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MEDA Maroc's 100 Hours to Success Impact Evaluation – Baseline Study

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Section 1: Introduction

MEDA Maroc's 100 Hours to Success program provides beneficiaries with 100 hours of training in basic life skills, entrepreneurship skills and financial management skills, with the aim of improving young peoples' chances to either enter wage employment or start their own business. The program helps to fill gaps between skills gained in school and the demands of the labor market. By providing youth with this mix of skills training, MEDA Maroc believes that their 100 Hours to Success program provides youth with a stronger foundation on which to make the transition from school to work or to establish their own businesses, in a country where youth unemployment rates are fairly high and where the effort to secure one's first job can take up to two years (Boudarbat and Ajbilou 2007).

Working in cooperation with the Taqeem Fund for Evaluation in Youth Employment, MEDA Maroc has sought to undertake a comprehensive impact evaluation of its 100 Hours to Success program in Morocco, one supported financially by 3ie. The goal of this study is to assess the net gains that accrue to beneficiaries of MEDA Maroc's 100 Hours to Success Program and whether participants have demonstrably improved outcomes in terms of employment and self-employment. As such, the study will seek to quantify differences between participants and a comparable group of non-participants in regard to employment and entrepreneurship activity following the program, including not only rates of activity but duration of job search (and/or business start-up), wages and income, and various aspects of job quality. In this regard, the research team is also interested in analyzing the potential impact of the program on employability, including issues of self-efficacy, confidence, perception of abilities in regard to various soft skills, and attainment of more tangible skills related to language and computer usage. Finally, our analysis is concerned with potential improvements in savings behavior and the ability of beneficiaries to manage finances, whether at the personal or business level. In analyzing each of the above issues, we are mindful of potential differential outcomes in regard to age, gender, educational attainment, familial income and urban/rural residence.

The goals of the impact evaluation are not limited to quantifying the net impact of program participation on the economic lives of participants, but also aim to secure evidence on how MEDA Maroc can improve the delivery of its program in order to better serve Moroccan youth. Moreover, given the scope of the employment challenge among youth both in Morocco and the Arab world more widely, the evaluation hopes to develop evidence that can inform a wider range of programs targeting youth, particularly those that seek to provide youth with life skills training and entrepreneurship training as an enabling bridge in the transition from school to work.

This baseline report provides an overview of the methodological approach used in evaluating the impact of the 100 Hours to Success program and initial assessment of the population of youth surveyed prior to the launch of the program. In reviewing collected baseline data, this report also serves to assess the comparability of the study's treatment group and control group as they stand at baseline (before enrollment in the program). In this context, we seek also to identify challenges that have risen in the context of putting the impact evaluation

study in place, the risks they pose to a successful completion of the evaluation, and potential means by which these challenges can be resolved.

Towards these ends, the rest of the study is organized as follows. Section 2 provides a detailed overview of the program's curriculum and how it intends to improve the above stated outcomes for young participants. Section 3 provides an introductory literature review taking into account the evidence currently available on skills training programs and which evidence gaps the study will contribute to filling. The literature review provides an overview of rigorous evaluations of active labor market programs and how MEDA Maroc's evaluation will conform and complement with this body of work. Section 4 describes the methodological approach and structure of the study, as well as the means by which individuals were sorted into treatment and control groups. It also addresses issues raised with the implementation of the study's methodological approach. Section 5 provides a detailed analysis of the initial results from the baseline survey as described above, as well as results analyzing the significance of differences between treatment and control groups. Section 6 explores issues of external validation using findings from the World Bank's 2009 Moroccan Youth Survey. Section 7 revisits our initial assumptions related to statistical power and provides an assessment of the study's ability to determine statistically significant differences in outcomes between treatment and control groups, given more recent changes in the identification of members of the treatment and control group. Section 8 addresses in more detail the ongoing challenges related to program enrollment and its potential impact on the study's results. Finally, Section 9 provides a final summary and a review of issues that will affect the quality of the study and issues that must be addressed when delivering the follow-up survey and final analysis. The study also includes an appendix that details statistics related to the comparability of findings between the treatment and control groups.

Section 2: An Overview of 100 Hours to Success

The 100 Hours to Success program is composed of 100 hours of training in three core areas: entrepreneurship, financial education, and life skills. In addition, enrollees are provided with support in opening a mandatory savings account upon enrollment. To enable this savings component that MEDA Maroc perceives as one of the keys to financial success of the youth, MEDA Maroc has partnered with La Poste (Al Barid Bank), and has negotiated the minimum savings deposit amount down to 5 Moroccan Dirhams (0.60 USD) for 100 Hours to Success participants.¹ Local extension officers also attempt to match enrollees with internship opportunities in local businesses. While extension officers attempt to secure internships for as many participants as possible, such positions are generally open only to about 5-10% of participants. The limitation is imposed by local businesses, many of which are resistant to offering such positions. In Morocco, MEDA Maroc has covered the mandatory social insurance fees for interns, normally paid by the local businesses in order to encourage greater take up of interns.²

The entrepreneurship training module of 100 Hours to Success is based on training material from Street Kids International and Save the Children, adapted to the Moroccan context by MEDA Maroc. Over 32 hours, participants develop a start-up idea, undertake market

¹ Normally, a minimum deposit of 100 MAD (12 USD) is required to open a savings account.

² The local insurance requirements amount to 500 MAD (58 USD) per intern.

research, and develop a business plan. The business plan includes an in-depth evaluation of start-up costs, how to conduct a profitability study and how to develop a pricing strategy. The intent is not only to provide with tangible experience in developing a new business, but helping them to identify and build personal skills more broadly through an environment of experiential learning.

The financial training module is based on material developed by Microfinance Opportunities, adapted for the context of Moroccan youth by MEDA Maroc. Over 36 hours, participants are given tools for managing their money, with a focus on debt management, budget management, savings, financial negotiation, and banking services.

Finally, the life skills module, based on the material developed by the International Youth Foundation and adapted by MEDA Maroc, provides youth with 32 hours of training. This training includes three sections. The first focuses on engaging youth in understanding how to manage their emotions and seeks to build self-confidence. The second provides youth with skills to deal with confrontation and conflict management. The third hones in on building successful habits and skills for the workplace.

While there are many programs both within the Arab region and internationally that seek to provide such types of training to youth to support the transition from school to work, MEDA Maroc feels that it is the mix of training covering life skills, financial skills and entrepreneurship skills – coupled with tangible experience provided through internships and instilment of healthy savings habits – that makes their program unique. Moreover, MEDA Maroc feels that this mix of training is key to providing youth with a foundation on which to successfully transition from school to work.

Section 3: Literature Review

The 100 Hours to Success program is designed to complement the Moroccan formal education system by providing additional training in job-relevant skills to beneficiaries who are either still enrolled in school or who have recently graduated. The skills that it aims to provide to students and recent graduates are aligned with those that are widely employed by civil society actors and governments as part of active labor market programs (ALMPs). Unfortunately, few examples of such training programs exist which, through experimental research methodologies, have proven to provide positive employment benefits for youth. There has been a great deal of research on ALMPs using non-experimental designs including a useful overview by Card, Kluve, and Weber (2010) and Betcherman, Olivas, and Dar (2004). These studies do not identify any single measure that had a significant effect across the studies surveyed, though they do provide relative rankings of interventions by effectiveness. One clear result from the literature is that programs specifically targeting an age group within the population, such as those under 25, are found to be significantly less efficient than those targeting the population as a whole.

Evaluation evidence available on skills training is mainly based on programs in developed countries. While growing over the last couple of years, evaluations coming from developing countries remain limited. Some of the most revealing evidence comes from a randomized trial in the Dominican Republic, which found that job training had a positive, albeit un-sustained, effect on wages (Card et al. 2011). A more recent randomized trial using a larger sample in Colombia found stronger impacts (Attanasio, Kugler, and Meghir 2009). The program, called

“Jóvenes en Acción,” involved three months of classroom training, undertaken by private agencies, followed by three months of vocational training in a private company. The probability of employment rose and wages were, on average, higher for program participants, especially for women. However, we do not know whether this positive effect is due to the vocational training, the internship, or the combination of the two. Training may improve the productivity of young people, but internships may reveal useful information about the quality of a match. The study of MEDA Maroc’s 100 Hours to Success program and its intention to match some participants to internships should reveal more evidence.

The largest gap of evidence by far is reported in the region of Middle East and North Africa. The Youth Employment Inventory (Betcherman et al. 2007) – a global repository of evidence on program outcomes of youth employment interventions – reveals only six impact evaluations on the topic within the region. Two of these studies are of particular importance for skills training. First, Groh et al. (2012) present evidence from Jordan on the effectiveness of wage subsidies and soft skills training in helping female community college graduate find employment. The study shows that wage subsidies are effective in increasing employment in the short-term, but that a soft skills training program has no average impact on labor outcomes. An evaluation of an entrepreneurship program (Premand et al. 2012) for Tunisian students in their final year of university, which taught skills in business planning and leadership, found that there was a very small effect on the self-employment rate while the wage employment rate remained unchanged. Nevertheless, as in many other examples of skills training programs, the intervention did succeed in boosting knowledge, optimism and other behavioral skills.

MEDA Maroc’s impact evaluation hopes to complement the above-mentioned studies in providing evidence on if and how skills training will boost employment and self-employment rates but will also offer evidence in three other areas that remain unexplored in the literature:

1. Demand for training programs: Evidence shows that demand for training among youth is low, as seen by the large dropout rate in some studies (see Duflo, Greenstone, and Hanna 2012, Haan and Serriere 2002, Cho et al. 2013, Heckman et al. 2000). In the context a low take up rate of MEDA Maroc’s study (see below), it would be an important contribution to the literature to understand more on why youth are dropping out of training programs and the associated positive or negative outcomes.
2. Gender: The gender dimension will provide equally important evidence. A growing body of research (see Blattman, Fiala, and Martinez 2012, and Cho et al. 2013) shows that training impacts on income and skills are greater for young men than women, although parts of this evidence apply to vocational training programs where manual trades are more culturally suited to men. In MEDA Maroc’s study, where over half of participants are young woman, particular attention will be paid to the determinants (if any) of their success such as higher propensities to save and invest money or constraints social and labor markets such as family obligations or labor market discriminations, especially as seen in the Moroccan context.
3. Quality of training: Evidence is scant on how the quality of training, including to what extent the content of the training and the quality of the trainers, has an effect on outcomes. This is especially true in training programs in developing countries where quality varies considerably. Non-experimental evidence (Haan and Serriere 2002) tells us that short training programs similar to 100 Hours to Success (programs that focus

on hard technical skills like accounting, management, and marketing) will increase employment. A successful experimental example could help prove the case.

Section 4: Study Methodology and Set-up Issues

The impact evaluation of the 100 Hours to Success Program has been designed as a randomized control trial (RCT). The random sorting of program applicants into a treatment (participants) and control (non-participants) allows the evaluation team to create a counterfactual to program participation in which members of the control group should be comparable to the treatment group both in observable and non-observable characteristics. According to the initial design of the study, applicants to the program were to have been randomly sorted into a treatment group (accepted into the program) and a control group (not accepted into the program).

The study was implemented in the Oriental region of Morocco in the urban and rural areas around the city of Oujda. Oujda was selected because it serves as a principal area of operations for MEDA Maroc, where the 100 Hours to Success program has been established since 2009, where MEDA Maroc has an established network of operational partners, and where there is significant observed demand for the program.³ Running the evaluation in this one district of Morocco does pose external validity concerns for the study as a whole, an issue that is addressed in section 6 of this report.

For the 2012-2013 programmatic year, MEDA Maroc initially had the capacity to provide 100 Hours to Success to 600 individuals in the wider Oujda area, which dictated the choice of sorting 600 individuals into the treatment group. To ensure statistical power, given this fairly small population, the research team decided to expand its surveyed control sample to cover at least 1200 other individuals. Working with its partner organizations, including local youth centers and vocational training centers, MEDA Maroc put out a call for applications. Applicants were asked to visit local youth centers in order to take a survey aimed at understanding the economic needs of local youth during the 3rd and 4th weeks of October 2012, during which 1817 surveys were collected.⁴ These 1817 individuals were then randomly sorted into a treatment population of 600 treatment and 1217 control individuals.⁵

³ The Oriental region has been for the most part sidelined in the development schemes of the country until very recently. The region has the 4th highest unemployment rates in the country. The youth population of the region exhibits even higher unemployment rates: 41% in urban and 21% in rural areas (HCP, 2011).

⁴ The surveys were administered electronically on tablets using Open Data Kit survey software. This mobile data collection technique saved the team valuable time and resources and greatly reduced the number of errors usually caused by manual data entry.

⁵ This random sorting was done using Excel's random number generator, which provides a randomly generated number between 0 and 1 for each observation. The treatment group was selected from the bottom third of these randomly generated numbers for each participating youth center (to ensure that the program provided enough participants for each youth center. Due to a conflict between the official application list and our list of surveyed applicants, two names have been kept (temporarily) out of the current identification list of treatment and control, so analysis on treatment and control groups below refers to 1815 individuals. The status of these two excluded individuals is being reviewed in a final clarification of the entire dataset against administrative lists of applicants and enrolled participants.

