher quantity of goods owned. Here again, the program has no effect on this dimension of wealth of the households. The results on consumption and ownership of durable goods are in line with those of the business and revenue generated.

**Table 19: annual consumption and ownership of goods**

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Food expenses	Regular expenses	Planned spot expenses	Occasional expenses	Total Consumption expenses	Index of asset ownership
Effect of the Support for Bus. Program	969.71 (1,190.732)	686.62 (1,611.547)	-899.71 (659.444)	371.24 (407.283)	333.63 (3,194.904)	0.08 (0.238)
Extreme values at 5%	without	without	without	without	without	with
Extreme values at 1%	without	without	without	without	without	with
Average in control group	23655	26530	9893	1647	48280	0.0408
R2	0.0843	0.169	0.0742	0.0114	-0.00500	0.00458
Stan. deviation in sample	11158	16039	6380	3720	33752	2.770
Man in sample	21600	23040	7800	300	46850	0.169
No. of observations	475	419	445	514	587	616

*The coefficients reported in this table are from a regression of the least ordinary squares.*

*\* means that the coefficient is significantly different from zero at the trust threshold of 90%*

*\*\* at the threshold of 95% and*

*\*\*\* at the threshold of 99%*

*The regression includes an indicator of each stratum as control variable*

## 2. Indicators of personal well-being

Lastly, well-being is measured by a series of scales and questions indicated in table 20. Respondents were supposed to classify their satisfaction on a scale with regard to their current situation (column 1) and to build position themselves with respect to a series of negative or positive feelings (Col. 5 and Col. 6) and evaluate the change in their personal situation and that of the household of the respondent during the last 12 months (col. 2 and col. 3).

The program does not seem to have any effect on these dimensions of well-being

Table 20: Well-being of the household

Variables	1	2	3	4	5	6
	Score of satisfaction (min=1 max=10)	Improvement in personal situation	Improvement in situation of household	Existence of a project	Score negative feelings (min=1 max=4)	Score positive feelings (min=1 max=4)
Effect of the Support for business program	-0.13 (0.172)	0.05 (0.044)	0.05 (0.042)	-0.02 (0.045)	0.03 (0.045)	-0.09 (0.054)
Average in the control group	6.023	0.508	0.462	0.471	0.471	2.696
R2	-0.0159	0.0354	0.0280	0.00687	0.00687	0.00530
Standard deviation in the sample	1.981	0.500	0.500	0.499	0.499	0.633
Mean in sample	6	1	0	0	0	3
Number of observations	574	570	606	539	570	571

*The coefficients reported in this table are from a regression of the least ordinary squares.*

*\* means that the coefficient is significantly different from zero at the trust threshold of 90%*

*\*\* at the threshold of 95% and*

*\*\*\* at the threshold of 99%*

*The regression includes an indicator of each stratum as control variable*

### **3. Conclusion on the impact of the program on the wealth of the household and the well-being**

The program had no effect on the wealth of the household measured in terms of overall consumption or ownership of durable goods. This result was expected, considering that the program had not affected the revenue gained from the small business. We also do not note any effect on certain aspects of well-being.

## Conclusion

The implementation of the “support for small business” program was inserted in the context where the training offering was relatively limited. It therefore constituted a real novelty for the small businesses.

First of all, the analysis demonstrates that the “support for small business” program was effectively implemented with the beneficiary small businesses. These businesses indeed received different training modules offered by the program. We show that this training constitutes a unique offering that was not substituted in the control group with other existing training sessions. Overall, the program made it possible to increase the proportion of trained small businesses from 11.5 to 74.5% and the volume of training from 11 to 45 hours, corresponding to a net effect of approximately 34 hours (a number however that is probably underestimated). The implementation of the program therefore responds to a demand that had not been taken into account by other agencies previously.

At the time of the second and third follow-up surveys (i.e., immediately after and one half year after the launch of the technical support), we had observed several positive changes: modifications in terms of production, distribution and marketing, a decrease in certain difficulties observed by the business owners, in increase in survival of the small businesses (even if still insignificant at this stage), but no effect on the profits, the total sales of these businesses or their level of expenses.

