

FINAL TECHNICAL REPORT / RAPPORT TECHNIQUE FINAL

FINAL REPORT

Adam Osman;

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Name of the Principal Investigator(s): Adam Osman, Jamin Speer & Abdelrahman Nagy

Corresponding Author: Adam Osman, email: aosman@illinois.edu, phone: 1 (217) 244-3950

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Executive Summary

Youth unemployment is a chronic social and economic problem in Egypt, as in much of the developing world. Unemployment in Egypt is 13.4%; more than 3.5 million, or 87%, of those unemployed in Egypt are youth between ages 15 and 29.¹ Two in five of the unemployed hold a university degree or higher, most graduating from the public university system, where 25% of graduates have never operated a computer. The supply of inappropriately or under-trained youth is high, while employers struggle to find qualified young workers with the right skills. With a growing labor force of 27 million, and a youth bulge that requires 800,000 new jobs per year, solutions need to make use of the wealth of unutilized human resources available in the country.

While there are many possible reasons for this widespread unemployment, including discrimination on the part of firms and lack of the right skills on the part of young people, to this date there is little rigorous evidence on these matters or on how to improve outcomes for these unemployed people.

In this report, we describe a series of research projects we undertook in Egypt to better understand the labor market and evaluate potential solutions. These projects, including a large survey of Egyptian employers and multiple randomized trials for recruiting and training young people, speak to the needs and biases of employers as well as the psychological frictions and skill deficiencies of potential workers. Our findings show that there are many hurdles for unemployed young people trying to find a good job. Some of these hurdles can be overcome with better skills training or education, but others require firms' cooperation and potential government policy interventions.

The first project is a large-scale survey of about 1,200 Egyptian businesses in four different sectors: retail, information technology (IT), restaurants, and hotels. We gathered detailed information about each firm's skill demands, hiring methods, labor arrangements, and vacancy rates. This survey shows that use of employee referrals and owner connections in hiring is common: almost 50% of hiring in retail occurs using these methods. But it is hardly universal, with only about 25-30% of hiring in IT and hotels making use of some sort of connections. Thus, potential workers who do not "know someone" are already at a disadvantage in some industries. This is particularly true among firms that value "soft" skills more heavily. Firms seem to be using connections as a way to find skills that are more difficult to observe on a resumé.

We show that firms hold widespread biases against those that come from low socio-economic backgrounds and against women. Using *List Randomization*, an innovative survey technique, we ask firms directly if they weigh socio-economic status higher than skills when making hiring

¹ Murata, Akira (2014). "Designing Youth Employment Policies in Egypt." Global Economy & Development Working Paper No. 68, January, Global Economy and Development at Brookings.

decisions and about one third of firms confirm this to be the case. When we use list randomization we find that the true proportion of firms that do this is closer to half. This stands in contrast with a similar set of questions aimed at getting at gender bias. We ask firms directly if they prefer to hire men over women and over 50% admit to this. When we use the list randomization we find the same proportion. Together these provide two important facts: discrimination by SES and gender is widespread, and firms do not feel that discriminating against women is anything worth hiding.

The second project is a series of randomized experiments designed to understand what motivates young people to sign up for and attend labor market assistance programs that can help them find jobs. These experiments first show the seriousness of information frictions. Simply telling someone about potential opportunities dramatically increases their probability of signing up. We also find evidence that the price of training matters, with higher fees leading to lower application rates. On the other hand, small incentives also do not seem to be effective in increasing application rates, and anecdotal evidence points to an expectation that the most legitimate programs provide significant stipends to trainees. Importantly, the information treatments have a larger impact than changing the fees associated with the training, implying that information frictions are at least as important as financial frictions for job seekers.

We also find evidence that there are negative stigmas associated with entry-level jobs which keep many people from wanting to try for such jobs. We find that these stigmas are mitigated by maturity and work experience. But that means that those who need the most help – young, less experienced people – are staying away from training programs because they are concerned about the social image of starting jobs. On the other hand, we do not find any evidence that people are staying away from training because they do not wish to be seen as poor or less fortunate. One important takeaway from this part of the research program is that while application rates were high, getting individuals to actually attend the training is very challenging. Even with wide ranging outreach (we implemented Facebook ads that reached over a million youth), and high application rates in some contexts, we were only able to convert a very small percentage of applicants into trainees.

The final project is a large randomized evaluation of in skills training for college graduates. 985 eligible individuals were randomized into four groups. One group was taught technical, sector-specific skills, others were taught “soft” skills like interpersonal skills and workplace hygiene, and others received a combination of the two, with the final group served as a control group. We contacted all four groups between 1-2 years after randomization and implemented a survey with them which allowed us to estimate the impacts of the program. Since we were able to randomize who received which type of training we are able to interpret differences in outcomes as the causal impact of the program.

Importantly, we find that none of the training programs led to increases in employment over those who did not get any training. 90% of men in the control group managed to find a job, while 63% of women in the control group managed to find work. These proportions are no different for those that received training. On the other hand, we do see some evidence that the training that combined soft and technical skills in particular affects the quality of the jobs the trainees have in the short and medium term, and led to an increase in income. Getting soft skills alone does not help the trainees get more pay. Getting technical skills alone does increase earnings in the short term, but the effect goes away quickly. Hence, soft skills do have value – but only if they are combined with technical skills.

We find that all three types of training do affect longer term job search behavior and personal aspirations. All three training groups are more likely to be actively looking for work and have higher reservation wages on average. We also find that the training leads women in particular to want to delay marriage in the coming year so that they can focus on their employment prospects, while it has the opposite effect on men, who are more likely to intend to get married in the medium term. We also find that 92% of men want to immigrate abroad but this decreases with the training, while 82% of women want to immigrate abroad, with the training have no impact on this outcome.

The results of our projects inform policy in Egypt and other developing countries in a number of ways. Hiring processes need to be made fairer; educational institutions and the government need to provide a more level playing field for those of lower socioeconomic status, women, and those with fewer connections. Labor market assistance programs that already exist can help more people if they are better advertised and if entry-level jobs are given a more positive image. Advertising campaigns aimed at showing the value of any work could be one way to help young people get started in the labor market. Importantly, job training programs do not seem to have transformative impacts on labor market outcomes in the medium term. Most of the potential participants manage to find a similar job even without the training. There are some benefits, especially for training programs that combine soft and technical skills. Convincing educational institutions to combine soft and technical skills training could be a better strategy than separate training programs and would give their students the best chance to succeed in the labor market.

In addition to the substantive contributions of the research, we are among the first to start building a foundation for future experimental research in Egypt. Egypt has little prior infrastructure, personnel, or history with randomized trials. In our survey of employer skill demands, our recruitment experiments, and our training program experiment, we have worked with local NGOs, government entities, and private survey firms, in each case deepening their understanding of how randomized experiments work and of their value. In some cases, we had to work very hard to convince our partners that randomized experiments were needed. We believe that this itself is important work that will pay dividends for future researchers doing work in Egypt.

Section 1: The Research Problem

Youth Unemployment is a chronic social and economic problem in the developing world in general and in the Middle East and North Africa (MENA) region in particular. The region had persistently exhibited the highest unemployment rates among all regions throughout the past twenty years with a rate hovering around 26% between 2014 and 2019.