After sorting and efforts to inform individuals that they had been selected for participation, MEDA Maroc's local team faced difficulties in putting the 600 randomly sorted youth into classes for training. Several issues were identified as causes for the slow uptake. The major stumbling block was the difficulty in aligning the schedules (work, school, etc.) of youth from the control group with the training schedule. As not all youth were able to be integrated at once (in November) into training, scheduling problems were aggravated with time. MEDA Maroc also had a problem contacting youth to arrange training due to incorrect contact information for the youth. With inaccurate phone records, reaching out to these youth (from the control group) became a real issue. A portion of the phone numbers had been changed, making it impossible to contact many youth to arrange for training. In addition, a small number of potential trainees obtained internships (external to MEDA Maroc), which are technically part of the program, prior to enrolling in training. In all, MEDA Maroc was able to enroll 363 in the first phase of training by February 2013.

The limited numbers enrolled in training imposed a serious challenge on the study, as the number of enrollees would not allow the statistical power to analyze differences between participants and non-participants at any level of detail deeper than on the aggregate level. However, MEDA Maroc was able to secure funding to run a second wave of training in March 2013 for the remaining individuals in the treatment group. Rather than filling empty positions in this second wave of training with individuals not included in the survey, we chose to do a second randomization from the original baseline participants, drawing an additional 300 individuals previously sorted into the control group into the treatment group. This would bring the treatment and control groups into alignment at about 900 individuals each.

This approach opened the sorting to the risk of bias: even though the control group was never told that they would not be able to participate, we understood it to be possible that in the four month gap between application and this second wave of acceptance into the program, individuals might have either figured out that they had not been selected initially (which might skew their views towards the program) or moved on to other options. Importantly, this second factor may skew outcomes further because those most able to rely on themselves to secure employment or to take other steps toward building their future may have found other options, leaving the individuals from the second wave that go through the MEDA Maroc training fundamentally different from the first tranche. This will be tested in the analysis below and in the final analysis. However, overall, we felt at the time that the risk of such bias was outweighed by the need for strengthened numbers within the treatment group.

Following the second wave of sorting, MEDA Maroc continued to face problems with enrollment. To date, the number of individuals who have either enrolled or completed the initial training of the program reaches only 505 individuals. This includes 361 individuals from the first wave of sorting and 128 individuals from the second wave of sorting for youth with complete registration records; 15 youth with registration records that have not yet been classified as wave 1 or wave 2 but their final status will be confirmed according to administrative records. The relatively low rate of enrollment has been due to logistical concerns related to difficulty arranging training programs that align with youth's schedules, problems in tracking individuals given provided contact information, and a small number of individuals who have been contacted but had decided not to participate. These issues and their potential impact on the final results of the study are addressed in more detail in section 7 below.

Section 5: Analysis of Baseline Survey Data

In section 5, we provide a general analysis of the collected baseline data, focusing on results from key demographic sub-groups deemed particularly relevant to our study and on major indicators that will be assessed for changes over the longer term study. A more comprehensive summary of statistics pulled from baseline survey data is provided in Appendix 1, while Appendix 2 provides an assessment, including statistical significance, of differences between the treatment and control groups as identified in section 3.

Gender

Overall, the surveyed population of 1815 is 53% female, which is slightly higher than we expected when designing the impact evaluation methodology. When comparing the first random sorting, the treatment group was 54.3% female and the control group was 52.3% female. The gender ratio balance between the control and treatment groups improved slightly when the second random sorting took place: the treatment group as a whole (both waves of training) was 53.6% female while the remaining control group was 52.4% female. The difference between the control and treatment groups was slightly more than one percentage point, and it should be noted that the difference is not statistically significant for either sorting (see Appendix 2).

Table 1: Surveyed Population by Gender

	Control		Treatment 1		Control (2)		Treatment (2)	
Gender	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Male	580	47.7	273	45.7	429	47.6	424	46.4
Female	637	52.3	325	54.3	473	52.4	489	53.6
Total	1217	100.0	598	100.0	902	100.0	913	100.0

Age Breakdown

In terms of age, we categorized youth into four age categories: 15-18 (presumably still in secondary school or facing challenges related to early dropout), 19-21 (of university age or seeking entry into the labor force without a tertiary degree), 22-24 (post university age), and 25-30 (older youth).⁶ Herein, there is a fair similarity between the first control group and the first treatment group, except that the first treatment group is marginally younger than the control. After the second random sorting is included, the difference between the control and the treatment closes to within a percentage point for each age category.

⁶ It should be noted that 25 is the age limit for the program, so the age upper bracket primarily includes youth aged 25.

Table 2: Surveyed Population by Age Category

Age Category	Control (1)		Treatment (1)		Control (2)		Treatment (2)	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
15-18	380	31.2	198	33.1	276	30.6	302	31.6
18-21	496	40.8	230	38.5	366	40.6	360	39.7
22-24	270	22.2	136	22.7	204	22.6	202	22.7
25-30	71	5.8	34	5.7	56	6.2	49	6.0

There are significant differences in age structure among survey respondents by gender, as noted in Table 3. By and large, male program applicants are younger than female program applicants. Among males, 37.6% are under the age of 19, while only 26.7% of women are. On the other hand, men between the ages of 19 and 21 make up 35.4% of male applicants while women between the ages of 19 and 21 make up 44.1% of female applicants. While there are gender differences among older youth, these are fairly small. This age differential by gender is likely related to higher educational attainment rates among young women in Oujda (and Morocco generally), while young men are more likely to leave school and seek out employment (and training support for their employment search) at an earlier age.

Table 3: Age Categories by Gender

Age	Male			Female		
	<i>Freq.</i>	<i>Percent</i>	<i>Cum.</i>	<i>Freq.</i>	<i>Percent</i>	<i>Cum.</i>
15-18	321	37.6	37.6	257	26.7	26.7
19-21	302	35.4	73.0	425	44.1	70.8
22-24	181	21.2	94.2	226	23.5	94.3
25-30	50	5.9	100.0	55	5.7	100.0
Total	854	100.0		963	100.0	

Urban-Rural Residential Status

In regard to area of residence, the bulk of survey respondents live in urban areas. In fact, three-quarters live within urban boundaries. While we were expecting this urban bias before starting the survey, it should be noted that the share of the surveyed population living in rural areas is slightly higher than was originally expected, when we estimated rural residents to make up about 17% of the surveyed population. This slight increase should bolster our capacity to analyze differences in outcomes in key areas for the rural population at the close of the study.

Table 4: Surveyed Population by Urban-Rural Residence

	Urban		Rural	
	<i>n</i>	%	<i>n</i>	%
Control 1	909	74.7	308	25.3
Treatment 1	452	75.6	146	24.4
Control 2	682	74.4	220	25.6
Treatment 2	679	74.7	234	25.3

The breakdown of the urban/rural population by gender does present some striking differences. Among men, only about 19.6% are from rural areas while among women, this figure rises to 29.7%. This is in contrast to expectations, which would suggest that young women have limited mobility – due to social restrictions – that might limit their access to programs like that of MEDA Maroc. At the same time, rural men might have access to more traditional, physically demanding jobs and as such might be less inclined to seek out opportunities requiring the training provided by MEDA Maroc. It might also be that MEDA Maroc’s services in rural areas through partners that more specifically target women. These issues need to be explored in further detail over the course of the study.

Household Income Status

In assessing employment and other relevant outcomes, the study will be concerned with how youth from various economic backgrounds fare. In particular, we will seek to demonstrate whether the program has the same (positive) impact on disadvantaged youth as it does on youth from more advantaged economic backgrounds. In this regard, we use two differing measures to assess household income and wealth: 1) a question asking respondents to select from a range of average monthly income categories and 2) a consumption index.

The use of income categories was chosen over asking individuals for specific estimates of household income out of concerns that, as youth, they would not have a full and accurate understanding of all earnings within the household, as well as concerns that they would tend to exaggerate or otherwise misreport income. In this regard, presenting individuals with categories was seen as a way in which to provide a more accurate breakdown of incomes within the population, at least at the aggregate level. The notable weakness is that this approach will not allow us to monitor incremental changes in household income over the span of the program and, as such, to assess the program’s impact on household income. At the same time, given that we are more directly interested in changes in the individual respondent’s income, this is not a paramount concern.

In the absence of nationally used income categories, we deferred to the breakdown that has been used by MEDA Maroc in its monitoring system. This includes monthly household income in the following six categories: 0-1500 Moroccan dirhams (MAD), 1500-3500 MAD, 3500-5000 MAD, 5000-7000 MAD, 7000-10,000 MAD, and 10,000 MAD and above. In the past, MEDA Marco has found that these categories are largely representative of the individuals that have enrolled in and participated in its programs.

Overall, we find that the majority of survey participants associate their households with the bottom two income categories. Of the 1817 individuals for whom we collected income data, 25.8% and 40% are from the poorest and second poorest income categories respectively. An additional 25.7% are from the two intermediate income categories, while only 4.5% were from the highest two income categories.

Breaking down our surveyed population into treatment and control groups, we find that our treatment groups are slightly biased towards poorer populations. In the second wave of sorting, the share of those in the highest two income brackets dropped to 7% compared with 10% in the control group. While the difference between these two groups is not statistically significant (see Appendix 2, future assessments will have to be mindful about this potential

bias, as household income is sure to have some bearing on employability, employment outcomes and the potential to start up one's own business.

Table 5: Surveyed Population by Household Income Category (%)

	0-1500	1500-3500	3500-5000	5000-7000	7000-10K	10K+
Total	25.8	40.0	16.9	8.8	4.3	4.2
Control (1)	25.2	39.3	17.5	9.0	4.4	4.5
Treatment (1)	26.9	41.5	15.7	8.4	4.0	3.5
Control (2)	25.7	38.6	16.6	9.1	4.9	5.1
Treatment (2)	25.8	41.4	17.2	8.5	3.7	3.3

In contrast to what might be expected, survey respondents living in urban areas are more likely to be from the poorest households (77.5% in the bottom two income categories vs. 61.9% in rural areas). Generally, one would think that urban residents have more access to employment opportunities and higher wages than those living in rural areas. This differential is likely related to the self-selection of those applying to the program. The poorest youth living in rural areas, particularly men, are more likely to see out in physical agricultural work rather than investing in efforts to improve their employability in skills that have more bearing, arguably, in an urban environment. A similar argument can be made for women, who are represented more heavily (although marginally) among the lower income categories.

Table 6: Surveyed Population by Household Income Category, Gender and Urban Residence (%)

	0-1500	1500-3500	3500-5000	5000-7000	7000-10K	10K+
Urban	34.8	42.7	11.9	5.1	3.1	2.4
Rural	22.8	39.1	18.6	10.1	4.7	4.8
Male	23.8	38.5	18.9	8.8	4.9	5.2
Female	27.6	41.3	15.2	8.8	3.7	3.3

In addition to our question about household income categories, we collected significant data on household assets and consumption in an effort to build the foundations for calculating income based on a consumption index. Towards this end, our included questions mirror those included by the World Bank in the 2009 survey of Moroccan youth.

We have begun a process of replicating the consumption index used by the World Bank using their survey data using a principle component analysis (PCA), the results from which will be applied to the calculation of household income deciles. Completion of this effort will require confirmation from the World Bank team on the initial calculations. Once this is completed, we should be able to plot our surveyed population within established income categories that are nationally representative.

At the same time, given that our population is likely to be bunched towards the household income mean within the national sample, we will independently calculate a decile scale for household income using only data from our survey. This should give us a wider band within which to measure differences in household income over time within our population and, as

such, identify any potential impact that the 100 Hours to Success program may have on household income. Results will be included in the final study.

Educational Enrollment and Overall Attainment

Our data show that MEDA Maroc attracts individuals with a wide range of educational attainment, suggesting not only a range of needs in regard to skills development but also the potential for strikingly different outcomes from program participation for individuals at different levels of educational attainment. That said, a large share of the applicants are either enrolled in university or seem to be on university track, which suggests that the applicant pool for MEDA Maroc's 100 Hours to Success differs considerably from the overall youth population in Morocco (see section on external validity below).

On the whole, our survey population reflects a range of attainment in regard to education. Of the total, 86% are currently enrolled in some level of school. Of the 1561 individuals who are currently enrolled, 3.9% are enrolled in *college* (lower secondary), 14.3% are enrolled in *lycée* (upper secondary), 34.9% are enrolled in professional degree programs, and 47% are enrolled in university and above. Outcomes are similar when our treatment and control groups are compared. Non-enrollment rates and rates of enrollment in professional degree programs are slightly higher among the initial control group. This difference largely disappears with the second sorting for non-enrollment, but increases slightly for professional degree enrollment. On the flip side, enrollment rates in university and *lycée* (presumably university tracked students) are slightly higher within the treatment groups. Differences are not statistically significant (see Appendix 2).

Table 7: Surveyed Population by Educational Enrollment

	Not enrolled		College		Lycée		Professional		University	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Total	255	14.0	61	3.4	223	12.3	544	30.0	732	40.3
Control 1	183	15.0	40	3.3	142	11.7	371	30.5	481	39.5
Treatment 1	72	12.0	21	3.5	81	13.5	173	28.9	251	42.0
Control 2	128	14.2	33	3.7	104	11.5	286	31.7	351	38.9
Treatment 2	127	13.9	28	3.1	119	13.0	258	28.3	381	41.7

Of those who are not enrolled currently (254), only 10.3% had finished a university degree or higher and 12.6% had finished a professional degree program. Nearly 5.9% had finished their *lycée* degree, while a much higher 30.7% had finished only the college (intermediate) degree. Notably, nearly 40.7% of those no longer enrolled had dropped out of school before finishing their college degree. This suggests that there is a fairly large contingent of individuals seeking to benefit from MEDA Maroc's programs who are poised to not continue their educations through university and, in having only completed their college degrees, face considerable marginalization when securing employment, particularly in the formal sector.