At one year after the end of the training sessions, it had to be admitted that most of the previous positive changes did not continue. The few efforts identified in the short term did not translate into structural changes. The businesses of the treatment group did not have a better accounting, did not invest more, had no more employees or did not clear their debts faster than businesses of the control group. At the personnel level, the training also did not seem to affect the mindset and the degree of optimism of the beneficiaries and they did not seem less affected by problems than business owners of the control group. We still observe that the business owner of the treatment group diversify their source of income by intensifying their occasional employed work (by a few hours per week).

One of the few impacts that are notable of the program is the rate of survival that completely reversed compared to the beginning of the program. The program made it possible to diminish definitive business closures by 30%.

However, in spite of this higher survival rate in the treatment group, we do not observe any significant difference on the economic performance indicators such as total sales, profits, expenses in investments. In the end, the situation of the beneficiaries of the program and of their household is also not affected by the training program.

This lack of impact on the managerial and economic performance indicators is perhaps linked to the nature of the training program that is not perhaps always adapted to the needs of the business owners. In fact, one year after the end of the program, a significant proportion of trained people (40%) declare themselves dissatisfied with the training program.

Another possible explanation might be the relatively limited intensity of the training sessions (34 hours more for the treatment group). Support programs of similar intensity implemented in other countries also had no effect on the economic performance even if they affect the management practices and managerial performance.

# Annex 1 Additional tables and charts

## I. ATTRITION

Table A1: Baseline characteristic of the final sample (after attrition)

VARIABLES		Treatment	Stan. deviation	Average treatment	Average control	No. of observations
<i>% attrition</i>						
(0)	Attrition	-0.00296	(0.0308)	0.278	0.281	858
<i>Variables baseline</i>						
(1)	Age	-0.00695	(0.485)	34.38	34.39	617
(2)	Gender	-0.0262	(0.0301)	1.152	1.178	617
(3)	Agriculture	0.0126	(0.0113)	0.0268	0.0142	617
(4)	Livestock	0.00504	(0.0220)	0.0833	0.0783	617
(5)	Building	0.0309	(0.0291)	0.170	0.139	617
(6)	Services	-0.0190	(0.0405)	0.497	0.516	617
(7)	Crafts	-0.0434	(0.0292)	0.131	0.174	617
(8)	Commerce	0.0174	(0.0171)	0.0565	0.0391	617
(9)	Other	-0.00343	(0.0154)	0.0357	0.0391	617
(10)	Total sales	96.64	(4.647)	28086	27989	562
(11)	Accounting	-0.0644**	(0.0315)	0.778	0.843	614
(12)	Number of employees	0.112	(0.408)	5.101	4.989	617
(13)	Total expenses	-23.442	(52.287)	422344	445786	515
(14)	Household size	0.0806	(0.168)	4.249	4.168	614
(15)	Household income other than business	52.14	(549.0)	4250	4198	614
(16)	Active lines of credit	0.0595	(0.0768)	1.327	1.268	613
(17)	Credit due	-0.185	(0.177)	0.175	0.361	611
(18)	Financial problems	0.114	(0.0711)	2.425	2.312	610
(19)	Amount of initial investment	-12.146	(22.374)	222478	234623	616

## II. EXPENSES OF THE BUSINESS IN 2012

**Table A2: expenses of the business in 2012, total sample**

VARIABLES	(1) investment	(2) Lease	(3) Inputs	(4) Employment	(5) total calculated	(6) Total Estimated expenses
Effect of the Support for Bu. Program	3,834.19 (4,231.674)	-5,792.20 (4,466.755)	22,733.00 (24,008.749)	464.92 (9,948.511)	757.52 (35,605.182)	-5,917.43 (68,823.527)
extreme values at 5%	With	with	with	with	with	with
extreme values at 1%	With	with	with	with	with	with
Average in control group	9650	33042	85283	67036	224628	268099
R2	-0.0266	0.0750	0.0676	0.0475	0.0905	0.0700
Stand. deviation in sample	55471	57064	329911	122375	426383	996685
Mean in sample	0	16180	500	20000	74200	72350
No. of observations	611	596	583	560	511	588