Such high unemployment rates among youth are often attributed to the difficulty of labor market insertion due to a mismatch in the skills acquired through the education system and the skills required in the market. Many training and employment matchmaking services providers enter the market seeking to offer a solution to the skill mismatch problem by equipping their students with the skills needed in the market. However, many market imperfections could prevent these institutions from reaching their goal. Our study aims to address many of these market frictions and evaluate the effect of mitigating these frictions on labor market outcomes. It focuses on 4 layers of frictions in specific:

- 1- Search frictions: this is manifested when employers fail to find the skills they need in the pool of applicants.
- 2- Information frictions: the information asymmetries in the labor market could result in the lack of information of education and training institutions about the skills demanded by the employers, the lack of information of job-seekers on relevant training opportunities and job matching services as well as their lack of information about suitable jobs or where to look for them resulting
- 3- Training frictions: manifested in the inability of job-seekers to acquire the skills demanded in the market through higher education institutions or through available training providers
- 4- Recruitment frictions: training providers face considerable challenges to recruit trainees even when the service is highly subsidized due to biased perceptions and lack of trust in the authenticity of these institutions and in the value of the training they offer

Our study employs a variety of methods to address each of these types of frictions:

- 1- A large-scale survey with nearly 1200 firms to identify the skills demanded for entry-level jobs in three sectors hospitality, retail and Information Technology/ Business Process Outsourcing (IT/BPO) and analyzing the data to inform the design of training curricula used by training institutions.
- 2- Implementing a randomized evaluation to test different messaging techniques' effectiveness in attracting job seekers to apply for the training and participate. The experiments also help clarify how different messages affect the types of people who respond.
- 3- Implementing a randomized evaluation to evaluate the job market outcomes of different employment training curricula with varying weights for technical and soft skills.

To implement our study, we partner with EFE| Egypt, an independent not-for-profit foundation registered under the Ministry of Social Solidarity and an affiliate of EFE-Global that aims to bridge the gap between employers and high potential candidates from marginalized backgrounds. It provides them with the skills required for entry into formal jobs in the private sector through rigorous training programs structured around the needs of the local labor market.

Egypt is no exception to the region in persistent high rates of youth unemployment. To highlight the main features of the Egyptian labor market we will revisit the situation analysis we presented in our proposal.

Unemployment in Egypt is 13.4%; more than 3.5 million, or 87 percent, of those unemployed in Egypt are youth between ages 15 and 29.² Two in five of the unemployed hold a university degree or higher, most graduating from the public university system, where 25% of graduates have never operated a computer. The supply of inappropriately or under-trained youth is high, while employers struggle to find qualified young workers with the right skills. With a growing labor force of 27 million, and a youth bulge that requires 800,000 new jobs per year, solutions need to make use of the wealth of unutilized human resources available in the country. Scale is of critical importance.

The features of the labor market suggest that much can be gained from addressing the **skill mismatch** between employers and youth. This market failure is seen both in the high rate of youth unemployment and the fact that 44.7 percent of all employed Egyptian youth are in jobs that do not match their university degrees.³ The educational system has been too slow to respond to the changing needs of employers in the modern economy. Employers persistently report they are unable to find candidates with the right skills.

The skills mismatch is partly driven by **information asymmetries**. Youth are uninformed about the skills they need for employment and about the market returns in various sectors. Without this information, youth focus on jobs that they and their parents perceive as desirable, whether or not these jobs are available in large numbers. This leads to an abundance of unemployed youth, employed but mismatched youth, and unfilled jobs in the labor market. A recent study in Egypt found that when students are given information about wages and employment probabilities in various sectors, they can change their plans for future employment.⁴

Finally, **perceptions** may lead to labor market frictions. One way is through the importance placed on the “prestige” of a job. Parents often encourage their children to pursue education and careers in certain fields, while others fields are discounted as a viable career path and youth instead stay

² Murata, Akira (2014). “Designing Youth Employment Policies in Egypt.” Global Economy & Development Working Paper No. 68, January, Global Economy and Development at Brookings.

³ Barsoum, Ramadan, & Mostafa. (June 2014). Labour Market Transitions of Young Women and Men in Egypt. Cairo: Work4Youth

⁴ Osman, Adam (2014), “Occupational Choice Under Credit and Information Constraints.” Working Paper.

at home rather than pursue available opportunities.⁵ Youth may also feel that taking an entry-level job is seen negatively by future employers, instead of seeing it as a first step toward a successful career. In many cases, youth and their parents do not realize these opportunities can serve as stepping stones to the next possibility, a chance to move upward professionally.

Perceptions can have an important **gender-related component** in the Egyptian context as well. For instance, a recent survey showed that 93% of young men and 81% of young women believe men should have priority over women for work when jobs are scarce.⁶ These types of perceptions may affect both investments in skills by young women and the chances that employers will hire a female job candidate, even if she is the best candidate for the job. These perceptions also have a potentially negative impact on average labor productivity in Egypt.

Private sector employers often show blatant preference toward youth from more privileged socioeconomic backgrounds, such as graduates from private universities, who are perceived as having better skill sets. Anecdotally, however, employers mention that these graduates of private universities often quickly leave entry-level jobs, leading to high turnover for the employer. It is possible that some employers may not understand how to reach the right types of workers, who have the required skills and will stay on the job, or how to train workers properly. These employer errors are difficult for a training program targeting youth to address, but likely are worthy of further investigation as they are potentially an important part of the problems in the Egyptian labor market.

It is especially important to understand employer skill demand and perceptions among **small and medium enterprises (SMEs)**. The 2014 Central Agency for Public Mobilization and Statistics (CAPMAS) Enterprise Census report shows that 88 percent of all Egyptian companies are SMEs, which account for 80 percent of the country's GDP and 75 percent of the labor.⁷ In EFE|Egypt's experience, Egyptian SMEs have a high need for qualified entry-level employees with sector-specific skills and knowledge but are unable to tap into the labor supply on their own. Effective employment training programs can act as a vital resource, providing youth with the necessary job skills for employment, and giving the SMEs a qualified pool of applicants to choose from.

Employment training programs can potentially address these problems if they are properly designed. However, it is difficult to address these problems with supply-driven training programs that do not explicitly seek out the input of employers in designing their curricula. This leads to "training fatigue," in which youth accumulate a series of post-graduate trainings and certificates, but become only nominally more skilled and increasingly frustrated with their continued

⁵ Groh, Matthew et al. (2014), "Testing the Importance of Search Frictions, Matching, and Reservation Prestige Through Randomized Experiments in Jordan." World Bank Policy Research Working Paper No. 7030.

⁶ Population Council (2011). "Survey of Young People in Egypt." Accessed February 2015 at <http://www.popcouncil.org/research/survey-of-young-people-in-egypt-final-report-and-data-sets>.

⁷ Qayyum, Mehrunisa. "Revolutionary Business: Rethinking Entrepreneurship in the Middle East." Carnegie Endowment for International Peace. January 26, 2012. Accessed January 2015 at: <http://carnegieendowment.org/2012/01/26/revolutionary-business-rethinking-entrepreneurship-in-middle-east/ck6q>

unemployment without clear market-demanded skills or link to a job opportunity. Long durations of unemployment have thus become endemic among Egypt's youth.