As with the potential bias in educational enrollment identified in the comparison of treatment and control groups above, there seems to be a consistent differentiation in attainment rates between the treatment and control groups. While the differences are not statistically significant, there is a distinct pattern wherein the control group seems to have more individuals from lower educational strata than the treatment group. It is possible that this

bias was introduced through the randomized sorting process that randomized at the level of the partnering youth center (to ensure that enough individuals were selected from each center to allow for formation of at least one full class). The team must revisit this selection process to ensure that any potential bias is more definitively identified and controlled for in the final analysis.

Table 8: Educational Attainment (% of Surveyed Population Having Completed Each Degree)

	Primary	College	Lycée	Professional degree	University and above
<i>All Participants</i>					
Total	18.6	29.5	43.1	4.9	3.9
Control 1	19.2	29.7	42.1	4.9	4.1
Treatment 1	17.6	28.9	45.2	5.0	3.3
Control 2	20.1	28.4	42.2	4.7	4.7
Treatment 2	17.2	30.5	44.1	5.2	3.1
<i>Non-Enrolled Youth</i>					
Total	40.7	30.7	5.9	12.6	10.3
Control 1	41.4	30.4	5.5	14.4	9.9
Treatment 1	38.9	34.7	6.9	8.3	11.1
Control 2	42.5	25.2	4.7	15.7	11.8
Treatment 2	38.9	35.7	7.1	9.5	7.7

Enrollment rates differ by gender. While the numbers of those enrolled at the *college* and *lycée* levels are similar when comparing young women and men, the rate of enrollment in professional degree programs is higher among men, at 36% compared to 24% among women. At the same time, the enrollment rate at the university and higher level is higher among women, at 44% compared to 37%. Non-enrollment rates are also higher among women: 17% compared with 10%. This is reflective not only of the age differential noted above, but the differentiation in how men and women choose to finish their educations, with men more likely to take shorter professional degrees that provide them with tangible vocational skills. This differentiated skills mix might be reflected in longer term outcomes in terms of employment.

Among those no longer enrolled in school, it should be noted that levels of final attainment are fairly comparable by gender except for the number who left school after only primary attainment, which accounts for nearly 45% of women no longer in school and only 33% of men, suggesting that age is not the driving factor behind school attainment. As would be expected, school dropouts are highly correlated to household income.

Of our total sample, only 13.8% had received any training outside of the formal school system. Of these 251 individuals, 103 had received language training, 105 had received computer training, 7 had received training in business administration, 7 had received entrepreneurship training, and 49 had received some other kind of training. Given a small overall population, the shares receiving external training are fairly comparable across treatment and control groups, and observed differences are not statistically significant.

Self-Perception of Skills and Self-Efficacy

Beyond educational enrollment and attainment, our survey collects a range of data related to more tangible skills among youth, including language ability and computer skills, and a range of self-perceptions related to softer employability skills such as confidence in ability to negotiate, perform during an interview, show leadership, and work with a team. These perceptions at baseline are assessed below.

Languages

In a local setting, Moroccans largely communicate in the local dialect of Arabic (*darija*). Their capacity either in modern standard Arabic (*fusha*) or French (widely spoken but unofficial language of business and the elite) should reflect both their educational attainment and, less tangibly, their social networks. As such, their abilities in either language (or in a third language) have a bearing on their employability, particularly in the formal sector. While it is not expected that participation in the 100 Hours to Success program would have any bearing on capacities in language, an individual's capacities in this regard (at baseline) might have influence on either their own benefit from the program or, at the very least, will have an impact on later employability that should be captured.

In analyzing our baseline data, we find that the majority of respondents consider themselves to have a good fluency of Arabic (57%) or excellent fluency (21%), while relatively few consider themselves to be fluent (either at a good or excellent level) in French (23%). The level of knowledge or fluency in a third language is relatively low, with 34% having no knowledge of a third language and only 16% having a good or excellent level of fluency therein.

Table 9: Language Capacity among Surveyed Population

	Arabic		French		Third Language	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
No fluency	..	..	..	..	625	34.4
Basic fluency	29	1.6	550	30.3	468	25.8
Intermediate fluency	380	20.9	853	47.0	432	23.8
Good fluency	1033	56.9	345	19.0	204	11.2
Excellent fluency	374	20.6	68	3.7	88	4.8

In a comparison between the treatment and control groups, we find that language capabilities at baseline are highly comparable. Where there are marginal differences that are observable between the assigned groups, these differences are statistically insignificant.

Between genders, there is little to no observable difference in regard to language capabilities, at least in terms of self-perception of abilities. The same applies to abilities in regard to Arabic and area of residence (urban/rural). The number of individuals with good or excellent fluency in French is quite higher in urban areas (24.8% compared to 16.5%), which might be expected given greater exposure to French in an urban environment as well as more indirect factors like income and educational quality. In this regard, language capabilities in Arabic and French do

seem to rise with household income, although there is tentative evidence of a U-shaped outcome in regard to Arabic as wealthier families replace capabilities in Arabic with capabilities in French.

It is important to note that the questions on language capacity, as well as the following question on computer skills, are based on self-perceptions. As such, they are open to bias and do not allow for an unbiased assessment of skills. As an alternative, the team should consider including some kind of external assessment of language skills – such as having individuals read or write a paragraph in each language for external assessment. In and of itself, this poses an issue of equitable assessment, while the logistics might prove costly and might be beyond the budgetary constraints to the evaluation.

Table 10: Language Capacity by Control and Treatment (%)

	No fluency	Basic fluency	Intermediate fluency	Good fluency	Excellent fluency
<i>Arabic</i>					
Control 1	..	1.5	21.5	57.2	19.9
Treatment 1	..	1.8	19.7	56.4	22.1
Control 2	..	1.3	21.1	57.5	20.1
Treatment 2	..	1.9	20.7	56.3	21.1
<i>French</i>					
Control 1	..	31.1	46.2	18.7	4.0
Treatment 1	..	28.8	48.5	19.6	3.2
Control 2	..	30.9	45.6	19.1	4.4
Treatment 2	..	29.8	48.3	18.8	3.1
<i>Third Language</i>					
Control 1	34.8	25.9	23.3	10.8	5.2
Treatment 1	33.4	25.6	24.9	11.9	4.2
Control 2	34.8	26.6	23.4	10.0	5.2
Treatment 2	34.0	25.0	24.2	12.4	4.5

Competence in Computer Usage

Overall, the majority of the surveyed population identifies itself as lacking in necessary computer skills, with 46.4% of the population reporting that their computer skills are “insufficient” and 22.3% reporting that their computer skills are “very insufficient.” It should be noted that between control and treatment groups, there is little difference in overall outcomes in this regard; however, the share reporting that they have excellent computer skills is slightly higher among the treatment groups than in either of the control groups. According to our tests, however, these differences are not statistically significant.

Table 11: Computer Competence among Surveyed Population (%)

	Very insufficient	Insufficient	Good	Excellent
Total	22.3	46.4	27.0	4.2
Control 1	22.7	47.0	26.2	4.0
Treatment 1	21.6	45.2	28.6	4.7
Control 2	22.2	47.2	27.0	3.7
Treatment 2	22.5	45.7	27.1	4.8

The share of women reporting very insufficient and insufficient computer skills is higher than that of men, at 71.6% compared to 58.4%. This is among the most striking gender differentials revealed within our data. Likewise, and perhaps not surprisingly given access, urban residents are more likely to identify their computer skills as good or excellent: from the total surveyed population, 32.6% of those in urban area identified their skills as such compared with only 27.3% of those in rural areas.

Life Skills and Self-Efficacy

Overall, our findings on self-perceived abilities in regard to basic life skills and respondents' sense of self-efficacy suggest that, prior to the start of the 100 Hours to Success program, applicants have a strong sense of their own capacities. This, coupled with the relatively small range with which we measure these factors (scale of 1-4) suggest that identifying measureable improvements in outcomes may prove difficult once we have delivered the follow-up survey.

In the context of the surveyed population as a whole, as noted in tables below, the vast majority of respondents feel that they have a strong grasp on core life skills and capabilities. In regard to ability to work with a team, to adapt to new situations, to solve problems, to present ideas to a group, to resolve differences through negotiation, to convince people about an idea, to resolve personal conflict, to work with a group to meet a deadline and to respect the ideas of others, the large majority of respondents identified themselves as being capable (although not "very capable"). Respect for the ideas of others, notably, is quite high, with the vast majority reporting that they are quite able to do so.

Table 12 (A-J): Self-Perception of Life Skills

	Not capable		Somewhat capable		Capable		Very capable		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
<i>A. Ability to work with a team</i>									
Total	53	2.9	192	10.6	1,021	56.3	549	30.2	1815
Control 1	35	2.9	130	10.7	683	56.1	369	30.3	1217
Treatment 1	18	3.0	62	10.4	338	56.5	180	30.1	598
Control 2	25	2.8	104	11.5	509	56.4	264	29.3	902
Treatment 2	28	3.1	88	9.6	512	56.1	285	31.2	913

	Not capable		Somewhat capable		Capable		Very capable		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
<i>B. Ability to adapt to new situations</i>									
Total	46	2.5	331	18.3	949	52.4	486	26.8	1812
Control 1	31	2.6	225	18.5	634	52.2	325	26.7	1215
Treatment 1	15	2.5	106	17.8	315	52.8	161	27.0	597
Control 2	23	2.6	158	17.6	471	52.3	248	27.6	900
Treatment 2	23	2.5	173	19.0	478	52.4	238	26.1	912

	Not capable		Somewhat capable		Capable		Very capable		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
<i>C. Ability to solve problems</i>									
Total	41	2.3	433	23.9	1,013	55.9	325	17.9	1812
Control 1	24	2.0	299	24.6	671	55.2	221	18.2	1215
Treatment 1	17	2.8	134	22.4	342	57.3	104	17.4	597
Control 2	19	2.1	223	24.8	492	54.6	167	18.5	901
Treatment 2	22	2.4	210	23.1	521	57.2	158	17.3	911

	Not capable		Somewhat capable		Capable		Very capable		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
<i>D. Ability to present an idea to a group</i>									
Total	219	12.2	520	28.9	744	41.4	316	17.6	1799
Control 1	143	11.8	370	30.6	491	40.6	205	17.0	1209
Treatment 1	76	12.9	150	25.4	253	42.9	111	18.8	590
Control 2	106	11.8	271	30.2	358	40.0	161	18.0	896
Treatment 2	113	12.5	249	27.6	386	42.7	155	17.2	903

	Not capable		Somewhat capable		Capable		Very capable		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
<i>E. Ability to resolve differences within a group</i>									
Total	104	5.8	466	25.9	960	53.3	270	15.0	1800
Control 1	60	5.0	331	27.4	639	52.9	179	14.8	1209
Treatment 1	44	7.4	135	22.8	321	54.3	91	15.4	591
Control 2	47	5.3	239	26.7	475	53.1	134	15.0	895
Treatment 2	57	6.3	227	25.1	485	53.6	136	15.0	905

	Not capable		Somewhat capable		Capable		Very capable		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
<i>F. Ability to convince people about an idea</i>									
Total	52	2.9	407	22.6	1015	56.4	327	18.2	1801
Control 1	31	2.6	270	22.4	686	56.9	219	18.2	1206
Treatment 1	21	3.5	137	23.0	329	55.3	108	18.2	595
Control 2	24	2.7	189	21.2	517	57.9	163	18.3	893
Treatment 2	28	3.1	218	24.0	498	54.8	164	18.1	908

	Not capable		Somewhat capable		Capable		Very capable		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
<i>G. Ability to resolve personal conflicts peacefully</i>									
Total	60	3.3	362	20.0	950	52.6	435	24.1	1807
Control 1	30	2.5	247	20.4	641	53.0	291	24.1	1209
Treatment 1	30	5.0	115	19.2	309	51.7	144	24.1	598
Control 2	21	2.3	180	20.1	482	53.9	212	23.7	895
Treatment 2	39	4.3	182	20.0	468	51.3	223	24.5	912

	Not capable		Somewhat capable		Capable		Very capable		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
<i>H. Ability to work with a group to meet a deadline</i>									
Total	70	3.9	460	25.6	956	53.1	314	17.4	1800
Control 1	51	4.2	308	25.5	633	52.4	215	17.8	1207
Treatment 1	19	3.2	152	25.6	323	54.5	99	16.7	593
Control 2	40	4.5	217	24.3	472	52.8	165	18.5	894
Treatment 2	30	3.3	243	26.8	484	53.4	149	16.4	906

	Not capable		Somewhat capable		Capable		Very capable		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
<i>I. Ability to develop creative ideas</i>									
Total	58	3.2	409	22.6	1057	58.4	285	15.8	1809
Control 1	40	3.3	264	21.8	711	58.7	197	16.3	1212
Treatment 1	18	3.0	145	24.3	346	58.0	88	14.7	597
Control 2	28	3.1	186	20.7	539	60.0	145	16.1	898
Treatment 2	30	3.3	223	24.5	518	56.9	140	15.4	911

	Not capable		Somewhat capable		Capable		Very capable		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
<i>J. Ability to respect the ideas of others</i>									
Total	2	0.1	50	2.8	665	36.8	1091	60.3	1808
Control 1	2	0.2	30	2.5	450	37.1	731	60.3	1213
Treatment 1	0	0.0	20	3.4	215	36.1	360	60.5	595
Control 2	1	0.1	21	2.3	345	38.4	531	59.1	898
Treatment 2	1	0.1	29	3.2	320	35.2	560	61.5	910

It is also noteworthy that among these capabilities, we do observe some statistically significant differences between our treatment and control groups. Given the large degree of similarity overall in terms of survey outcomes, these differences are not overly concerning, but must be kept in mind in terms of analyzing final outcomes. In particular, as noted in the Appendix 2, we find that the differences between the control and treatment in the first wave of sorting in the areas of presenting a topic to a group, our treatment group is more prone to feel only somewhat capable, wherein the difference is statistically significant at a 90% confidence level. In terms of resolving differences within a group, the treatment of the initial sorting is more inclined to somewhat capable while the control group is more inclined to be

not very capable, both of which are statistically significant at a 90% confidence level. In terms of resolving personal conflicts peacefully, the treatment group of the first wave of sorting is less inclined to be not very capable (at a 95% confidence level), with the level of confidence dropping to 90% (but still significant) with the second sorting.