*The coefficients reported in this table are from a regression of the least ordinary squares.*

*\* means that the coefficient is significantly different from zero at the trust threshold of 90%\*\* at the threshold of 95% and \*\*\* at the threshold of 99% The regression includes an indicator of each stratum as control variable The regression also controls by the presence of the baseline variable*

**Table A3: business expenses in 2012, sample not including top 1%**

VARIABLES	(1) Investment	(2) Lease	(3) inputs	(4) employment	(5) total calculated	(6) Total estimated expenses
Effect of the Support for Bus. Program	2,802.13 (2,445.961)	-1,995.03 (2,997.472)	22,075.11 (17,501.562)	-8,461.01 (7,390.452)	10,775.76 (27,054.920)	30,197.59 (24,708.760)
Extreme values at 5%	With	with	with	with	with	with
Extreme values at 1%	Without	without	without	without	without	without
Average in control group	6278	27807	62000	63519	184542	172804
R2	0.00424	0.0549	0.0433	0.100	0.0664	0.0978
Stan. deviation in sample	28245	37401	203026	92314	297991	303499
Mean in sample	0	15840	350	19800	72200	71600
No. of observations	605	591	578	555	506	583

*The coefficients reported in this table are from a regression of the least ordinary squares.*

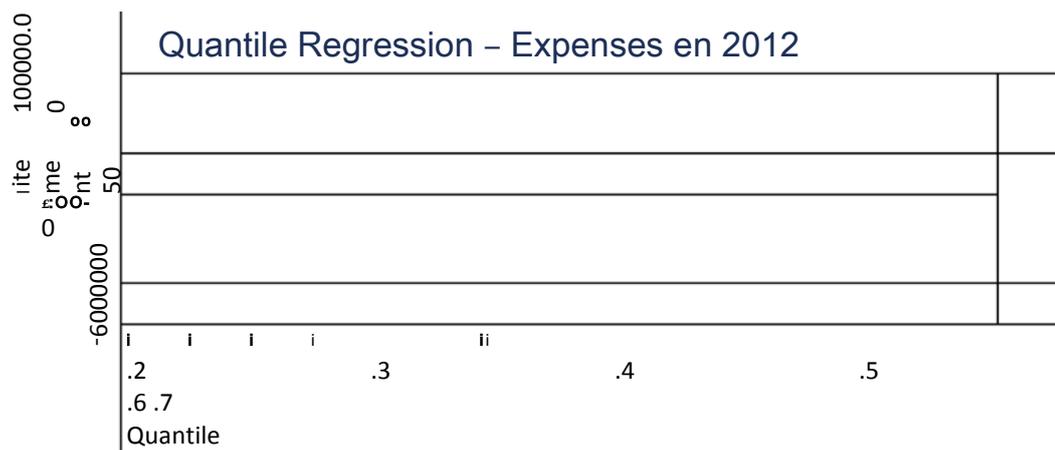
*\* means that the coefficient is significantly different from zero at the trust threshold of 90%*

*\*\* at the threshold of 95% and*

*\*\*\* at the threshold of 99% The regression includes an indicator of each stratum as control variable*

*The regression also controls by the presence of the baseline variable*

Chart A1 : Quantile regression, expenses in 2012



Traitement = treatment

## III. SALES AND PROFITS OF THE BUSINESS IN 2012

**Table A4 Profits and Total Sales in 2012, total sample**

(1)

<u>VARIABLES</u>	Annual added value (2)	Profit from the last month referred to an annual amount (3)	Profit for the year (4)	Sales of the last month referred to an annual amount (5) Sales for the year	
Effect of the Support for Bus. Program	-14,795.42 (27,610.176)	27,238.39 (26,328.185)	5,907.37 (13,669.182)	36,288.77 (110,777.517)	-41,141.15 (75,238.505)
Extreme values at 5%	with	with	with	with	with
Extreme values at 1%	with	with	with	with	with
Average in control					
Group	85230	77343	65441	390173	353618
R2	0.0361	-0.0142	0.0196	0.0372	0.165
Stan. deviation in sample	388349	491482	245387	2.024e+06	1.120e+06
Mean in sample	15200	10200	21467	106200	104348
No. of observations	595	597	586	586	582