Because of the abundance of low-return training programs, youth are often **skeptical** of the value of training. Thus, it is important for employment training stakeholders to understand how youth make the decision to enter training, and what types of recruitment strategies might best reach the populations that the training programs are targeting. Research in the United States shows that the program design, recruitment, and sign-up rules and strategies can have large effects on who opts in to a training program;⁸ although Egypt is a different context, it is likely that the strategies used to recruit youth for training programs can have widely varying impacts there as well.

Two recent reports highlight the challenges faced by the Egyptian labor market and help motivate this project's goals. The *Survey of Young People in Egypt* provides a comprehensive picture of Egyptian youth and highlights the main issues facing them in the labor market.⁹ A World Bank report provides a detailed picture of the labor market in Egypt and attempts to identify the causes of some of the challenges it faces.¹⁰ While these studies are extremely informative in identifying the failures of the labor market, they do not seek to provide concrete solutions for these problems. However, they do help motivate and frame this project.

The Egyptian labor market match is fraught with inefficiencies, much to the detriment of young workers and employers. Training programs can potentially address these market failures by giving workers the skills they need to find employment, addressing the problems of information asymmetries and skill mismatch. Training programs that also target employment for SMEs can help to better connect youth with the businesses that have growing employment. If an employment-driven training model can potentially address these challenges, it is of critical importance to rigorously evaluate its impact and efficiency and mobilize this evidence.

⁸ Heckman, James J., and Jeffrey A. Smith (2004), "The Determinants of Participation in a Social Program: Evidence from a Prototypical Job Training Program." *Journal of Labor Economics*, Vol. 22, No. 2, pp. 243-298.

⁹ Population Council (2011). "Survey of Young People in Egypt." Accessed February 2015 at <http://www.popcouncil.org/research/survey-of-young-people-in-egypt-final-report-and-data-sets>.

¹⁰ World Bank (2014). "Arab Republic of Egypt – More Jobs, Better Jobs: A Priority for Egypt." Washington, DC: World Bank Group. Accessed February 2015 at <http://documents.worldbank.org/curated/en/2014/06/20318997/arab-republic-egypt-more-jobs-better-jobs-priority-egypt>.

Section 2: Progress towards Milestones, Methodology, Challenges & Synthesis of Research Results and Policy Recommendations

In this section we provide a detailed account of our activities broken down into subsections that discuss each main component of the project as outlined in the initial proposal. For each component we begin by reproducing the original milestones, outlining the methodology we used to address each point, discuss our progress on each milestone, including a detailed timeline of events. We then discuss the challenges we faced in implementation of the research in the field, how we overcame those challenges. We complete each subsection with a discussion of the high level results and our policy recommendations based on our data analysis.

MILESTONE 1

Enhance the understanding of skill demand in the retail, hospitality, and information technology/business process outsourcing sectors

Related Outputs

- 1.1 Employer survey and analysis of market demanded skills and competencies in three target sectors: retail, hospitality, and IT/BPO (J-PAL)
- 1.2 Data collection and analysis of continued skill development from EFE alumni (EFE and J-PAL)

Methodology

To accomplish the first milestone we focused on two main outputs as outlined above, (1.1) an employer survey and (1.2) data collection and analysis of EFE alumni.

1.1 Market Demanded Skills:

To study the skill demands and hiring methods of firms in Egypt, we conducted a large-scale survey of hiring managers. After a short qualitative survey was conducted on a small group of firms to identify key occupations and skill needs in each industry, we conducted a longer quantitative survey of 1,186 total firms: 539 in retail, 126 in information technology, 169 in hotels, and 352 in restaurants. The survey provides us with unique data on the skill demands, hiring and training practices, challenges, biases, and institutional relationships of the firms.¹¹

The surveys were conducted via interviews with human resources or hiring managers at each establishment. Upon arrival, the interviewer asked to speak with a manager who has authority over personnel and hiring matters. Each survey took approximately one hour and contained about 80

¹¹ The full surveys used for each industry are included in the supplementary files submitted with this report.

questions, varying slightly by industry. The core questions were the same for each industry, with changes made to reflect industry occupations and skill needs.

The survey focused on three key areas. One major area was information about employment and labor arrangements. This included questions about the number of employees, change in size over time, the age and educational distributions of employees, and whether workers are "formal" (working with an official contract) or "informal".

The second area of focus was hiring methods and difficulties in hiring. We asked what share of workers are hired with no connection to anyone at the firm, or with a connection to the owner, an employee, or a customer. Firms also reported whether they had relationships with educational institutions for recruiting students and whether potential workers apply online or in person. We then asked about vacancies, long-term vacancies, average time to hire, average time a worker takes to reach acceptable productivity, and how often workers leave (turnover).

The third area was skill demands. Firms were asked to rate a long list of skills - both technical and "soft" skills - on a scale of how important they are for the entry-level occupation we chose to ask about. Then, firms were asked to list the most important skill from that list and the hardest skill to find in the labor market from that list. For example, for retail (where the occupation is salespersons), we asked firms to rate the importance of cooperation with other employees, ability to greet customers in a friendly manner, showing up to work on time, staying on task, keeping accurate counts of clothing stock, and many other skills. The lists of skills were tailored to the industry of the firm being surveyed. In addition to these, we also asked about firm training practices, promotion practices, pay, and relationships with local institutions.

Because industries and firms differ in their occupational makeups, we focus our skill and hiring questions on the same entry-level occupation for each industry. For retail, we use salespersons; for hotels, front desk workers (receptionists); for restaurants, waiters; and for IT, junior developers. These occupations were chosen based on results of the pilot qualitative surveys of firms.

To distinguish firms by complexity and sophistication, we ask various questions tailored to each industry. These include things like the types of technology they use, whether or not they have websites and/or reservation software, whether customers make reservations, whether customers are wealthy, whether customers are international, whether the firm pays higher wages than its competitors, and whether and how the firm provides training for their workers. We ask these because these factors may be correlated with firms' ability to hire workers and the wages they pay. This could be for multiple reasons. More "sophisticated" firms may have name recognition and non-pecuniary benefits for employees. On the other hand, more sophisticated firms may require higher levels of skill and thus may have vacancies.

With these detailed data in hand we are able to implement some of the first sets of analyses related to hiring in entry-level positions in Egypt. These data allow us to look at hiring behavior and how it correlates with the types of skills firms say they need. This is important because many job training institutions aim to train job seekers on skills firms need, without having any rigorous data on how those needs differ by firm.

Survey Experiments: We also included three small experiments in our survey. The first two experiments are “List Randomizations” which are meant to allow for respondents to indirectly admit to statements that may be sensitive. This works by providing half of the sample a list of four innocuous statements (like “I was born in this city”) and asking them to report the number of these statements that they believe are true. Importantly they would only provide a number, and not mention which of the statements are true. Then, the other half of the sample would get a list of five statements which include the four innocuous statements and one sensitive statement. By comparing the number of true statements in both groups we can recover the proportion of the sample that believes the sensitive statement is true. We did this with two sensitive statements: “When hiring a new employee, I prefer to hire men over women” and “When hiring a new employee I will put more weight on their socioeconomic background than on their technical skills.”

The third experiment was to test the importance of how the question is worded on individual responses. We asked individuals the following question: “Some employers complain that they cannot find workers with the appropriate skills. Do you believe there is a lack of entry level job applicants with enough skills to handle the work in your business?” but we randomized if the individual was read the first part of the question “Some employers complain that they cannot find workers with the appropriate skills”. This tests if leading questions can change responses to important questions.