A similar batch of questions asked individuals to assess how much they agree or disagree with statements about their capacities in terms of attaining future goals, learning from failure, seeing challenges as opportunities, their perception of what they are learning as aiding their futures, the importance of negotiating to secure goals, their roles as leaders in the future, and their ability to set goals. As with the self-assessment of life skills questioned above, we find that surveyed youth are more prone to agree (but not strongly agree) with most of these normative statements. In fact, when asked how they felt about their ability to learn from failure and whether what they are learning now will aid them in the future, individuals were just as likely or more likely to strongly agree.

Table 12 (A-G): Self-Efficacy Question Responses

	Strongly disagree		Disagree		Agree		Strongly Agree		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
<i>A. In the future, I will attain my goals.</i>									
Total	9	0.5	108	6.0	1,060	58.4	638	35.2	1815
Control 1	8	0.7	76	6.2	706	58.0	427	35.1	1217
Treatment 1	1	0.2	32	5.4	354	59.2	211	35.3	598
Control 2	6	0.7	50	5.5	521	57.8	325	36.0	902
Treatment 2	3	0.3	58	6.4	539	59.0	313	34.3	913

	Strongly disagree		Disagree		Agree		Strongly Agree		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
<i>B. When I fail, I try to understand why in order to succeed in the future.</i>									
Total	21	1.2	79	4.4	874	48.3	836	46.2	1,810
Control 1	16	1.3	60	4.9	582	48.0	555	45.8	1213
Treatment 1	5	0.8	19	3.2	292	48.9	281	47.1	597
Control 2	11	1.2	46	5.1	432	48.1	410	45.6	899
Treatment 2	10	1.1	33	3.6	442	48.5	426	46.8	911

	Strongly disagree		Disagree		Agree		Strongly Agree		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
<i>C. I see challenges as opportunities.</i>									
Total	42	2.3	236	13.1	967	53.7	557	30.9	1,802
Control 1	31	2.6	162	13.4	654	54.2	360	29.8	1207
Treatment 1	11	1.8	74	12.4	313	52.6	197	33.1	595
Control 2	29	3.2	114	12.7	488	54.5	264	29.5	895
Treatment 2	13	1.4	122	13.5	479	52.8	293	32.3	907

	Strongly disagree		Disagree		Agree		Strongly Agree		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
<i>D. What I learn now will aid me in the future.</i>									
Total	5	0.3	58	3.2	756	41.7	993	54.8	1812
Control 1	4	0.3	44	3.6	513	42.3	653	53.8	1214
Treatment 1	1	0.2	14	2.3	243	40.6	340	56.9	598
Control 2	2	0.2	28	3.1	379	42.1	491	54.6	900
Treatment 2	3	0.3	30	3.3	377	41.3	502	55.0	912

	Strongly disagree		Disagree		Agree		Strongly Agree		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
<i>E. Negotiating with others will aid me in securing my objectives.</i>									
Total	70	3.9	236	13.1	884	48.9	618	34.2	1808
Control 1	53	4.4	166	13.7	575	47.5	417	34.4	1211
Treatment 1	17	2.8	70	11.7	309	51.8	201	33.7	597
Control 2	40	4.5	117	13.0	423	47.1	318	35.4	898
Treatment 2	30	3.3	119	13.1	461	50.7	300	33.0	910

	Strongly disagree		Disagree		Agree		Strongly Agree		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
<i>F. I see myself in a leadership position in the future.</i>									
Total	75	4.1	389	21.5	936	51.7	411	22.7	1811
Control 1	51	4.2	258	21.2	616	50.7	290	23.9	1215
Treatment 1	24	4.0	131	22.0	320	53.7	121	20.3	596
Control 2	39	4.3	180	20.0	461	51.2	221	24.5	901
Treatment 2	36	4.0	209	23.0	475	52.2	190	20.9	910

	Strongly disagree		Disagree		Agree		Strongly Agree		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
<i>G. I set goals in order to secure my future objectives.</i>									
Total	17	0.9	150	8.3	962	53.1	683	37.7	1812
Control 1	11	0.9	108	8.9	650	53.5	447	36.8	1216
Treatment 1	6	1.0	42	7.0	312	52.3	236	39.6	596
Control 2	9	1.0	74	8.2	495	54.9	323	35.8	901
Treatment 2	8	0.9	76	8.3	467	51.3	360	39.5	911

Overall, there is considerable similarity in outcomes within these questions when comparing treatment and control groups; however, as with the first batch of self-assessed life skills questions, there is one area in which differences between the treatment and control are statistically significant. On the question about seeing challenges as opportunities, the treatment group as identified during the second wave of sorting is less inclined to strongly disagree with the statement than the control group, a difference that is within a 90%

confidence level, suggesting that our treatment group is more favorably inclined to see themselves as positively engaged in overcoming obstacles.

As noted above, there are considerable issues that must be addressed when interpreting the questions above and how to improve our ability to capture outcomes in these areas in the future. The heavy bias towards capable here suggests that individuals were prone to answer positively about themselves but in a way that suggested room for improvement. Herein, the team's choice to go with a four-point scale (avoiding a five-point scale because of concerns that everyone would tend toward a neutral answer (3) might prove to undermine our ability to register shifts over time in perspectives of ability. However, the compressed scale leaves little room for documenting marginal improvements.

As such, the team should consider whether or not the inclusion of such questions in the follow-up survey will yield any worthwhile data. Moreover, given the possibility that program participants might demonstrate a measureable decline in these areas, there is an issue of how such a decline would be interpreted: does participation in 100 Hours to Success decrease one's self-efficacy or merely one's awareness that such issues are more challenging – once one is tested in a learning environment like that of 100 Hours to Success - than initially perceived? As with questions about self-assessment in language and computer skills, a means of providing an external, unbiased assessment of such skills might prove more informative, but would come at a logistical and financial cost to the evaluation that might not be feasible.

Employment Status, History and Aspirations

Our core area of concern in the analysis behind the impact evaluation is the gain accrued by participants (in comparison with non-participants) in the areas of employment and business start-up. As described above, the majority of participants (86%) are still enrolled in some level of education. In this regard, it is understandable that the majority are not currently working and have relatively little employment history. The education status of the majority should also be kept in mind when evaluating employment outcomes in the future: while it was expected on evaluation design that individuals would be enrolling in MEDA Maroc's 100 Hours to Success as a bridge in the transition from school to work, the actual transition might take longer for many than expected in that a year from now many might still be in school and only passively searching for employment. While any documentation of continued education among participants (in contrast with non-participants) might prove to be a positive outcome, any outcomes in terms of labor market participation might not be yet measureable by follow-up survey.

At baseline, 84.6% of respondents were not active in the labor market, the vast majority of these being full-time students. Of the 279 individuals (15.4% of the total) who were active, 32.3% were employed and 19% were self-employed. The unemployment rate among this – albeit small – population of active individuals was nearly 49%. While this is considerably higher than the national youth unemployment rate of 17%, it should be kept in mind that this is a particular group and make up only a small share of the total population surveyed for the baseline (7.5% of those surveyed).

In reviewing how our treatment and control groups compare at baseline, it is notable that the treatment groups and control groups are largely in alignment, with no statistically significant

differences. That said, in the second wave of sorting, the treatment group is slightly more inclined to be active in the labor market, with higher rates of employment, self-employment and unemployment.

Table 13: Current Employment Status of Surveyed Population

	Employed		Self-employed		Unemployed		Inactive		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Total	89	4.9	53	2.9	136	7.5	1537	84.7	1815
Control 1	58	4.8	40	3.3	90	7.4	1029	84.6	1217
Treatment 1	31	5.2	13	2.2	46	7.7	508	84.9	598
Control 2	39	4.3	23	2.5	66	7.3	774	85.8	902
Treatment 2	50	5.5	30	3.3	70	7.7	763	83.6	913

Given the relatively low number of survey respondents who are actively engaged in the labor market, there is little merit in disaggregating labor market activity further at this point, whether that involves looking at the type and quality of employment or activities of the unemployed. Our ability to do so at follow-up is assumed to be much stronger, although the large numbers of respondents who are currently in school suggests that a significant number will still be in school after one year and, as such, many will still be economically inactive.

While there are relatively few youth within our survey who are currently working, an introductory analysis of work history suggests that a fairly large share have some work experience. Overall, 41.8% of our surveyed population has at least held one job in the past. This figure is consistent across control and treatment groups, with values ranging from 40.8% to 42.7%. The balance does turn in favor of the treatment group with the second wave of sorting, but the difference is not statistically significant.

Table 14: Work Experience (% with at least one position)

	N	%
Total	757	41.8
Control 1	507	41.7
Treatment 1	250	41.9
Control 2	368	40.8
Treatment 2	389	42.7

Men do tend to have more work experience than women, at 47.9% compared with 36.3%, and those living in urban areas tend to have more work experience than those in rural areas, at 45% compared to 32%. These differences are likely to reflect mobility and access to opportunities in the overall labor market. Overall, much of the work experience is through unpaid volunteer activities, with nearly 47% having held unpaid internships and 23.3% having volunteered. Of those who have had work experience, 33.7% have held paid private sector employment, while about 5% have worked for a family business (paid or unpaid), 7.9% have held a paid internship, and 1.3% have held a public sector position.

Aspirations for employment and self-employment

While relatively few of the respondents are currently engaged in work, our survey allows for an initial analysis of aspirations for employment that greatly informs the overall analysis of the study. Overall, 94.4% of respondents intend to work (or be self-employed) within the next five years, while the bulk of the remainder intend to still be in school over that period (86 out of 102). Few voiced intent to stay out of the labor market due either to family pressures (4) or no need to work due to family wealth (5). These figures are largely consistent over treatment and control groups, and it should be noted that the figure is only marginally higher for women than for men.

One of the issues that is often put forward as an obstacle to youth employment in the Moroccan (and wider Arab) context is a preference for public sector employment. While the availability of jobs in this area has declined in Morocco since the reforms of the 1990s, the preference has remained. In our survey, when asked about their preferences for employment, 57% of respondents reported a preference for public sector work, compared with 26.4% reporting a preference for self-employment (keeping in mind the self-selecting nature of the population applying for a training program on entrepreneurial skills development) and 12.8% favoring employment in the private sector. Measured changes in such preferences for public employment are a potentially important measure of impact from the MEDA Maroc program, although it should be noted that such preferences are informed by powerful institutional drivers (job security and benefits that accrued from public employment), which will be difficult to counter.

In terms of preferences for sector of employment, our treatment and control groups are largely in alignment. After the first wave of sorting, the treatment group did show a higher share of those seeking public sector employment (59.8% vs. 55.7%) and a lower share of those seeking private employment (11.3% vs. 13.6%), but the differences are reduced in the final sorting. Such differences are statistically insignificant.

Table 15: Employment Preferences among Survey Population (%)

	Self-employment	Public sector	Private sector	Association	Family-owned business
Total	26.4	57.0	12.8	2.4	1.3
Control 1	26.9	55.7	13.6	2.5	1.3
Treatment 1	25.4	59.8	11.3	2.1	1.4
Control 2	27.0	57.0	12.7	2.2	1.1
Treatment 2	25.8	57.1	12.9	2.6	1.6

Women are more likely than men to prefer public sector employment (61.3% vs. 52.2%), which aligns with expectations given the job security, family-friendly work benefits, and cultural “appropriateness” that goes with such jobs. As such, they are less interested in seeking out self-employment and, importantly, private sector employment. In this context, it should be noted that while “good salary” was the most important characteristic in accepting a job for both genders (51.5% for men and 43.9% for women), more women cited “acceptable work environment” as a priority over salary (15.3% for men and 20.0% for women).

Table 16: Employment Preferences by Gender (%)

	Male	Female	Total
Self-employment	28.2	24.8	26.4
Public sector	52.2	61.3	57.0
Private sector	16.1	9.9	12.8
Association	1.9	2.9	2.4
Family-owned business	1.6	1.1	1.3

Sector preferences do not vary much by urban or rural residence. On the other hand, preferences vary by large degrees among categories of household income. On the surface, these preferences do not follow a pattern than allows for broad generalization of trends. As such, the linkages between income and predilection to self-employment or employment in any particular sector are worthy of deeper analysis and, perhaps, a better measurement of household income status.

Table 17: Employment Preferences by Household Income (%)

	0-1500	1500-3500	3500-5000	5000-7000	7000-10K	10K+	Total
Self-employment	25.8	26.0	25.2	23.0	42.3	29.9	26.4
Public sector	56.1	58.2	54.8	63.8	48.7	53.7	57.0
Private sector	13.9	12.7	14.8	10.5	3.8	13.4	12.8
Association	3.2	1.9	2.8	1.3	3.8	1.5	2.4
Family-owned	0.9	1.1	2.4	1.3	1.3	1.5	1.3

Attitudes towards Entrepreneurship

While 26.4% of the surveyed population has a preference for self-employment, there is a larger interest among the population in the potential for self-employment and entrepreneurial activity. Overall, when asked whether they had an interest in one day starting their own business, 84.5% affirmed that they did. In addition, 46.7% had an idea for a business that they would like to start. In more practical and immediate terms, 18.2% intended to start their own business within the next 12 months. Notably, those intending to start a business were not necessarily those who responded with a preference for self-employment over other sectors.