*The coefficients reported in this table are from a regression of the least ordinary squares.*

*\* means that the coefficient is significantly different from zero at the trust threshold of 90%*

*\*\* at the threshold of 95% and*

*\*\*\* at the threshold of 99%*

*The regression includes an indicator of each stratum as control variable*

*The regression also controls by the presence of the baseline variable*

**Table A5: Profit and Sales in 2012, not including the 1%**

	(1)	(2)	(3)	(4)	(5)
	Annual added value	Profit of the last month related to annual amount	Year's profit	Sales of the last month related to an annual amount	Year's Sales
Effect of the Support for Bus. Program	9,852.80 (15,781.983)	7,658.39 (12,855.633)	-1,220.78 (8,376.558)	62,161.52 (43,099.062)	41,698.31 (33,935.390)
Extreme values at 5%	with	with	with	with	With
Extreme values at 1%	without	without	without	without	Without
Average in control group	49611	67126	58829	270061	231827
R2	0.0499	0.0432	0.0945	0.0825	0.0775
Stan. deviation in sample	195562	153770	100970	545408	423642
Mean in sample	14712	9600	21333	96000	103680
No. of observations	590	594	581	581	577

*The coefficients reported in this table are from a regression of the least ordinary squares.*

*\* means that the coefficient is significantly different from zero at the trust threshold of 90%*