1.2 Analysis of continued skill development by EFE Alumni:

To improve our understanding of how skill development changes over time we also were able to build into our survey of EFE graduates questions related to their skill acquisition, and their views related to the value of the training they received from EFE. We also collected data on the other training programs they attended and how much they spent on those programs. While the majority of the results related to EFE alumni outcomes will be discussed in milestone 2.3 below, we will include selected insights here.

Progress towards milestones

In the first quarter of the project a request for proposals was released to hire a firm to conduct the market skills and competencies study. EgyPols consultancy firm was selected and they applied to get data collection approval from the Central Agency for Public Mobilization and Statistics (CAPMAS). In preparation for the quantitative survey and to gain time until the CAPMAS approval is obtained, EgyPols conducted nine in depth interviews with employers in the 15 sectors

of interest: retail (6), hospitality (3) and IT (6). The learnings from these interviews were used to inform both the quantitative surveys and EFE's training program.

It took some time for EgyPols to receive CAPMAS approval which occurred in October 2016 and the data collection of the retail survey started the following month. The IT and hospitality surveys followed. Data collection with our initial target of 1000 firms across the three sectors was planned to conclude in May 2017. In April, we implemented a new set of data quality checks on the IT and hospitality surveys which included recording portions of the audio of the surveyors as they implemented the survey. To our knowledge, this practice was never adopted before in the data collection industry and it goes above and beyond industry best practices. Unfortunately, we found that much of the data seemed to be fabricated. We viewed this challenge as a learning opportunity and spent a lot of time and effort trying to understand why this had happened and put into place a new system that ensures data quality more quickly.

We discarded surveys done poorly and negotiated with EgyPols to redo surveys proven to be fabricated. Around 15% of the surveys were repeated and implemented with a satisfactory quality. However, as we still could not verify the quality of many of the earlier surveys (before audio recording began) we took a conservative approach and decided to discard those surveys. We then negotiated a new contract with EgyPols to conduct a second round of data collection building on the first round's lessons and using our new and improved data quality assurance methods. We were able to do this within budget because the devaluation of the Egyptian pound brought our first survey efforts in under budget.

Data collection of round 2 started in May 2018 and concluded in January 2019. We collected 1000 new surveys, and had nearly two hundred from the earlier round that we determined to be high quality, so all together we exceeded the initial target of 900 firm surveys for the project. The enhanced data quality assurance measures adopted were reflected in the significant improvement of the quality of the data. Whereas before the quality checks our data analysis seemed to be suggesting that many of our questions had no strong relationship with hiring practices, after we implemented stricter quality controls we found that our results which much more consistent with other work in this area.

Implementation Timeline

- *September 2015:* tender announced to recruit a research firm that will conduct a market study aiming to enhance the understanding of skill demand in the retail, hospitality, and information technology/business process outsourcing sectors.
- *November-December 2015:* a research firm, EgyPols, was selected and contract was signed with AUC.
- *March 2016:* 6 experienced surveyors were selected and trained
- *March – April 2016:* qualitative surveys were conducted with 6 employers from the retail sector. The findings were compiled in a report submitted end of April 2016

- *May- June 2016:* qualitative surveys were conducted with 6 employers from the IT/BPO sector. The findings were compiled in a report submitted mid-June 2016
- *July – August 2016:* qualitative surveys were conducted with 3 employers from the hospitality sector, the rest of the surveys is underway.
- *August 2016:* Questionnaire for the quantitative survey to be conducted was finalized and implementation is pending the approval of CAPMAS
- *October 2016:* Approval obtained from CAPMAS and retail quantitative survey installed on data collection software *SurveyCTO*
- *November 2016:* Data collectors trained on retail survey and *SurveyCTO* and start of data collection.
- *December 2016:* Data collection for the retail survey completed.
- *February 2017:* Retail report produced.
- *February 2017:* IT quantitative survey finalized and installed on *SurveyCTO*, data collectors trained, and start of data collection.
- *March 2017:* Hospitality (hotels and restaurants) surveys finalized and installed on *SurveyCTO*
- *April 2017:* Data collection of the IT survey concluded and hospitality surveys data collection started.
- *April - May 2017:* All four surveys back-checked through listening to audio recordings of the surveyors conducting the survey and recontacting respondents for a shorter version of the survey. Data fabrication incidents were detected.
- *May 2017:* Data collection firm contacted and they committed to redo surveys conducted by untrustworthy data collectors.
- *June – August 2017:* New data collectors recruited and trained and a new round of hospitality surveys data collection started. Back-checking activities were held hand in hand with the data collection to ensure data quality, any surveys that proved to be of poor quality were repeated.
- *September-October 2017:* Data collection was completed using the new improved methods to ensure the collection of high quality data. While we found the quality of the responses in this final period satisfactory we could be not confident in the earlier work that was done beforehand.
- *December 2017-January 2018:* Discussions between J-PAL and Egypols to compile the lessons learned from the first phase of data collection and negotiations regarding a second phase of data collection that would allow us to collect a complete set of firm surveys of the highest quality. Plan and timeline for the second phase of data collection submitted
- *February 2018 – April 2018:* Finalizing contracting for data collection firm for the second survey round. Recruitment of fresh college graduates with no prior experience in data collection to participate as data collectors in phase 2.
- *May 2018:* Intense and in-depth training of new data collectors in both a classroom setting as well as in the field.

- *May 2018*: Start of phase 2 of data collection. High frequency checks of performance in audio recordings were implemented and data collectors were provided weekly feedback to insure continued high quality performance.
- *June 2018 – October 2018*: Ongoing data collection. 1000 surveys were completed to our satisfaction. When we combine this with the surveys from the first round whose quality we were able to validate we get a total of 1200 high quality surveys.
- *October 2018 – February 2019*: Data cleaning and analysis.

Challenges Faced and Our Response

In the first year of the project there were significant delays to start data collection because of the delay in obtaining the CAPMAS approval. EgyPols applied for preliminary approval in May and did not obtain it until 5 months later in October 2016.

The main challenge we faced, however, was the quality of the data and the data fabrication incidents in the first round of data collection. This was, nevertheless, an eye-opening experience because the issue of data quality is not specific to our experience or to the firm we dealt with, it is a general issue in Egypt and data fabrication is a recurrent problem. This turned out to be a rich learning opportunity for us and motivated us to set-up a rigorous data quality assurance system that ensures the highest standards of data quality. This benefited not only this project but all the other projects of J-PAL in Egypt.

The system we set-up has five main components: (i) we stipulated that the data collection company hired fresh graduates with no experience in data collection to avoid the likelihood that they have learned how to fake data or do other low quality data collecting activities, (ii) we recorded audio for parts of the survey and hired a team of quality assessors to listen to *every* recording and grade them, (iii) we provided weekly feedback to the data collectors about how they performed on the surveys so that they can make improvements right away, (iv) we've had the surveyors make a WhatsApp group where they share their location in real time whenever they start a new survey so that our quality assurance staff can make surprise visits that are actually a surprise (in the past we would need to call people to see where they are so that we could drop in on them, which gives them advance warning of the check), and (v) we regularly reviewed the data as came in to look for errors and inconsistencies and go back to the data collectors with any issues that arose.