When comparing treatment and control groups, attitudes towards entrepreneurship are very much in alignment. It should be noted that there is a lower tendency among the first treatment group and particularly among the second treatment group towards entrepreneurial activity. Such observed differences are statistically insignificant.

Table 18: Interest in Entrepreneurship among Surveyed Population

	Future interest in starting a business		Idea for a business		Starting in next 12 months	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Total	1,443	84.5	687	46.6	260	18.2
Control 1	971	84.6	461	46.6	177	18.6
Treatment 1	472	84.3	226	46.5	83	17.5
Controls 2	722	85.1	347	47.2	135	19.1
Treatment 2	721	83.8	340	45.9	125	17.3

Within the wider survey population, there is little demonstrable difference between women and men in terms of desire to start a business in the future. Men are more inclined than women to report having an idea for a business (49% vs. 44.6%), but women are slightly more inclined to have immediate intentions to start a business (17.5% vs. 18.8%). Those residing in urban areas and rural areas have similar long-term intentions towards entrepreneurship, but urban dwellers are more inclined to have a business idea (48.8% vs. 40%); however, again, rural dwellers are more inclined to have immediate plans to start a business (20%) than urban dwellers (17.6%). In reviewing the gender and urban residence outcomes, it is possible that women and rural dwellers are more inclined towards actual business start-up out of necessity or lack of other opportunities rather than starting businesses out of opportunity perceptions.

This idea (at least in terms of necessity-based entrepreneurship) is slightly contradicted by a preliminary analysis of attitudes towards entrepreneurship among different household income categories. Herein, there is evidence of a slight U-shaped curve in regard to long-term entrepreneurial gains, with those from poorer households and those from richer households reporting more interest in this regard. Among the poorest households, long-term interest reaches 85.6%, a rate that gradually declines to 81.6% among those in middle categories before rising to 94% among those in the highest income category. In terms of business ideas, the percentage with tangible ideas grows gradually with household income, from 42.9% among the poorest to 69.8% among the richest. Actual intent to start a business remains at between 17-19% for all income categories with the exception of the richest, where it is 27.4%.

Savings and Financial Behavior

In addition to employment outcomes, MEDA Maroc seeks to directly impact the savings and money management capacities of youth in order to better provide them with a platform to start their own businesses and reach other economic goals. In order to measure these potential outcomes, we included a survey component on financial behavior, the primary results of which, at the baseline, are introduced below.

Overall, we find that 48.3% of respondents report being able to save money, although only 21.2% of respondents do this formally through savings accounts at banks or the postal service. It should be noted that the figures for savings are higher among the control group. While the

difference is notable, this difference between control and treatment groups is not statistically significant.

Table 19: Financial Behavior among Survey Respondents (%)

	Savings account	Saving money	Have borrowed money in past
Control 1	21.5	49.4	15.4
Treatment 1	20.4	46.2	15.7
Control 2	21.4	50.0	14.9
Treatment 2	20.9	46.7	16.2
Total	21.2	48.3	15.5

In regard to general savings behavior, fewer women are actively saving than men, at 46.6% compared with 50.2%. The primary reason for savings for both men and women is simply “to have extra money” (39.3% of men and 35.7% of women), followed by saving for education (29.9% of men and 31.7% of women). In addition, 22.2% of men and 28.1% of women report that their primary reason for saving is to have money in case of an emergency. Only 5.4% of men 2.7% of women cite business start-up and development as a primary reason for savings.

Savings rates are significantly lower in rural regions (40.1%) than in urban areas (50.9%), as is the share of those who maintain formal savings accounts (20.4% in rural vs. 22.6% in urban). Both savings and the maintenance of a savings account increase gradually with household income: with savings growing from 41.2% of poorest to 60.5% of the richest and the maintenance of formal savings accounts growing from 14.1% of the poorest to 39.5% of the richest.

Despite their relatively young status, nearly 15.5% of applicants had borrowed money in the past, although most of this was through informal channels (family and friends). Of the 283 individuals who had borrowed money, 93% had done so from family and friends. Such loans range from 15 dirhams to 30,000 dirhams, with an average of 1217 dirhams. Most loans were used for migration (37.8%) or educational purposes (30.4%). In regard to migration, it is not possible to determine from the data whether loans used to support migration were for future plans or past (and perhaps failed) efforts. Rural and urban loan usage is rather aligned, while men are slightly more prone to have taken a loan than women (17.1% vs. 14.2%). Evidence from household income groups is mixed, although those from poorer backgrounds tend to have higher rates of borrowing. In reviewing outcomes by treatment and control groups, loan behavior is comparable, although members of the treatment group (both waves) were slightly more inclined to have borrowed money. Differences are not statistically significant.

Section 6: External Validity Analysis

To contextualize the findings from our baseline study in the wider national context and to assess, to some degree, the external validity of our survey's findings, we compare our results with findings from the 2009 World Bank survey of youth in Morocco (World Bank 2012). The World Bank study surveyed 2,000 households (1,216 urban and 784 rural) across Morocco in a nationally representative survey. From these households, they collected more detailed data from 2883 young people aged 15 to 29, including information on economic inclusion, aspirations, notions of leisure, community participation, and access to services and their usage.

Below, we compare aggregate indicators from our survey with aggregate figures from the World Bank study for both Morocco as a whole and the Oriental region in an effort to provide a basis from which to understand how our data reflects conditions in the country as a whole. It should be kept in mind that while national aggregates from the World Bank data are representative of the country, figures at the regional level are not necessarily representative of the Oriental sub-population.

Demographics

In regard to key demographic factors, it is noteworthy that the distribution of our survey population tends to be younger than that covered by the national data. While the span of the surveyed population is comparable, those ages 15 to 21 are more heavily represented in the MEDA Maroc pool of applicants, which is natural given that applicants are just beginning – for the most part – their transition from school to work. In terms of gender, our sample is fairly reflective of the national averages found in the World Bank study, while our sample is more dominantly from urban areas.

Table 20: Comparison of Core Demographic Indicators

	MEDA Maroc	World Bank	World Bank (Oriental region)
Sample size (n)	1817	2883	185
Gender (% female)	53%	51.5%	53.5%
Age 15-18	31.8%	31.3%	26.0%
Age 19-21	40.0%	21.7%	21.6%
Age 22-24	22.4%	26.1%	32.4%
Age 25-29	5.7%	20.1%	20.0%
Age 30+	0.1%	..	..
Urban	75.0%	57.7%	57.3%

Income

A detailed comparison of the surveyed population and the national population is in the process of being developed using a household consumption index. As noted above, this index will be calculated using a list of comparable household assets identified through the survey.

Education

While our surveyed population is generally younger than that found in the World Bank data, they are more educated and on the pathway to become more educated in the future. Nearly 86% of MEDA applicants are enrolled in school, while only 26.2% of youth in the nationally representative World Bank data are. Moreover, according to the World Bank, over 18% of youth in Morocco have never attended formal school, a sub-population not represented in our pool of applicants, and nearly 23% never finished a primary degree. Less than 2.9% of the national population of youth had completed the important *lycée* (including comprehensive examinations), while 43.1% of our pool of applicants had. The figures for those who have completed a professional degree program or a university degree are more in alignment, but this understandable given that the average age is below the age of completion for such programs. It can be assumed that a large share of our applicant pool is on a pathway towards such programs, while the most of the sample within the World Bank are not. As such, it is obvious that MEDA Maroc attracts, on the whole, a much less marginalized group of youth, youth who feel that the added investment of time in training might give them added leverage when seeking higher quality jobs or self-employment.

Table 21: Educational Outcomes Comparison

	MEDA Maroc	World Bank	World Bank (Oriental region)
Currently enrolled (% of total)	86%	26.2%	24.3%
Primary (% of enrolled)	..	5.0%	5.2%
College (% of enrolled)	3.9%	34.5%	28.9%
Lycée (% of enrolled)	14.3%	45%	55.2%
Professional (% of enrolled)	34.9%	7.2%	7.9%
University (% of enrolled)	47%	8.1%	2.6%
Level completed			
Never attended	..	18.2%	22.7%
Some primary	..	22.7%	21.1%
Primary	18.6%	28.7%	25.9%
College	29.5%	21.6%	23.2%
Lycée	43.1%	2.9%	4.3%
Professional	4.9%	4.2%	1.6%
University or higher	3.9%	1.3%	1.1%

Employment Outcomes

In our analysis, we noted that the vast majority of MEDA Maroc applicants are still enrolled in some level of schooling and are, as such, not yet actively engaged in the labor force. However, nearly 94% of our surveyed applicants report being interested in working within the next 5 years. At the national level, only 75.2% report an interest in working. This difference lies in the self-selection bias of our applicants who are seeking to join a program that will aid them in bridging the gap between school and work.

Given the low rates of participation within our sample, it is expected that the rate of employment among all applicants is lower than the rate of employment within the wider youth population, although it is interesting to note that the rate of self-employment is similar, as is the share that is unemployed (available for work and actively looking for employment). The actual unemployment rate (unemployed as a share of those in the labor force) is much higher among our participants because of the relatively low number in the labor force, rather than a particularly high number of unemployed. Those facing employment challenges would likely be drawn to a program like MEDA Maroc's 100 Hours to Success.

World Bank respondents show similar preferences for public sector work although the figure is higher in our sample than in their nationally representative sample. This could be skewed by the fact that the World Bank survey only offered three choices within this question, but it is also perhaps reflective of the higher expected educational gains within our sample. Having completed one's lycée greatly enhances the possibility of securing public sector work or at least in having raised one's expectations for such work.

Table 22: Employment Outcomes Comparison

	MEDA Maroc	World Bank	World Bank (Oriental region)
Working or likely to work in near future	94.4%	75.2%	71.3%
Employed	4.9%	24.7%	30.2%
Self-employed	2.9%	2.5%	1.6%
Unemployed	7.5%	7.2%	4.9%
Inactive	84.7%	65.5%	63.3%
Unemployment rate	49%	21.0%	13.2%
Sector preferences			
Public	57.0%	45.7%	56.1%
Private	12.8%	22.6%	6.1%
Self-employment	26.4%	31.7%	37.9%
Other	3.7%	..	..

Savings Behavior

Savings behavior is much higher among the applicants to the MEDA Maroc program, but this should be understood in the context that 100 Hours to Success participants are expected to have established a savings account prior to enrollment. As such, it is difficult to assess what their savings behavior would have been without the chance of enrolling in 100 Hours to Success. Overall, however, even prior to the start of the program, it should be noted that the number of youth report actual savings among the MEDA applicants is four times the rate found in the wider youth population in Morocco.

Table 23: Savings Behavior Comparison

	MEDA Maroc	World Bank	World Bank (Oriental region)
Saving money	48.3%	12.2%	18.5%
Savings account (% of those saving)	21.5%	10.6%	23.5%

Section 7: Ongoing Challenges with Program Enrollment

As noted in the introduction and section 3, we originally intended to have 600 participants enrolled in the 100 Hours to Success program by December 2012, but given logistical challenges, the local MEDA Maroc team had difficulties in securing active enrollments by all of those identified as the treatment in the first wave of sorting. As of end of January/beginning of February 2013, only 363 individuals had been enrolled. The remainder of the youth were withheld because of a mix of issues related to class scheduling, participation in internships, or difficulties in contacting selected participants.

With limited enrollment, MEDA Maroc was able to secure funding for a second wave of training that was to begin in February 2013. To maximize the number of individuals for whom we had baseline surveys, and given a training capacity for another 600 individuals for this second wave of training, the team decided to do a second randomized selection from the original control group, adding 300 additional participants. While this was done with an awareness that the study risked introducing some selection bias – given the time delay and the fact that members of the original control may have inferred that they were not selected as participants (despite not being informed either way) – we decided that the benefits of a larger treatment group outweighed such concerns.

Since then, however, the MEDA Maroc team has continued to face challenges in regard to enrolling selected participants. For both sorting waves, only 505 have enrolled in or completed training. Naturally, this poses considerable constraints to the study. Fundamentally, the low numbers of participants puts pressure on the study in terms of statistical power (see section 8 below), and in a best-case scenario, the delay in program delivery and the added incentives posed to treatment members who have yet to enroll impose issues related to selection bias. Whether or not we can effectively control for introduced biases will depend largely on final numbers and the inclusion of carefully selected variables designed for controlling for participant enrollment behavior. Moreover, it is evident that we will have to make considerable use of an intention to treat (ITT) analysis in comparison to the analysis of those actually treated.

Section 8: Revised Power Calculations

Power is the probability of discovering a causal effect of treatment when a randomised experiment has been properly implemented and data correctly analysed. The literature approaches the power calculation using either the power determination approach and the effect size approach. The former begins with an assumption about the effect size the intervention produces, and the aim is to compute the power that will detect that effect with a given sample size. The latter begins with a desired level of power and the aim is to compute the minimum effect size that can be detected at that level of power for any given sample size. This approach can be replicated at any given level of power. Bloom (1995) defines the minimum detectable effect size (MDES) as the smallest true effect that can be detected for a specified level of power and significance level for any given sample size.