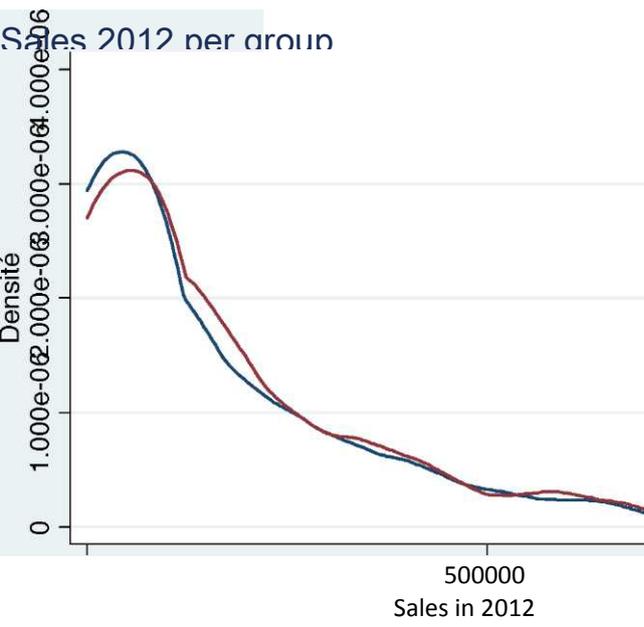
*\*\* at the threshold of 95% and*

*\*\*\* at the threshold of 99%*

*The regression includes an indicator of each stratum as control variable*

*The regression also controls by the presence of the baseline variable*

Chart A2: Density of sales, by group. Sample without top 5%



1000000

Treatment group

Sample total except top 5%

Control group

Chart A3: Profit density per group. Sample without top 5%

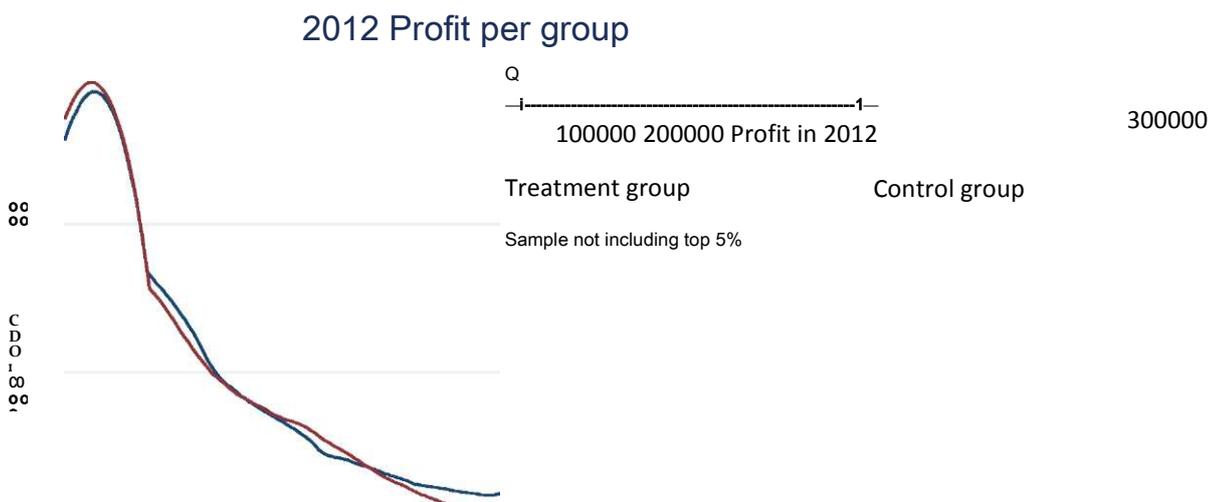


Chart A4 : Quantile Regression, sales in 2012

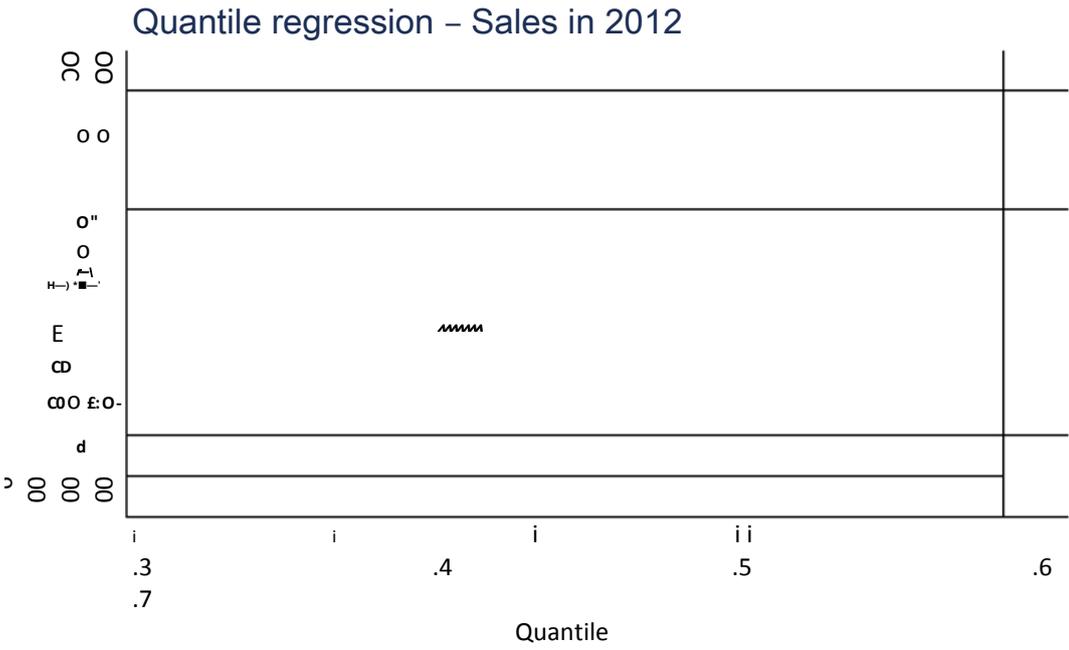
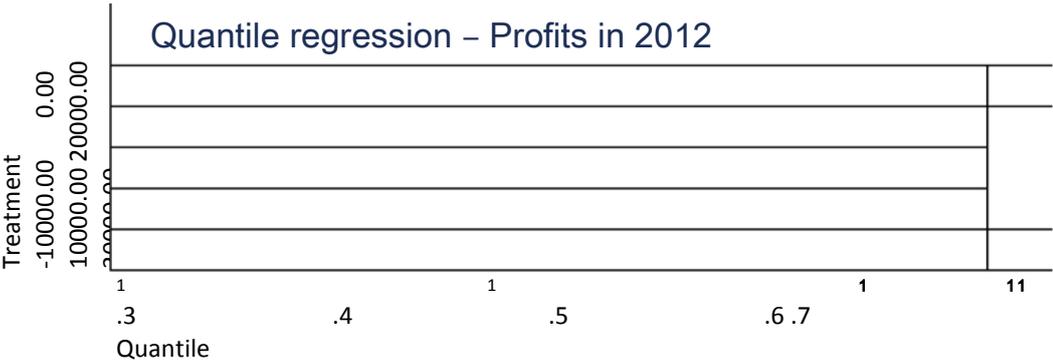