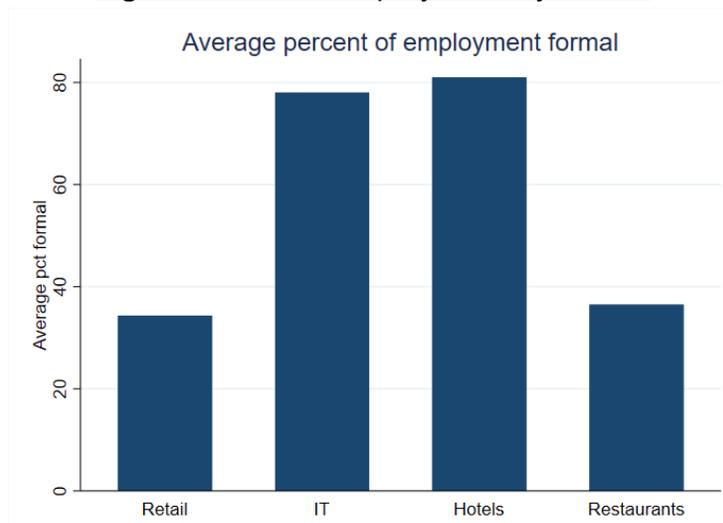
All together these strategies led to much improved data quality. It also opened our eyes to the regular corruption in the data collection industry in Egypt and made us much more cautious when reading any other studies coming from other researchers. The issues is not one of bad intentions by the researchers, or potentially even the data collection companies, but the culture of corruption amongst data collectors is something we heard about again and again and without the audio recording capabilities it would be impossible to detect.

Results and Analysis

Due to a lack of data, knowledge about specific hiring processes and outcomes in developing countries remains limited. Informality of work arrangements and use of employee referrals in hiring have been documented. However, there is very little data on the incidence of these and other practices or on the hiring outcomes that are associated with different approaches. Using the data we collected from a unique survey of Egyptian business establishments in four key industries, we are able to shed light on key attributes of the hiring process. We pay particular attention to the use of "connections" in hiring - that is, hiring people with a connection to the firm's owner - as a distinct phenomenon from using employee referrals.

We document a few key facts. First, almost all firms – about 90% -- use exclusively formal or exclusively informal labor. The choice is strongly related to industry. In IT, 70% of firms use exclusively formal labor. In hotels, that figure is 75%. In retail and restaurants, on the other hand, 56% and 60% respectively use exclusively informal labor. The figure below shows the average percentage of employment that is formal across sectors. About 80% of total employment in hotels and IT is formal, while in retail and restaurants, less than 40% of employment is formal.

Figure 1: Formal Employment by Sector



Second, use of referrals in hiring – that is, hiring someone with a connection to a current employee – is common and similar across industries. In all four industries, the average percentage of workers hired via referral is between 15 and 20%; restaurants are highest at 19.8%. While this does not vary much across industries, there is great variation in use of owner connections in hiring. Firms that use formal labor and firms in IT and hotels do use referrals but are very unlikely to hire using connections. Informal firms and those in retail and restaurants sometimes use owner connections and sometimes do not. In retail, 30% of workers were hired due to a connection with the owner. In IT, this was only 7%; in hotels, 12%; and in restaurants, 16%.

Table 1: Hiring Methods by Industry

	Percent of workers hired using each method			
	Retail	IT	Hotels	Restaurants
No connection to anyone	52.8	74.7	71.4	64.3
Connection to employee (referral)	15.7	17.0	16.3	19.8
Connection to owner	29.7	7.3	12.4	16.3
Connection to customer	2.4	1.0	0.0	0.2

Use of employee referrals in hiring and whether the firm employs formal and informal labor are not correlated with each other. However, use of owner connections is most common among firms using informal labor. We place each firm in a 2x2 matrix, defined by whether they are above average in use of connections and above average in use of informal labor. The table below shows that the largest cell here is “formal and no connections”. About 90% of firms that use mostly formal labor use few connections. Among informal firms, about half use connections in hiring and half do not.

Table 2: Connections and Informality

Percent of Firms in Each Cell: Overall		
	Connections	No connections
Formal	4.3	36.3
Informal	27.7	31.7
Retail		
	Connections	No connections
Formal	2.8	27.0
Informal	38.2	32.1
IT		
	Connections	No connections
Formal	2.8	66.5
Informal	7.2	23.6
Hotels		
	Connections	No connections
Formal	13.3	45.4
Informal	12.4	28.8

Another part of the survey investigates firms' skill demands, both the most important skills for the job and the hardest skills to find in the labor market. The table below shows the most common responses by industry. In retail, for example, the most important skill is “keeping accurate and honest records”, while in hotels, it is “speaking English”.

Table 3: Most Commonly Listed Skills

Most important skill			
Retail	IT	Hotels	Restaurants
Keep accurate/honest records	Learn new programming languages	Speak English	Be groomed for work
Deal w/customers in positive way	Write computer programs	Speak other languages	Keep accurate/honest records
Be groomed for work	Use Java Script	Deal w/customers in positive way	Deal w/customers in positive way
Move quickly/with agility	Solve unfamiliar problems	Solve unfamiliar problems	Work on many things at once
Smile when speak to customers	Use database software	Cooperate w/other employees	Remember orders w/o writing

Hardest skill to find			
Retail	IT	Hotels	Restaurants
Keep accurate/honest records	Learn new programming languages	Speak other language	Keep accurate/honest records
Be groomed for work	Solve unfamiliar problems	Initiate new tasks	Be groomed for work
Judge when to place orders	Create new products	Speak English	Judge when to place orders
Work on many things at once	Do both programming and repair	Solve unfamiliar problems	Work on many things at once
Safeguard valuable customer items	Independently organize time	Cooperate w/other employees	Remember orders w/o writing

We can categorize each skill as “technical” or “soft”. Overall, 55% of firms list a technical skill for the most important, and 45% list a soft skill. Technical skills are most commonly listed in IT (67% technical), whereas soft skills are more commonly listed in retail (52% soft). For the hardest skills to find – a measure of what skills are not as commonly found in the labor market – the results are slightly different. For example, in IT, where technical skills are clearly the most important, half of firms say that soft skills are the hardest to find. On the other hand, restaurants report difficulty in finding technical skills. These results show that the skills which may create frictions in the labor market and prevent workers from finding jobs are not always the most important skill of the job; sometimes what is difficult to find are the more peripheral skills involved in the job.

Table 4: Technical and Soft Skill Demands

	Most important skill			
	Retail	IT	Hotels	Restaurants
Technical	47.8	67.0	58.7	50.6
Soft	52.2	33.0	41.3	49.5

	Hardest skill to find			
	Retail	IT	Hotels	Restaurants
Technical	47.8	49.2	63.8	59.6
Soft	52.2	50.8	36.2	40.4

We can use these skill demands to investigate why firms use referrals and connections in hiring. It could be that they are using these hiring methods to look for skills that are difficult to find on a traditional resume. Our analysis here is preliminary, but we have found interesting results so far. Use of employee referrals does not seem to be related at all to firms’ skill demand patterns. However, firms that use connections are more likely to be firms that say soft skills are the hardest

skills to find in the labor market. While the literature has documented that referrals can be used to find productive workers, it may be that connections are used specifically to find workers with the right soft skills, which are likely less observable in the traditional hiring process.