The basic formula for calculating power comes from a mean-comparison between the treated and untreated groups at 80% of usual level of power. In the case of simple regression of the

outcome variable Y on the dummy variable of treatment D (without covariates X), the formula is given by:

$$Power = \left[\frac{\bar{Y}_1 - \bar{Y}_0}{\sigma_Y \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \geq 1.645 \mid \beta = MDE \right] = 0.80$$

Where $\bar{Y}_1 - \bar{Y}_0$ is the mean difference between the treated group and the control group, σ_Y is the standard deviation of the outcome variable Y in the overall sample, n_1 and n_2 are the sizes of the sub-samples of treated and untreated respectively, the number 1.645 corresponds to the statistical value of t-student at 95% as level of confidence, and β is the associated coefficient to the treatment dummy D.

In the absence of treatment effect, the most common null hypothesis states that there is no difference between the population means of the treatment and control groups on the outcome of interest ($H_0: \bar{Y}_1 = \bar{Y}_0$). Then, the MDE for a given sample is the result of resolving the previous equation assuming a t of student distribution:

$$IMD = 2.487 \sigma_Y \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}$$

As noted above, our initial power calculations suggested that, given 600 expected participants, the study would benefit from an expansion of the control population from a matched 600 individuals to 1200 individuals. This number would allow us to target a small MDES through a range of outcomes and enable an analysis of outcomes for a range of sub-groups within the population (gender, urban/rural, household income groups, groups with varying educational backgrounds, etc.). These numbers were recalculated during the second sorting, which improved the theoretical power of the approach.

Given the reduction in our treated population from the expected 900 individuals to the 505 who completed training between November 2012 and August 2013, we have reassessed the power calculations provided both in our original proposal. In doing so, we reviewed key indicators associated with our original hypotheses around program impact, including employment and self-employment along various sub-groups of interest (gender, residential location, educational status, and household income. An application of the above-stated formula on such outcomes for each sorting provides us with estimates of the MDE suggested by our baseline data (with 80% of power and 95% of confidence) included in Tables 24-27 below:

The first table assumes a total treated population of 505. Our calculations in Table 24 assume no attrition from the study, and include those originally intended for treatment (but not receiving treatment) in our control population for the sake of calculating overall power within the surveyed population. Overall, we find our estimates of MDE to be within a reasonable range, noting particular challenges in determining an effect among smaller sub-groups such as those with only primary education, the more highly educated, and those from higher income households, reflective of the small numbers within these groups.

Table 24: Minimal Detectable Effect Calculations

Outcome indicators by sub-groups	Standard deviation	N (Treatment)	N (Control)	MDE
<i>Employed</i>				
Overall sample	0.217	505	1312	0.0283
Women	0.202	278	685	0.0357
Men	0.232	227	627	0.0447
Urban	0.219	348	1015	0.0338
Rural	0.210	157	297	0.0515
Primary	0.252	75	263	0.0820
College (intermediate)	0.266	143	392	0.0646
Lycée (high school)	0.161	245	538	0.0309
Professional degree	0.149	27	62	0.0854
University	0.204	15	55	0.1478
Low-income	0.220	143	326	0.0549
Higher income	0.161	12	64	0.1260
<i>Self-employed</i>				
Overall sample	0.168	505	1219	0.0221
Women	0.142	278	685	0.0251
Men	0.192	227	627	0.0370
Urban	0.168	348	1015	0.0260
Rural	0.167	157	297	0.0410
Primary	0.192	75	263	0.0625
College (intermediate)	0.175	143	392	0.0425
Lycée (high school)	0.137	245	538	0.0263
Professional degree	0.271	27	62	0.1554
University	-	15	55	-
Low-income	0.158	143	326	0.0394
Higher income	0.249	12	64	0.1948

Assuming that we will have attrition among control group in the follow-up survey, and given these MDEs, the question is how power would be affected by different attrition rates. The associated levels of power are given by t-table using the following formula:

$$t_{1-K} = \frac{MDE}{\sigma_Y \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} - t_\alpha$$

Where K is the power and again t_α is obtained from a standard t-distribution. At 95% of confidence $t_\alpha = 1.645$.

The table below calculates power with respectively 5, 10 and 20 percent of attrition rates among the control group. For example, for power of 80%, $t_{1-K} = 0, 841$ and for power of 70, $t_{1-K} = 0, 524$. Powers between these two values are calculated by linear interpolation. Herein, power does drop below .8, but remains close (between .77 and .8).

Table 25: Power Calculation Given Potential Attrition

Outcome indicators by sub-groups	Standard deviation	N (Treated)	Attrition 5%	Attrition 10%	Attrition 20%	Power 1	Power 2	Power 3
<i>Employed</i>								
Overall sample	0.217	505	1246	1181	1050	0.795	0.788	0.774
Women	0.202	278	651	617	548	0.794	0.788	0.773
Men	0.232	227	596	564	502	0.795	0.789	0.775
Urban	0.219	348	964	914	812	0.795	0.789	0.776
Rural	0.210	157	282	267	238	0.793	0.786	0.768
Primary	0.252	75	250	237	210	0.796	0.791	0.779
College (intermediate)	0.266	143	372	353	314	0.795	0.789	0.775
Lycée (high school)	0.161	245	511	484	430	0.794	0.787	0.771
Professional degree	0.149	27	59	56	50	0.794	0.787	0.772
University	0.204	15	52	50	44	0.796	0.791	0.780
Low-income	0.220	143	310	293	261	0.794	0.787	0.772
Higher income	0.161	12	61	58	51	0.797	0.794	0.785
<i>Self-employed</i>								
Overall sample	0.168	505	1246	1181	1050	0.795	0.788	0.774
Women	0.142	278	651	617	548	0.794	0.788	0.773
Men	0.192	227	596	564	502	0.795	0.789	0.775
Urban	0.168	348	964	914	812	0.795	0.789	0.776
Rural	0.167	157	282	267	238	0.793	0.786	0.768
Primary	0.192	75	250	237	210	0.796	0.791	0.779
College (intermediate)	0.175	143	372	353	314	0.795	0.789	0.775
Lycée (high school)	0.137	245	511	484	430	0.794	0.787	0.771
Professional degree	0.271	27	59	56	50	0.794	0.787	0.772
University	-	15	52	50	44			
Low-income	0.158	143	310	293	261	0.794	0.787	0.772
Higher income	0.249	12	61	58	51	0.797	0.794	0.785

Table 26 provides a stricter use of the control group, excluding those intended for treatment but left untreated. As such, the control group includes only those within the formal control group. In excluding the intended but untreated, we find that our estimated MDE increases marginally but remain in the same general range as those provided in Table 24.

Table 26: MDE Calculations with Restricted Control Group

Outcome indicators by sub-groups	Standard deviation	N (Treatment)	N (Control)	MDE
<i>Employed</i>				
Overall sample	0.213	505	900	0.0295
Women	0.192	278	472	0.0361
Men	0.233	227	428	0.0476
Urban	0.219	348	680	0.0359
Rural	0.210	157	220	0.0546
Primary	0.256	75	181	0.0874
College (intermediate)	0.266	143	255	0.0691
Lycée (high school)	0.180	245	379	0.0367
Professional degree	0.168	27	42	0.1031
University	0.225	15	42	0.1683
Low-income	0.214	143	232	0.0566
Higher income	0.184	12	46	0.1483
<i>Self-employed</i>				
Overall sample	0.162	505	900	0.0224
Women	0.135	278	472	0.0254
Men	0.188	227	428	0.0384
Urban	0.162	348	680	0.0266
Rural	0.160	157	220	0.0416
Primary	0.194	75	181	0.0663
College (intermediate)	0.164	143	255	0.0426
Lycée (high school)	0.131	245	379	0.0267
Professional degree	0.283	27	42	0.1736
University	-	15	42	-
Low-income	0.161	143	232	0.0426
Higher income	0.223	12	46	0.1798

Finally, Table 27 builds upon the MDE estimates in Table 26, accounting for potential attrition in the same manner that Table 25 analyzed the potential loss in power resulting from different levels of attrition from the control group. Herein, there is a slightly larger loss in power resulting in potential attrition from the control, although in each case power remains above 0.76.

Table 27: Power Calculations with Restricted Control Group and Estimates of Attrition

Outcome indicators by sub-groups	Standard deviation	N (Treated)	Attrition 5%	Attrition 10%	Attrition 20%	Power 1	Power 2	Power 3
<i>Employed</i>								
Overall sample	0.213	505	855	810	720	0.793	0.785	0.767
Women	0.192	278	448	425	378	0.793	0.785	0.766
Men	0.233	227	407	385	342	0.793	0.786	0.768
Urban	0.219	348	646	612	544	0.793	0.786	0.769
Rural	0.210	157	209	198	176	0.792	0.783	0.762
Primary	0.256	75	172	163	145	0.794	0.788	0.773
College (intermediate)	0.266	143	242	230	204	0.793	0.785	0.767
Lycée (high school)	0.180	245	360	341	303	0.792	0.784	0.764
Professional degree	0.168	27	40	38	34	0.792	0.784	0.765
University	0.225	15	40	38	34	0.795	0.789	0.776
Low-income	0.214	143	220	209	186	0.793	0.784	0.765
Higher income	0.184	12	44	41	37	0.796	0.791	0.781
<i>Self-employed</i>								
Overall sample	0.162	505	855	810	720	0.793	0.785	0.767
Women	0.135	278	448	425	378	0.793	0.785	0.766
Men	0.188	227	407	385	342	0.793	0.786	0.768
Urban	0.162	348	646	612	544	0.793	0.786	0.769
Rural	0.160	157	209	198	176	0.792	0.783	0.762
Primary	0.194	75	172	163	145	0.794	0.788	0.773
College (intermediate)	0.164	143	242	230	204	0.793	0.785	0.767
Lycée (high school)	0.131	245	360	341	303	0.792	0.784	0.764
Professional degree	0.283	27	40	38	34	0.792	0.784	0.765
University	-	15	40	38	34			
Low-income	0.161	143	220	209	186	0.793	0.784	0.765
Higher income	0.223	12	44	41	37	0.796	0.791	0.781

Our findings suggest significant reductions in overall power given reductions in the number of participants enrolled in the program. More concerning is the potential impact of attrition, a real possibility in the context of a highly mobile youth population. While results will still be meaningful in a worst case scenario, particularly since we have kept calculated MDEs fairly narrow, the research team will have to ensure intensive efforts to follow up and track down all surveyed individuals in an attempt to keep attrition rates as low as possible.

Section 9: Final Summary and Review of Issues

Moving forward on implementing impact evaluations as designed always poses challenges. In assessing operational programs, we are attempting to evaluate dynamic activities that are subject to change due to a number of internal and external factors. Finding ourselves having completed our baseline survey, the biggest challenge to a successful completion of the study is the shift in expectations regarding enrollment in the program. As described above, our ability to reach our expected number of participants has been due to a number of factors, mostly external. This lack of enrollment has imposed a limit on the power of our study as described above, increasing our minimum detected effect or decreasing our statistical power and confidence level. Moreover, the need for two waves of training (and possible a third) has tentatively introduced some level of bias into our results.

In reviewing overall power given a potential treatment and control population of 1080, we believe that we still have the power to determine a significant change in outcomes. MEDA Maroc will bear the costs of this increased threshold should any measurable impact be less than 3.7 percentage points different from our control group, a difference that would be undetectable. Still, we find that this risk is better than introducing further potential bias in results or a delay in the follow-up survey by adding additional training programs.

The difference between the expected treatment population and the limited number of enrollments also ensures that we will have to make use of an intention-to-treat analysis. While such an analysis and the use of it to create an instrumental variable to control for biases between the intended treatment population and the actually treated population was already planned, the limited enrollment numbers underline its importance and the scale of the difference between the intended and actually treated populations.

Overall, the quality of the data collected through our baseline study seems good, both in terms of responses and the usability of most questions to inform our analysis. While there is some statistical significance in differences between our treatment and control groups, these are minor. The important issue seems to be an imbalance in educational outcomes between the two groups, even if these differences are not statistically significant. The team will review this further and our follow-up analysis will control for potential real differences where they can be identified.

As noted above, we face challenges with the module of self-assessed skill questions, including those focused on language and computer skills as well as life skills and self-efficacy. For language and computer usage questions, it has been suggested that we replace or supplement these questions with some means by which to assess capabilities through external observation rather than self-assessment. While this approach would have merit, it raises logistical concerns and cost issues. This issue will be reviewed and decided before completing the follow-up survey.

On life skills and self-efficacy, our approach also needs to be reviewed. At a minimum, our scaling seems to present a fundamental concern with measuring movement on the scale. From a wider perspective, asking youth to self-assess in these areas might be the wrong approach. Before finalizing our follow-up survey, the team will review these questions and decide how to measure them if including them at all. It is important to keep in mind that such

outcomes are secondary to the core issues of employment, self-employment and employability.