Chart A5 : Quantile Regression, profits in 2012



#### IV. REVENUE OF BUSINESS OWNERS IN 2012

**Table A6: revenue from January 2012 from, total sample**

<u>VARIABLES</u>	(1)	(2)	(3)	(4)	(5)	(6)
	Moukawalati activity	Other activity	Employment private/public sector	Occasional work	Other source of income	Total income
Effect of Support for Bus. Program	26,402.49*	5,194.77	-527.41	2,184.76*	663.75	33,648.33**
	(15,470.485)	(3,922.332)	(1,900.610)	(1,282.893)	(2,315.147)	(16,543.761)
Extreme values at 5%	with	with	with	with	with	with
Extreme values at 1%	with	with	with	with	with	with
Average in control group	27235	5451	6754	2164	8614	51160
R2	0.00165	-0.00775	-0.0179	-0.00915	0.0108	0.00336
Stan. deviation in sample	168340	49472	21856	15086	28388	180694
Mean in sample	16500	0	0	0	0	36500
No. of observations	597	606	611	610	600	582

*The coefficients reported in this table are from a regression of the least ordinary squares.*

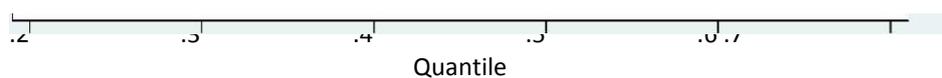
*\* means that the coefficient is significantly different from zero at the trust threshold of 90%*

*\*\* at the threshold of 95% and*

*\*\*\* at the threshold of 99%*

*The regression includes an indicator of each stratum as control variable*

**Chart A6: Quantile Regression income in 2012**



Régression de quantile - revenu total 2012



## Annex 2: Presentation of the final survey

The questionnaire of the final survey, 39 pages in length, resulted in conversations lasting from 40 minutes to 1 hour. It is made up of 20 sections. For the final survey, the questionnaire was entered digitally (touch-screen tablets).

- Section ID: This section lists the contact information of the business owner and his business. These parts are filled out beforehand in the tables before the survey to facilitate entry of the data. It is updated in the contact information do not make it possible to reach or property identity the business owner.
- Section AZ: This section concerns the professional situation of the business owner.
- Section A: This section concerns the operation of the business and of its business sector.
- Section B: This section is used to measure the profit and total sales of the business.
- Section C: This section concerns the production costs and investment. It specifically involves the lease of equipment, and the inventory management.
- Section D: This section makes it possible tally the formal and informal credit of the business as well as their amount.
- Section E: This section already present in the previous questionnaires, makes it possible to capture the changes qualitatively (management, production, services) implemented in the business by business owners.
- Section F: This section makes it possible to survey the number of clients of the business and to understand their nature and their geographic distribution.
- Section G: This section seeks to discern the other professional activities of the business owner and its sources of income.
- Section H: This section aims to capture the efforts of the business owner to tie non-commercial relations with other business owners.
- Section I: It is question in this section to capture the optimism and the business mindset of the business owners.
- Section J: This section raises questions related to the preference for the present and the attitude with regard to the risk of the business owner.
- Section K: This section measures the effectiveness of the treatment and involves the types and volume of training from which the business owners benefitted.
- Section L: This section recompiles the demographic and socio-economic characteristics of all the members of the household of the respondent.