This view is supported by our findings on the outcomes associated with the use of connections. Firms that use owner connections, surprisingly, do not report faster hiring times, but they do report that workers take a longer time to reach acceptable productivity levels. Use of connections is also correlated with lower employee turnover. The results suggest that firms use connections to find better "matches" for their firm, even if those workers are less qualified at the time of hiring.

Finally, we used innovative survey techniques to test firms' biases against women and against those of lower socioeconomic status. Using a technique called list randomization, we are able to estimate the percentage of firms who hold a certain bias, even if they do not want to admit it directly. For bias against women, we find widespread bias – but it is blatant and not hidden. 55% of firms admit directly that they prefer to hire men over women. With socioeconomic status, we find a bias against those of lower socioeconomic status, but it is not openly admitted. 32% of firms do say that they put more weight on a work candidate's background than their skills. But when we use our list randomization technique, we find that the true percentage is more like 50-55%. These are additional hurdles to employment for women and those of lower family status.

Policy Recommendations

These data support the contention that the Egyptian labor market suffers from a myriad of frictions. While many firms hire formal workers through competitive channels, a large set of firms rely heavily on owner connections for hiring. We find that those firms are more likely to value "soft skills" (e.g. showing up on time, being polite and conscientious, etc.). This may be because it is difficult for firms to be able to assess these skills in a normal interview process and so rely on other channels. We suggest strengthening a culture of providing reference letters and information from teachers and professors about the soft skills of students to help reduce this friction and support a more competitive labor market.

We also find strong evidence of discrimination on both gender and socioeconomic status. In many other countries explicit laws against this type of discrimination are the norm and are enforced. Increasing the salience of these types of laws through additional enforcement and media campaigns may be one way to help combat these types of discrimination.

MILESTONE 2

Support the design of effective and efficient employment training program composition for market demanded skills and competencies.

Related Outputs:

- 2.1 Curriculum development for three sector-specific, employment-driven training programs (EFE)
- 2.2 Piloted variations of sector-specific training programs for three sectors utilizing a variety of soft and technical skill combinations (EFE)
- 2.3 An experimental study measuring the impact of different employment training program designs and their cost-effectiveness, written for submission to a peer-reviewed journal (J-PAL)

Methodology

The training experiment consisted of a large randomized trial. With our NGO partner, Education for Employment Egypt (EFE), about 1,000 young people received a training course that spanned between 3-6 weeks at different points of the study.

Originally this component of the study depended on the recruitment component (outlined in milestone 3 below). Job seekers approached through the recruitment study were intended to create the pool of candidates that would then get trained. After individuals applied for the program the intent was to randomized individuals into four different groups. One group would receive a curriculum that focused primarily on technical skills (often referred to as “hard” skills), another group would receive a curriculum that focused primarily on non-technical skills (often referred to as “soft” skills), a third group would receive a curriculum that included both types of skills and a fourth group was told that they would not be able to be trained this year, and served as the control group. The control group was not denied training outright, but merely offered training at a later date.

This randomized design allows for the causal identification of the impact of the curriculum and training on the outcomes of the applicants. Most other studies of labor market training programs use other types of methods like a pre-post design, where they look at the employment outcomes for people before the program and compare it to their outcomes after the program but this type of evaluation is unable to account for what those individuals would have done if they never received the training. A randomized experiment is often seen as the “gold standard” in impact evaluation, and we took this opportunity to implement an evaluation on a program that has built a reputation for success but had not yet done a rigorous evaluation of its impacts.

While some of the earlier cohorts got longer trainings the majority of the sample were given a 3 week program. The three treatment groups were given 120-hour of instruction that consisted of different modules of content. These modules were classified as either “technical” or “soft” skills. The modules included the following:

- Career directions – resume writing, interview skills, etc. (soft)
- Retail training – training specific to tasks used in retail work and sales (technical)
- General English – basics of English language (soft)
- Business English – English specific to the business world, including grammar, running meetings, presentation skills, etc. (technical)
- English pronunciation – practice in pronouncing difficult English sounds (technical)
- Microsoft Office – Word, Excel, PowerPoint, etc. (technical)
- Business skills – interpersonal skills, small talk, etc. (soft)
- Labor law – employment contracts, etc. (technical)

The first treatment group (“technical skills”) received a 120-hour, 3-week training program where 93% of the hours were from the technical modules. 44 hours were in retail training, 36 in business English, 12 in pronunciation, and 20 in Microsoft office. The only soft skills given were a basic 9-hour introduction to Career Directions.

The second treatment group (“soft skills”) received a 120-hour, 3-week training program where 85% of the hours were from the soft skill modules. 32 hours were in general English, 20 in Career Directions, and 46 in business skills. They also got brief technical training in labor law (4 hours), pronunciation (6), and Microsoft Office (12).

The third treatment group (“technical and soft skills”) also got 120 hours, but this was split almost evenly between soft and technical skills. The hours of soft skills included business skills (38), career directions (18), and retail training (18). The technical skills included business English (22), pronunciation (8), labor law (4), and Microsoft Office (12).

We then surveyed all of the trainees and all of the control group one year after the training had ended. We got responses from 804 people from our sample of 985, for a response rate of 82%. In our survey, we asked about the characteristics, pay, and satisfaction of the first job after training and also of the most recent/current job. We also asked questions about people’s plans for marriage and migration, their attitudes toward gender in the workplace and at home, their business ownership, and how they get along with coworkers and supervisors.

Progress towards milestones

Originally this component depended on the recruitment component. Job seekers approached through the recruitment study were intended to create the pool of candidates that will participate in this study. However, we faced so many challenges in the recruitment study that prevented us from having a reasonable number of candidates showing up to the introductory sessions and then to the training. Therefore, we eventually had to disconnect these two components and EFE started recruiting participants through their usual channels.

The first cohort of applicants started the training in November 2016. The first two cohorts were instructive in showing EFE how the randomization and research implementation will work, along with how to administer the baseline survey on the entire sample, including the control group. Recruitment through usual EFE channels continued throughout the study given that recruiting large numbers of participants through other channels never materialized. The last cohort was trained in September 2018. In total, 11 cohorts were trained accounting for 985 study participants, 775 (79%) of them were assigned to one of the three treatment groups and the remaining participants formed the control group. Among the study participants, 68% were females and 32% males.

By September 2018, and given that we were around two years after the first cohort trained, we had made steps towards starting the endline survey. The questionnaire was finalized and the contracting of a survey firm to conduct the endline was underway. However, a last minute withdrawal of the prospective survey firm resulted in further delays. A new survey firm, Development Gate, was hired in April 2019. A team of young data collectors was hired and intensively trained in May 2019 and data collection started the following month. Outreach to participants proved to be very challenging with fewer than half the sample responding in our first attempts. We continued to try to reach the sample through January 2020 and were proud to have been able to reach over 80% of them, with no significant differential attrition between groups, allowing us to have sufficient statistical power to test of impacts of the program overall and different curricula against each other.