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Appendices

Section 1: Summarized statistics for key survey questionnaire answers

	Total				
Outcome indicators	N	Mean	Standard deviation	Min	Max
<i>Demographics</i>					
Gender (female=1)	1817	0.5300	0.4992	0	1
Age 15-18	1817	0.3181	0.4659	0	1
Age 19-21	1817	0.4001	0.4901	0	1
Age 22-24	1817	0.2240	0.4170	0	1
Age 25-30	1817	0.0578	0.2334	0	1
Single	1817	0.9857	0.1188	0	1
Urban	1817	0.7501	0.4331	0	1
Household size	1817	4.9053	1.9980	1	21
<i>Household Income</i>					
0-1500 MAD	1817	0.2581	0.4377	0	1
1500-3500 MAD	1817	0.4001	0.4901	0	1
3500-5000 MAD	1817	0.1690	0.3748	0	1
5000-7000 MAD	1817	0.0881	0.2835	0	1
7000-10K MAD	1817	0.0429	0.2028	0	1
10K+ MAD	1817	0.0418	0.2002	0	1
<i>Educational attainment</i>					
Primary	1815	0.1862	0.3894	0	1
College (intermediate)	1815	0.2948	0.4561	0	1
Lycée (high school)	1815	0.4314	0.4954	0	1
Professional degree	1815	0.0490	0.2160	0	1
University	1815	0.0386	0.1926	0	1
<i>Current Educational Attainment</i>					
No	1817	0.1409	0.3480	0	1
College	1817	0.0336	0.1802	0	1
Lycée	1817	0.1227	0.3282	0	1
Professional institution	1817	0.2994	0.4581	0	1
University	1817	0.4034	0.4907	0	1
<i>Capabilities in different languages</i>					
<i>Arabic:</i>					
No fluency	1816	0.0160	0.1254	0	1
Somewhat fluent	1816	0.2093	0.4069	0	1
Fluent	1816	0.5688	0.4954	0	1
Highly fluent	1816	0.2059	0.4045	0	1
<i>French:</i>					
No fluency	1816	0.3029	0.4596	0	1

Somewhat fluent	1816	0.4697	0.4992	0	1
Fluent	1816	0.1900	0.3924	0	1
Highly fluent	1816	0.0374	0.1899	0	1
<i>Third language:</i>					
None	1817	0.3440	0.4752	0	1
No fluency	1817	0.2576	0.4374	0	1
Somewhat fluent	1817	0.2378	0.4258	0	1
Fluent	1817	0.1123	0.3158	0	1
Highly fluent	1817	0.0484	0.2147	0	1
<i>Computer skills</i>					
Very insufficient	1816	0.2230	0.4164	0	1
Insufficient	1816	0.4642	0.4989	0	1
Good	1816	0.2704	0.4443	0	1
Excellent	1816	0.0424	0.2016	0	1
<i>Training</i>					
Training=1	1816	0.1382	0.3452	0	1
<i>Employment Status</i>					
Employed	1817	0.0495	0.2170	0	1
Self-employed	1817	0.0292	0.1683	0	1
Unemployed	1817	0.0748	0.2632	0	1
Inactive	1817	0.8465	0.3606	0	1
<i>Employment history</i>					
Work experience=1	1815	0.4176	0.4933	0	1
Unpaid internship	1815	0.1961	0.3972	0	1
Paid internship	1815	0.0331	0.1788	0	1
Paid private sector	1815	0.1410	0.3482	0	1
Paid public sector	1815	0.0055	0.0740	0	1
Family Business	1815	0.0209	0.1432	0	1
Volunteer	1815	0.0309	0.1730	0	1
Self-employment	1815	0.0975	0.2967	0	1
Other experience	1815	0.0160	0.1254	0	1
<i>Interest in entrepreneurship</i>					
Interest=1	1710	0.8450	0.3620	0	1
Business idea=1	1477	0.4665	0.4990	0	1
Intention to start a business within 12 months=1	1428	0.1821	0.3860	0	1

<i>Attitudes and Self-Efficacy</i>					
<i>Confidence to succeed in an interview:</i>					
Strongly unconfident	1710	0.0228	0.1493	0	1
Unconfident	1710	0.2076	0.4057	0	1
Confident	1710	0.6462	0.4783	0	1
Strongly confident	1710	0.1234	0.3290	0	1
<i>Attain Goals in the future:</i>					
Strongly disagree	1817	0.0050	0.0702	0	1
Disagree	1817	0.0594	0.2365	0	1
Agree	1817	0.5834	0.4931	0	1
Strongly agree	1817	0.3522	0.4778	0	1
<i>Understand failure causes:</i>					
Strongly disagree	1812	0.0116	0.1071	0	1
Disagree	1812	0.0436	0.2043	0	1
Agree	1812	0.4829	0.4998	0	1
Strongly agree	1812	0.4619	0.4987	0	1
<i>See Challenge as opportunities:</i>					
Strongly disagree	1804	0.0233	0.1508	0	1
Disagree	1804	0.1308	0.3373	0	1
Agree	1804	0.5366	0.4988	0	1
Strongly agree	1804	0.3093	0.4623	0	1
<i>What he/she is learning would help him/her in the future:</i>					
Strongly disagree	1814	0.0028	0.0524	0	1
Disagree	1814	0.0320	0.1760	0	1
Agree	1814	0.4173	0.4933	0	1
Strongly agree	1814	0.5480	0.4978	0	1
<i>Need to negotiate to attain goals:</i>					
Strongly disagree	1810	0.0387	0.1929	0	1
Disagree	1810	0.1309	0.3374	0	1
Agree	1810	0.4884	0.5000	0	1
Strongly agree	1810	0.3420	0.4745	0	1
<i>Leadership in the future:</i>					
Strongly disagree	1813	0.0414	0.1992	0	1
Disagree	1813	0.2146	0.4106	0	1
Agree	1813	0.5174	0.4998	0	1
Strongly agree	1813	0.2267	0.4188	0	1
<i>Set him/her goals to attain them:</i>					
Strongly disagree	1814	0.0094	0.0964	0	1
Disagree	1814	0.0827	0.2755	0	1
Agree	1814	0.5309	0.4992	0	1
Strongly agree	1814	0.3771	0.4848	0	1

<i>Team work to attain common goal:</i>					
Not very capable	1817	0.0292	0.1683	0	1
Somewhat capable	1817	0.1057	0.3075	0	1
Capable	1817	0.5630	0.4961	0	1
Very capable	1817	0.3021	0.4593	0	1
<i>Adapt to new situations:</i>					
Not very capable	1814	0.0254	0.1573	0	1
Somewhat capable	1814	0.1825	0.3863	0	1
Capable	1814	0.5237	0.4996	0	1
Very capable	1814	0.2685	0.4433	0	1
<i>Solve the problems:</i>					
Not very capable	1814	0.0226	0.1487	0	1
Somewhat capable	1814	0.2387	0.4264	0	1
Capable	1814	0.5595	0.4966	0	1
Very capable	1814	0.1792	0.3836	0	1
<i>Present a topic that he/she knows to a group of people he/she does not know:</i>					
Not very capable	1801	0.1216	0.3269	0	1
Somewhat capable	1801	0.2887	0.4533	0	1
Capable	1801	0.4137	0.4926	0	1
Very capable	1801	0.1760	0.3809	0	1
<i>Resolve differences within a group:</i>					
Not very capable	1802	0.0577	0.2333	0	1
Somewhat capable	1802	0.2592	0.4383	0	1
Capable	1802	0.5333	0.4990	0	1
Very capable	1802	0.1498	0.3570	0	1
<i>Convince a group of people</i>					
Not very capable	1803	0.0288	0.1674	0	1
Somewhat capable	1803	0.2263	0.4185	0	1
Capable	1803	0.5635	0.4961	0	1
Very capable	1803	0.1814	0.3854	0	1
<i>Resolve personal conflicts peacefully:</i>					
Not very capable	1809	0.0332	0.1791	0	1
Somewhat capable	1809	0.2012	0.4010	0	1
Capable	1809	0.5252	0.4995	0	1
Very capable	1809	0.2405	0.4275	0	1
<i>Get group members to respect the timetable:</i>					
Not very capable	1802	0.0388	0.1933	0	1
Somewhat capable	1802	0.2553	0.4361	0	1
Capable	1802	0.5305	0.4992	0	1
Very capable	1802	0.1754	0.3804	0	1

<i>Develop creative idea:</i>					
Not very capable	1811	0.0320	0.1761	0	1
Somewhat capable	1811	0.2258	0.4183	0	1
Capable	1811	0.5848	0.4929	0	1
Very capable	1811	0.1574	0.3643	0	1
<i>Listen to and respect the ideas of others:</i>					
Not very capable	1810	0.0011	0.0332	0	1
Somewhat capable	1810	0.0276	0.1639	0	1
Capable	1810	0.3680	0.4824	0	1
Very capable	1810	0.6033	0.4893	0	1
<i>Community involvement</i>					
<i>Trust community members:</i>					
Not at all	1817	0.2174	0.4126	0	1
A little	1817	0.5019	0.5001	0	1
A lot	1817	0.2223	0.4159	0	1
Enormously	1817	0.0583	0.2344	0	1
<i>His/her satisfaction to participate in the associative and community life:</i>					
Not at all satisfied	1817	0.0638	0.2445	0	1
Not satisfied	1817	0.3021	0.4593	0	1
Satisfied	1817	0.5179	0.4998	0	1
Very satisfied	1817	0.1161	0.3205	0	1
<i>His/her satisfaction of him/her ability to come out against public decisions that affect youth:</i>					
Not at all satisfied	1813	0.0607	0.2388	0	1
Not satisfied	1813	0.3707	0.4831	0	1
Satisfied	1813	0.4859	0.4999	0	1
Very satisfied	1813	0.0827	0.2756	0	1
<i>Satisfied with the opportunities he/she has to improve his/her social status in the future:</i>					
Not at all satisfied	1817	0.0804	0.2719	0	1
Not satisfied	1817	0.2455	0.4305	0	1
Satisfied	1817	0.5333	0.4990	0	1
Very satisfied	1817	0.1409	0.3480	0	1
<i>Do you feel that your community understands you?</i>					
Not at all	1817	0.1635	0.3699	0	1
A little	1817	0.5834	0.4931	0	1
Good	1817	0.2069	0.4052	0	1
Very good	1817	0.0462	0.2100	0	1

<i>Finance behavior</i>					
<i>Saving</i>					
Saving account=1	1817	0.2119	0.4088	0	1
Saving money=1	1817	0.4832	0.4999	0	1
Saving for studying	878	0.3075	0.4617	0	1
Saving for emergency	878	0.2517	0.4342	0	1
Saving for leisure	878	0.3736	0.4840	0	1
Saving for other reasons	878	0.0672	0.2505	0	1
Amount of saving (in Log)	1817	20.8967	30.4799	0	11.40758
<i>Borrowing</i>					
Loan=1	1817	0.1558	0.3627	0	1
Amount of loan (in Log)	1817	0.9318	20.2374	0	10.30899
Loan for studies	283	0.3110	0.4637	0	1
Loan for emergency	283	0.1661	0.3728	0	1
Loan for migration	283	0.3781	0.4858	0	1
Loan for other reasons	283	0.1449	0.3526	0	1

Section 2: Statistical tests of differences between Treatment and Control Groups

	Initial Sorting				Secondary Sorting			
Outcome indicators	Treatm ent - Control	p- value	N (Treatme nt)	N (Contr ol)	Treatm ent - Control	p- value	N (Treatme nt)	N (Contr ol)
<i>Demographics</i>								
Gender (female=1)	-0.0201	0.2101	598	1219	-0.0111	0.3174	915	902
Age 15-18	-0.0194	0.2025	598	1219	-0.0241	0.1355	915	902
Age 19-21	0.0231	0.8273	598	1219	0.0112	0.6873	915	902
Age 22-24	-0.0051	0.4031	598	1219	0.00431	0.5871	915	902
Age 25-30	0.0014	0.5474	598	1219	0.00853	0.7820	915	902
Single	0.0011	0.5738	598	1219	-0.00241	0.3330	915	902
Urban	-0.0085	0.3468	598	1219	0.0118	0.7198	915	902
Household size	-0.0863	0.1937	598	1219	0.000847	0.5036	915	902
<i>Household Income</i>								
0-1500 MAD	-0.0166	0.2243	598	1219	-0.00181	0.4649	915	902
1500-3500 MAD	-0.0218	0.1869	598	1219	-0.0284	0.1085	915	902
3500-5000 MAD	0.0175	0.8257	598	1219	-0.00529	0.3819	915	902
5000-7000 MAD	0.0066	0.6801	598	1219	0.00566	0.6648	915	902
7000-10K MAD	0.0042	0.6596	598	1219	0.0116	0.8890	915	902
10K+ MAD	0.0100	0.8414	598	1219	0.0182	0.9737	915	902
<i>Educational attainment</i>								
Primary	0.0159	0.7927	598	1217	0.0291	0.9444	914	901
College (intermediate)	0.0082	0.6398	598	1217	-0.0211	0.1620	914	901
Lycée (high school)	-0.0300	0.1129	598	1217	-0.0192	0.2050	914	901
Professional degree	-0.0017	0.4379	598	1217	-0.00481	0.3178	914	901
University	0.0076	0.7864	598	1217	0.016	0.9614	914	901