- Section M: This section asks questions related to the lodging of the survey.
- Section N: This section lists the assets of the household of the person interviewed.
- Section O: This section seeks to determine the consumption expenses of the household of the person interviewed. Current, weekly monthly or one-time consumption expense, unexpected or occasional expenses.
- Section P: This section recompiles the information on the personal finances of the person interviewed.
- Section Q: This section seeks to determine the personal satisfaction (mindset) of the business owner.
- Section R: This part makes it possible to check the quality of the survey (duration, specificities of the conversation, etc.), and the interviewer and supervisor to leave explanations on the specificities of its activity if necessary for our understanding during editing.

The questionnaire was prepared by researchers and IPA advisors, and validated by the partners (OFPPT and CCIS). We tested it on a sample of small businesses selected at random, in order to ensure that no incoherence or imprecision inherent in the questionnaire hindered the work of the interviewers. This also made it possible to verify that the average duration of a survey did not exceed 45 minutes.

## Annex 3: Training of interviewers

All of the persons involved in the survey, interviewers, supervisors and back checkers, took a three-week training session given by the IPA advisors in Rabat.

The person selected for the training were for the most part former interviewers of IPA who had proven to be satisfactory during the previous surveys. For experienced as well as new interviewers, the resumes were consulted and those profiles that were interesting were invited for an individual interview and were tested on filling out a part of the questionnaire. Other qualities required were: a very good mastery of French, a high level of education, a good control of computer equipment, experience in quantitative surveys, a certain ease in verbal communication, a respectful and polite manner, a good ability to listen and conviction. The ability to speak Berber was a plus. After a month of interviews, 40 people were invited to the training session.

The training was made up of sessions, exercises and evaluations presented in the following order:

- Introduction to the program and evaluation methodology, status of the work, the tasks of the interviewers, practical organization and timeline of the survey;
- Contact agreement with the person being interviewed, conduct to be adhered to with regard to people being interviewed;
- Instruction on filling out paper questionnaires and practical exercises (based on training manuals), checking on each section of the questionnaire being filled out through different role playing exercises presenting different scenarios;
- Familiarization with the computerized tablet and exercises filling out the questionnaires digitally;
- Final exams and selection.

In order to permit a better assimilation of the information, a number of practical exercises were done. Their individually corrected mistakes made it possible to go over each interviewer's specific mistakes.

At the end of three weeks of training, the interviewers were evaluated. The understanding of the questionnaire was tested by role-play situations – in darija and in French. Of the 40 people who attended the training, 30 were selected. Among those who obtain the best results in the tests, six people evidenced special qualities of leadership who were selected as the supervisors of interviewer teams. One interviewer was selected to be a back-checker in the office.

At the end of the training of the interviewers, supervisors received additional training modules in order to become trained on editing the questionnaires, checking the quality of the data and sending data to the server on a daily basis. They also reviewed the schedule and protocol of the survey process on the ground.

## **Annex 4: Quality control of the data**

### **Supervision of the interviewers**

Quality control during the survey was performed at two levels: by supervisors with interviewers and by IPA advisors.

For the duration of the survey, supervisors of each team were present for a part of the conversations of each member of their team. This supervision - particularly important in the very first days – made it possible to quickly and individually go over the aspects that might still pose a problem after training. More generally, their presence and the daily control of the work done provided an individual handling of the interviewers.

At the end of each survey day and once the questionnaires had been filled out by the interviewer, the supervisors checked all of the questionnaires on the tablets. Thus, any forgetfulness, inconsistency or errors could be quickly picked up and reported in the comments of Section R for each questionnaire (if the interviewer had information on the missing or erroneous data) so the IPA advisors could see the errors and correct them during the weekly cleaning of the data. If a mistake was observed, the person surveyed was contacted again during that week by the back-checker order to correct it.