Implementation Timeline

- *September 2015- September 2016:* Ongoing talks between J-PAL PIs and EFE training team to agree on program compositions for each treatment group
- *November 2016:* Baseline data collected and randomization for cohort 1
- *January 2017:* Baseline data collected and randomization for cohort 2
- *April 2017:* Baseline data collected and randomization for cohort 3
- *July 2017:* Baseline data collected and randomization for cohort 4
- *October 2017:* Baseline data collected and randomization for cohort 5
- *January 2018:* Baseline data collected and randomization for cohort 6

- *February - March 2018:* Preparation and finalization of end-line survey
- *March 2018:* Baseline data collected and randomization for cohort 7
- *May 2018:* Baseline data collected and randomization for cohort 8
- *June 2018:* Announcing the first round of the request for proposals
- *July 2018:* Baseline data collected and randomization for cohort 9
- *August 2018:* Baseline data collected and randomization for cohort 10
- *October 2018:* Baseline data collected and randomization for cohort 11
- *October 2018:* Withdrawal of the survey firm due to inability to reach out to respondents
- *February 2019:* Announcing the second round of request for proposals
- *March-April 2019:* Contracting of Development Gate data collection firm
- *May 2019:* Recruitment and training of data collectors
- *June 2019:* Data collection for endline survey started
- *January 2019:* Data collection for endline survey ended

Challenges Faced and Our Response

The largest challenge we faced in this portion of the project was the inability to recruit a sufficient number of applicants to the program. Our initial intention was to recruit at least 1,200 eligible applicants with the goal of growing that to 2,400 to improve statistical power. This turned out to be too difficult with the number of applicants to the program being quite low. We will discuss this issue in much more detail in milestone 3 below.

After many different attempts we eventually settled on using the normal recruitment process that EFE had in place and managed to enroll nearly 1,000 individuals into the sample. This provides us adequate statistical power to estimate the impacts of the program but does not allow us to dig deeper into sub-group analysis (i.e. which types of people benefit more from the different types of training).

Baseline data collection challenges:

The main challenge we faced in the beginning of the baseline data collection was communicating to EFE that the control group were to be surveyed exactly like the treatment group. For the first couple of cohorts, EFE did not notify us that a new cohort was to start a training session except after the control group were already turned away. Accordingly, we were not present in the right moment to survey the control group and it was very difficult to return to them for a survey because they were usually reluctant to deal with anything related to EFE after they have been turned away. This was remedied after the first two cohorts and constant communication with the partner. We still lost individual cases in later cohorts due to dropouts or to participants evading the survey.

Endline data collection challenges:

In order to accommodate participants and to ensure a high response rate, Development Gate gave participants different alternatives for where to do the survey. They could either do it in EFE

premises, Development Gate premises or any other place they suggest: this could be a café close to their home, their workplace, or another governorate where they lived. Development Gate management and enumerators made sure to meet participants at their place of choice even if this involved travelling to other governorates. The only difference between meeting with the participants at EFE or Development Gate vs meeting with them at their place of choice is that in the former case they get a transport allowance of 100 EGP but in the latter they do not get financial incentives. Announcements about the survey were made on the Facebook groups designated to each cohort, and participants were directly contacted using contact information they provided to EFE before the training or they reported in the baseline survey. The aforementioned options worked well in the first two weeks, but it quickly proved that we needed to further diversify the options in order to ensure the highest response rate possible. Participants were then given the additional options to take the survey over video call or for a last resort over phone. However, several factors made outreach to participants challenging and slow:

- Contact information of many of the study participants had changed over the time between the baseline survey and contacting them back for the endline survey making them unreachable. Trying to contact them through other channels did not always work. In many cases, treatment participants, who were supposed to be easier to reach compared to the control group, had completely lost contact with EFE. Enumerators tried to get their contact information through their peers who were part of the same cohort. This was possible in individual cases but it did not solve the general problem. Around 12% of the sample were unreachable.
- Many of the study participants did not want to take the survey. While we had an upfront rate of refusal of around 2%, many more study participants, around 6%, were indefinitely avoiding enumerators by promising them they will take the survey but not picking up when they are contacted back. This was particularly true for control group participants. In some cases, participants had even set up appointments with enumerators, sometimes in other governorates but never showed up.

To address this problem, we first asked EFE to promote their training to the control group and let them know that they can now participate in it, so that if they show interest we can meet with them and do the survey. However most of the participants had moved on and were not interested anymore in the training. We continued to reach out to participants multiple times and increased the incentive payments to them to get them to complete the surveys. In the end we managed to get 803 participants to complete the survey, a response rate of 82%.

Results and Analysis

Together with EFE a managed to enroll 985 job seekers into the study over 11 cohort. The cohorts were created based on the time that the job seekers applied to the program. When we reached a sufficient number of eligible applicants we would designate the whole group as a cohort and then we would randomly split the cohort into the four research arms, (control, hard skills, soft skills, and combined).

Based on our baseline data we can describe the average characteristics of the individuals enrolled in the study. The average participant is 24.7 years old, and 71% of the sample are women. It is worth noting that there was no explicit effort made to try to enroll women, it just turned out that women are more likely to apply for this type of program. (We have found demand for these programs to be higher for women in several of our studies in Egypt). 82% of the sample were single. 90% of the sample had graduated from college, on average 2.3 years before the training. About a two thirds of the sample had fathers who had postsecondary education, while about half of mothers did. More than 90% came from families making more than 2000EGP a month. About a third of the sample had taken a job training course before. Based on our statistical tests there is no jointly significant difference between the characteristics of each group.

Overall the picture of the sample is one of college educated young people who are coming from families from the middle class. There is variation with some individuals coming from low income backgrounds but the majority of the sample come from families with high parental educational attainment, above poverty level income.

Table 5: Training Experiment Baseline Balance

Training Experiment Balance Table	Control	Soft Skills	Technical Skills	Soft and Technical		
	(1)	(2)	(3)	(4)		
Age	24.70 {3.47}	-0.53 (0.26)	** (0.26)	-0.36 (0.26)	-0.56 (0.26)	**
Gender	0.71 {0.46}	-0.02 (0.05)	-0.06 (0.05)	0.01 (0.05)		
Years since graduation	2.32 {2.46}	-0.33 (0.23)	-0.16 (0.22)	-0.37 (0.23)		
Marital status: single	0.82 {0.39}	0.04 (0.03)	0.09 (0.03)	*** (0.03)	0.07 (0.03)	**
Education: University	0.90 {0.31}	0.01 (0.02)	0.05 (0.02)	** (0.02)	0.03 (0.02)	
Father education: post secondary	0.62 {0.49}	0.02 (0.04)	0.00 (0.04)	0.07 (0.05)		
Mother education: post secondary	0.49 {0.50}	0.06 (0.05)	0.00 (0.05)	0.04 (0.05)		
Family income (1 Less than 500 - 5 More than 2000)	4.60 {0.69}	0.02 (0.11)	-0.06 (0.11)	-0.02 (0.11)		
Took training before	0.34 {0.48}	0.00 (0.05)	-0.02 (0.05)	0.01 (0.05)		
<hr/>						
P-Values for Joint Tests	All Treatment vs. Control	Soft vs Technical	Technical vs Combined	Soft vs Combined		
	0.6525	0.217	0.5109	0.6322		
Number of People Per Group	210	277	276	222		

Notes: Table reports baseline values of characteristics for individuals in the control group and the differences between the control and each treatment group. Standard deviations reported in brackets. Robust standard errors reported in parentheses. Regressions include cohort fixed effects. Significance * <0.1 , ** <0.05 , *** <0.01

Between a year and two years after treatment we attempted to contact all individuals who initially enrolled in the study, including those in the control group and those in the treatment group who did not complete training. We managed to survey 82% of participants, with no differential attrition across groups (we reached 80% of control, 82% in the soft skills, 81% in the technical skills and 84% in the soft and technical skill groups). On average 95% of the treatment group participated in the training, which provides us a strong “first stage” for estimating the impact of the training. In other words, the randomization was successful in inducing those in each group to get the intervention we are studying, allowing us to credibly claim that any differences we find in longer term outcomes are *because* of the training that they received.