<i>Current Educational Attainment</i>								
No	0.0305	0.9606	598	1219	0.00202	0.5491	915	902
College	-0.0023	0.3990	598	1219	0.00598	0.7604	915	902
Lycée	-0.0190	0.1236	598	1219	-0.0148	0.1691	915	902
Professional institution	0.0151	0.7447	598	1219	0.0351	0.9488	915	902
University	-0.0243	0.1604	598	1219	-0.0284	0.1091	915	902
<i>Capabilities in different languages</i>								
<i>Arabic:</i>								
No fluency	-0.0036	0.2818	598	1218	-0.0053	0.1858	915	901
Somewhat fluent	0.0178	0.8092	598	1218	0.0032	0.5671	915	901
Fluent	0.0079	0.6250	598	1218	0.0121	0.6982	915	901
Highly fluent	-0.0220	0.1375	598	1218	-0.0100	0.2985	915	901
<i>French:</i>								
No fluency	0.0227	0.8388	598	1218	0.0113	0.6994	915	901
Somewhat fluent	-0.0227	0.1811	598	1218	-0.0269	0.1255	915	901
Fluent	-0.0085	0.3330	598	1218	0.0018	0.5395	915	901
Highly fluent	0.0085	0.8137	598	1218	0.0138	0.9391	915	901
<i>Third language:</i>								
None	0.0142	0.7252	598	1219	0.0082	0.6438	915	902
No fluency	0.0026	0.5466	598	1219	0.0169	0.7947	915	902
Somewhat fluent	-0.0170	0.2119	598	1219	-0.0076	0.3518	915	902
Fluent	-0.0096	0.2709	598	1219	-0.0248	0.0470	915	902
Highly fluent	0.0099	0.8214	598	1219	0.0073	0.7655	915	902
<i>Computer skills:</i>								
Very insufficient	0.0109	0.6996	598	1218	-0.0021	0.4579	915	901
Insufficient	0.0189	0.7764	598	1218	0.0149	0.7372	915	901
Good	-0.0232	0.1476	598	1218	-0.0013	0.4744	915	901
Excellent	-0.0066	0.2563	598	1218	-0.0115	0.1129	915	901
<i>Training</i>								
Training=1	0.0166	0.8320	598	1218	0.0120	0.7713	915	901
<i>Employment Status</i>								
Employed	-0.0034	0.3755	598	1219	-0.0125	0.1099	915	902
Self-employed	0.0111	0.9062	598	1219	- 0.00729	0.1781	915	902
Unemployed	-0.0031	0.4070	598	1219	- 0.00333	0.3937	915	902
Inactive	-0.0045	0.4004	598	1219	0.0231	0.9141	915	902

<i>Employment history</i>								
Work experience=1	-0.0017	0.4728	597	1218	-0.0183	0.2153	914	901
Unpaid internship	-0.0172	0.1927	597	1218	-0.0016	0.4659	914	901
Paid internship	-0.0007	0.4706	597	1218	0.0005	0.5225	914	901
Paid private sector	0.0155	0.8133	597	1218	-0.0134	0.2061	914	901
Paid public sector	-0.0018	0.3158	597	1218	0.0001	0.5091	914	901
Family Business	0.0087	0.8889	597	1218	0.0091	0.9124	914	901
Volunteer	0.0085	0.8383	597	1218	-0.0040	0.3127	914	901
Self-employment	-0.0044	0.3822	597	1218	0.0025	0.5712	914	901
Other experience	-0.0036	0.2803	597	1218	-0.0075	0.1019	914	901
<i>Interest in entrepreneurship</i>								
Interest=1	0.0032	0.5687	560	1150	0.0127	0.7653	862	848
Business idea=1	0.0022	0.5315	486	991	0.0112	0.6667	742	735
Intention to start a business within 12 months=1	0.0099	0.6752	473	955	0.0186	0.8186	723	705
<i>Attitudes and Self-Efficacy</i>								
<i>Confidence to succeed in an interview:</i>								
Strongly unconfident	0.0047	0.7295	560	1150	0.00154	0.5846	862	848
Unconfident	-0.0338	0.0528	560	1150	-0.0282	0.0755	862	848
Confident	0.0182	0.7704	560	1150	0.0141	0.7287	862	848
Strongly confident	0.0109	0.7395	560	1150	0.0125	0.7847	862	848
<i>Attain Goals in the future:</i>								
Strongly disagree	0.0049	0.9184	598	1219	0.00337	0.8470	915	902
Disagree	0.0088	0.7727	598	1219	-0.00796	0.2368	915	902
Agree	-0.0128	0.3015	598	1219	-0.0115	0.3102	915	902
Strongly agree	-0.0009	0.4847	598	1219	0.016	0.7629	915	902
<i>Understand failure causes:</i>								
Strongly disagree	0.0048	0.8148	597	1215	0.00128	0.6006	913	899
Disagree	0.0176	0.9573	597	1215	0.015	0.9412	913	899
Agree	-0.0093	0.3553	597	1215	-0.00468	0.4211	913	899
Strongly agree	-0.0131	0.3000	597	1215	-0.0116	0.3099	913	899
<i>See challenges as opportunities:</i>								
Strongly disagree	0.0072	0.8281	595	1209	0,0181*	0.9946	909	895
Disagree	0.0096	0.7155	595	1209	-0.00684	0.3334	909	895
Agree	0.0157	0.7354	595	1209	0.0172	0.7679	909	895
Strongly agree	-0.0325	0.0802	595	1209	-0.0285	0.0956	909	895
<i>What he/she is learning would help him/her in the future:</i>								
Strongly disagree	0.0016	0.7314	598	1216	-0.00106	0.3335	914	900
Disagree	0.0128	0.9269	598	1216	-0.00171	0.4180	914	900
Agree	0.0163	0.7464	598	1216	0.00754	0.6276	914	900
Strongly agree	-0.0307	0.1083	598	1216	-0.00477	0.4191	914	900
<i>Need to negotiate to attain goals:</i>								
Strongly disagree	0.0152	0.9427	597	1213	0.0116	0.9005	912	898
Disagree	0.0204	0.8869	597	1213	-0.00129	0.4676	912	898

Agree	-0.0436	0.0407	597	1213	-0.0344	0.0715	912	898
Strongly agree	0.0079	0.6307	597	1213	0.0241	0.8597	912	898
<i>Leadership in the future:</i>								
Strongly disagree	0.0016	0.5653	596	1217	0.00381	0.6581	912	901
Disagree	-0.0078	0.3520	596	1217	-0.0294	0.0638	912	901
Agree	-0.0291	0.1221	596	1217	-0.0114	0.3141	912	901
Strongly agree	0.0353	0.9540	596	1217	0.0369	0.9698	912	901
<i>Set him/her goals to attain them:</i>								
Strongly disagree	-0.0010	0.4149	596	1218	0.00123	0.6068	913	901
Disagree	0.0182	0.9068	596	1218	-0.00111	0.4658	913	901
Agree	0.0110	0.6702	596	1218	0.0368	0.9417	913	901
Strongly agree	-0.0282	0.1227	596	1218	-0.0369	0.0525	913	901
<i>Team work to attain common goal:</i>								
Not very capable	-0.0014	0.4344	598	1219	-0.00288	0.3575	915	902
Somewhat capable	0.0030	0.5766	598	1219	0.0191	0.9075	915	902
Capable	-0.0033	0.4473	598	1219	0.00255	0.5436	915	902
Very capable	0.0017	0.5296	598	1219	-0.0188	0.1917	915	902
<i>Adapt to new situations:</i>								
Not very capable	0.0003	0.5176	597	1217	0.000391	0.5211	914	900
Somewhat capable	0.0073	0.6478	597	1217	-0.0137	0.2248	914	900
Capable	-0.0059	0.4072	597	1217	-0.000737	0.4875	914	900
Very capable	-0.0018	0.4675	597	1217	0.0141	0.7503	914	900
<i>Solve the problems:</i>								
Not very capable	-0.0088	0.1193	597	1217	-0.00301	0.3333	913	901
Somewhat capable	0.0212	0.8404	597	1217	0.0175	0.8087	913	901
Capable	-0.0199	0.2118	597	1217	-0.0268	0.1255	913	901
Very capable	0.0074	0.6500	597	1217	0.0123	0.7525	913	901
<i>Present a topic that he/she knows to a group of people he/she does not know:</i>								
Not very capable	-0.0107	0.2567	590	1211	-0.00656	0.3352	905	896
Somewhat capable	0,0513*	0.9879	590	1211	0.0273	0.8995	905	896
Capable	-0.0225	0.1812	590	1211	-0.0281	0.1134	905	896
Very capable	-0.0180	0.1730	590	1211	0.00731	0.6580	905	896
<i>Resolve differences within a group:</i>								
Not very capable	-0,0249*	0.0167	591	1211	-0.0103	0.1737	907	895
Somewhat capable	0,0457*	0.9812	591	1211	0.0157	0.7758	907	895
Capable	-0.0147	0.2792	591	1211	-0.00511	0.4141	907	895
Very capable	-0.0062	0.3654	591	1211	-0.000224	0.4947	907	895

<i>Convince a group of people</i>								
Not very capable	-0.0096	0.1254	595	1208	-0.00389	0.3108	910	893
Somewhat capable	-0.0059	0.3890	595	1208	-0.029	0.0706	910	893
Capable	0.0158	0.7371	595	1208	0.0306	0.9047	910	893
Very capable	-0.0002	0.4954	595	1208	0.00231	0.5506	910	893
<i>Resolve personal conflicts peacefully:</i>								
Not very capable	-0,0254**	0.0023	598	1211	-0,0192*	0.0113	914	895
Somewhat capable	0.0133	0.7466	598	1211	-0.000196	0.4959	914	895
Capable	0.0126	0.6929	598	1211	0.0265	0.8704	914	895
Very capable	-0.0005	0.4906	598	1211	-0.00711	0.3618	914	895
<i>Get group members to respect the timetable:</i>								
Not very capable	0.0101	0.8523	593	1209	0.0117	0.9006	908	894
Somewhat capable	-0.0016	0.4714	593	1209	-0.0249	0.1129	908	894
Capable	-0.0211	0.1995	593	1209	-0.00508	0.4146	908	894
Very capable	0.0125	0.7445	593	1209	0.0183	0.8459	908	894
<i>Develop creative idea:</i>								
Not very capable	0.0028	0.6246	597	1214	-0.00168	0.4197	913	898
Somewhat capable	-0.0254	0.1121	597	1214	-0.0371	0.0295	913	898
Capable	0.0078	0.6234	597	1214	0.0307	0.9072	913	898
Very capable	0.0149	0.7929	597	1214	0.00813	0.6825	913	898
<i>Listen to and respect the ideas of others:</i>								
Not very capable	0.0017	0.8388	595	1215	0.0000171	0.5044	912	898
Somewhat capable	-0.0089	0.1384	595	1215	-0.00841	0.1376	912	898
Capable	0.0099	0.6583	595	1215	0.0322	0.9222	912	898
Very capable	-0.0026	0.4582	595	1215	-0.0238	0.1503	912	898
<i>Community involvement</i>								
<i>Trust community members:</i>								
Not at all	0.0150	0.7660	598	1219	-0.031	0.0546	915	902
A little	0.0128	0.6964	598	1219	0.016	0.7521	915	902
A lot	-0.0175	0.1992	598	1219	0.0142	0.7663	915	902
Enormously	-0.0103	0.1906	598	1219	0.000835	0.5302	915	902
<i>His/her satisfaction to participate in the associative and community life:</i>								
Not at all satisfied	-0.0070	0.2823	598	1219	-0.00349	0.3806	915	902
Not satisfied	0,0640**	0.9974	598	1219	0,0561**	0.9954	915	902
Satisfied	-0.0282	0.1295	598	1219	-0.0355	0.0650	915	902
Very satisfied	-0.0288	0.0359	598	1219	-0.0171	0.1285	915	902
<i>His/her satisfaction of him/her ability to come out against public decisions that affect youth:</i>								
Not at all satisfied	0.0028	0.5911	595	1218	0.0162	0.9254	912	901
Not satisfied	0.0364	0.9339	595	1218	0.0133	0.7214	912	901
Satisfied	-0.0272	0.1385	595	1218	-0.0283	0.1141	912	901
Very satisfied	-0.0119	0.1933	595	1218	-0.0012	0.4630	912	901

<i>Satisfied with the opportunities he/she has to improve his/her social status in the future:</i>								
Not at all satisfied	0.0051	0.6467	598	1219	0.0078	0.7283	915	902
Not satisfied	0.0194	0.8166	598	1219	0.0277	0.9151	915	902
Satisfied	-0.0251	0.1565	598	1219	-0.0397	0.0450	915	902
Very satisfied	0.0006	0.5145	598	1219	0.0042	0.6019	915	902
<i>Do you feel that your community understands you?</i>								
Not at all	0.0143	0.7810	598	1219	0.00784	0.6743	915	902
A little	-0.0228	0.1775	598	1219	-0.0203	0.1906	915	902
Good	0.0044	0.5852	598	1219	0.014	0.7687	915	902
Very good	0.0041	0.6521	598	1219	-0.00154	0.4379	915	902
<i>Finance behavior</i>								
<i>Saving</i>								
Saving account=1	0.0117	0.7173	598	1219	0.00413	0.5853	915	902
Saving money=1	0.0323	0.9022	598	1219	0.0333	0.9224	915	902
Saving for studies	0.0205	0.7289	276	602	-0.00315	0.4598	427	451
Saving for emergency	0.0025	0.5314	276	602	0.025	0.8027	427	451
Saving for leisure	0.0164	0.6795	276	602	0.00692	0.5837	427	451
Saving for other reasons	-0,0394*	0.0152	276	602	-0.0288	0.0446	427	451
Amount of saving (in Log)	0.1770	0.8461	598	1219	0.17	0.8507	915	902
<i>Borrowing</i>								
Loan=1	-0.0022	0.4529	598	1219	-0.0143	0.2007	915	902
Amount of loan (in Log)	-0.0011	0.4960	598	1219	-0.0694	0.2544	915	902
Loan for studies	-0.0123	0.4172	94	189	-0.0662	0.1157	149	134
Loan for emergency	0.0416	0.8112	94	189	0.0814	0.9668	149	134
Loan for migration	0.0086	0.5557	94	189	0.0189	0.6280	149	134
Loan for other reasons	-0.0379	0.1974	94	189	-0.0342	0.2081	149	134