In addition to the ongoing presence of the supervisor in each team, the IPA advisors visited the teams during the entire duration [of the survey] on the ground. Each interviewer conducted more than one survey in the presence of an IPA advisor. This presence made it possible to pick up any mistakes, which were corrected and re-explained to the interviewer, in the presence of the supervisor, so that more careful attention could be paid to the points that were the source of errors.

When accompanying the teams, the IPA advisors also reread the available questionnaires to check the quality control performed by the supervisors. Errors not picked up by the supervisor could thus be discussed with the supervisor and with the interviewer in order to improve their vigilance.

This quality control work and explanation took place during the entire ground work. Each team constantly received visits by IPA advisors and errors picked up were systematically transmitted to other teams.

### **Editing and cleaning of the questionnaires**

The questionnaires conducted by teams were reread by supervisors the same day as the survey in order to pick up mistakes. They were then sent to the server at the Rabat office. Every day, the server was synchronized to upload the data. The updated database went through a cleaning procedure by the IPA advisors once a week.

This second quality check made it possible to pick up inconsistent results, missing information not justified (no filter) or surprising results. When mistakes could not be corrected directly, the back-tracker was responsible for calling the respondent in order to have him specify the points that raised problems.

All of the questionnaires were reread and when necessary, the person surveyed was contacted again to check a precise point during a very brief call (under 5 minutes).

### **Particularity of the questionnaire**

In order to minimize the risk of error on crucial variables such as total sales and profits, the questionnaire contained two measurements of total sales and profit as well as a min max range for each. Having two measurements of these variables made it possible to pick up an inconsistent figure (for example total sales since the month of January 2012 that was smaller than the sales of the last month). The range made it possible to gather a minimum and a maximum for these variables.

### **Backcheck**

As during all surveys, IPA set up a backcheck system. This consisted of resurveying 10% of the people in order to make sure of the reliability of the results. The back check of the first follow-up survey was done by phone with 86 small business owners. The questionnaires - shorter than those of the ground and in two different versions - only went over the most important questions. The backcheck questionnaires are in the Annex.

Although the backcheck made it possible to correct a few errors, it had two other major objectives. The first was to simply and effectively check the work of the interviewers, to make sure there had actually been a meeting with the persons interviewed, and to check that the survey had been properly conducted.

The second objective was to compare the averages obtained during the survey with those of the backcheck. Conducted with 10% of the [previous] surveys, and with a much shorter questionnaire, the work of the checker does not make it possible to check the data by observation but gives the opportunity to check that the magnitudes of the variables are of the same order.

## **Motivation for the interviewers**

Financial incentive for the interviewers, linked to the backcheck and to the review and cleaning by the correspondents in the IPA premises was set up in order to motivate interviewers to pay careful attention when filling out their questionnaires. The calculation of premiums in effect was based on the number of mistakes picked up during the daily checks and a scale established in advance and presented to the interviewers during training. This work according to penalties made up a fourth of the total salary regarding the quality of work provided, thereby creating a strong motivation to do a high quality job.

## **Cleaning of the data**

Once the data were synchronized on the server, we then had them go through another certain number of logic tests, in order to check their consistency. The questionnaire in fact made it possible to cut up the information, making it possible to detect mistakes. For example, it made it possible to edit all questionnaires for which the profit was higher than the total sales. Errors were picked up weekly and the checker called the persons interviewed to correct inconsistencies. Lastly, the IPA advisors corrected mistakes as they were found in the database and continued with the logic tests.

## **Difficulties linked to the Computer Assisted Interviewing (CAI)**

The setup of the electronic survey for this last phase of the project presented certain complications. Internet connections were poor in certain regions of Morocco which slowed down the daily collection of data and therefore the picking up of mistakes in the cleaning. Moreover, we experienced difficulties linked to the server used. A part of the questionnaires, or at times even all of the questionnaires, never reached the server during the synchronization of the tablets. This led us to set up a data recovery phase. Two interviewers recovered almost all the data lost by calling persons interviewed to redo the questionnaire on the phone. Then two IPA advisors entered the data in the office.