Table 6: Training Experiment Employment Impacts

Training Experiment Impacts	Control	Soft Skills	Technical Skills	Soft and Technical			
	(1)	(2)	(3)	(4)			
Participated in the training (self reporting)	0.14 {0.35}	0.77 (0.03)	*** (0.03)	0.79 (0.03)	*** (0.03)	0.70 (0.03)	***
Worked during the past month	0.71 {0.45}	-0.01 (0.05)	0.03 (0.05)	0.03 (0.05)	0.04 (0.05)	0.04 (0.05)	
Number of jobs since they took the training	1.53 {0.93}	0.03 (0.10)	0.06 (0.10)	0.06 (0.10)	0.19 (0.10)	0.19 (0.10)	*
Time from randomization to first job in Months	6.35 {6.74}	-0.38 (0.73)	-1.07 (0.74)	-1.07 (0.74)	-0.99 (0.75)	-0.99 (0.75)	
Current income winsorized (highest 1%)	2190 {2208}	-155 (220)	-96 (223)	-96 (223)	240 (225)	240 (225)	
Current weekly working hours	33.81 {24.24}	-3.55 (2.37)	-2.14 (2.40)	-2.14 (2.40)	-0.52 (2.44)	-0.52 (2.44)	
Current hourly wage winsorized	68.42 {50.22}	7.28 (6.76)	9.30 (6.76)	9.30 (6.76)	10.23 (6.77)	10.23 (6.77)	

Notes: Table reports the average outcomes for individuals in the control group and the differences between the control and each treatment group. Standard deviations reported in brackets. Robust standard errors reported in parentheses. Regressions include cohort fixed effects. Significance * <0.1 , ** <0.05 , *** <0.01

In the table column 1 reports the average value for the control group for the outcome listed in each row. Columns 2-4 report how the average outcome in each treatment arm differs from that in control. Hence, we see in the first row that while some in control managed to get treated despite being allocated to the control group, those in treatment were much more likely to get treated. These differences are statistically significant at the 1% level. On the other hand, when we look at overall employment we find that 71% of the control group is working, while that seems to go down by 1% in the soft skills group, and it goes up by 3% in the technical skills group and by 4% in the soft and technical skills group. These differences are not statistically different, implying that there are not large increases in overall employment due to this training. Those who were eligible for the training would have found work one way or another.

On the other hand we do seem to find some evidence that those in the soft and technical training group have had more jobs since they were randomized into training, relative to control. This may

imply that these individuals are either unable to keep a job and so much find others, or they are able to identify better opportunities to move to. We find suggestive evidence for the second conclusion – current income for those in the combined group is 11% higher than those in the control group. This may be because those in the combined group are getting better jobs.

We also find that weekly working hours does not seem to be changing much across groups, although it seems to be decreasing slightly for each treatment group. Combined with the change in income we find an approximately 10% increase in hourly wage, although that is not statistically significant.

Table 7: Training Experiment Impacts on Job Quality

Training Experiment Impacts	Control (1)	Soft Skills (2)	Technical Skills (3)	Soft and Technical (4)
Commuting time of current job	35.84 {5.04}	-0.66 (3.92)	-3.57 (3.98)	-0.11 (4.03)
Current job has a contract	0.45 {0.01}	-0.05 (0.05)	-0.02 (0.05)	0.02 (0.05)
Level of satisfaction of the pay at current job	4.53 {0.14}	0.08 (0.37)	0.25 (0.37)	0.40 (0.38)
Felt overqualified for their current job	0.11 {0.00}	0.05 (0.04)	0.03 (0.04)	0.04 (0.04)
Duration they stayed in the first job after training	7.78 {7.29}	-1.26 (0.72)	* (0.73)	0.11 (0.74)
Working hours of first job after training	40.72 {17.28}	-4.41 (1.73)	** (1.75)	1.14 (1.78)
Income from first job after training winsorized	2060.00 {1530.54}	-48.10 (164.00)	261.00 (166.00)	287.00 (167.00)
First job after training had contract	0.42 {0.50}	0.10 (0.06)	* (0.05)	* (0.06)
				0.15 ***

Notes: Table reports the average outcomes for individuals in the control group and the differences between the control and each treatment group. Standard deviations reported in brackets. Robust standard errors reported in parentheses. Regressions include cohort fixed effects. Significance * < 0.1, ** < 0.05, *** < 0.01

In Table 7 we find that their first job after training was much more likely to be a formal job with a contract than the control group. Nonetheless some evidence that individuals left their first jobs quicker than those in the control group, despite those jobs having a higher salary than what the control group was receiving. This implies that there are other important aspects to the job that individuals care about. This might be partially explained by the fact that people in the treatment groups are more likely to report that they feel overqualified for their jobs.

Table 8: Training Experiment Impacts on Job Search

Training Experiment Impacts	Control	Soft Skills	Technical	Soft and Technical	
	(1)	(2)	(3)	(4)	
Actively sought a job in the past month	0.33 {0.47}	0.15 (0.05)	*** 0.17 (0.05)	*** 0.11 (0.05)	**
Lowest monthly wage they accept in a new job	2730.00 {1043.48}	150.00 (245.00)	215.00 (243.00)	499.00 (251.00)	**
Constraints on job search because of limited money for transportation	0.07 {0.26}	-0.03 (0.05)	0.03 (0.05)	-0.02 (0.05)	
Constraints on job search because of family	0.15 {0.36}	-0.08 (0.05)	-0.03 (0.05)	-0.10 (0.05)	**
Level of satisfaction with current work situation (on a scale from 1 to 10)	6.01 {2.76}	-0.12 (0.28)	-0.03 (0.29)	-0.05 (0.29)	
Had problems during the past year: getting along with their boss	0.20 {0.40}	0.03 (0.05)	-0.01 (0.05)	0.04 (0.05)	
Had problems during the past year: getting along with their coworkers	0.12 {0.33}	0.09 (0.05)	** 0.08 (0.05)	* 0.05 (0.05)	
Intends to stay at their current job for six more months	0.87 {0.34}	0.00 (0.05)	-0.01 (0.05)	-0.09 (0.05)	*
Owns a business	0.04 {0.19}	0.01 (0.03)	0.07 (0.03)	*** 0.02 (0.03)	

Notes: Table reports the average outcomes for individuals in the control group and the differences between the control and each treatment group. Standard deviations reported in brackets. Robust standard errors reported in parentheses. Regressions include cohort fixed effects. Significance *<0.1, **<.05, ***<.01

Table 8 showcases impacts the training had on job search behavior. All three treatment groups are more likely to search for a job after the training. This may be because they are more ambitious and believe they can climb the career ladder, or that they don't like the job they have now. Evidence for the first explanation is found in the next row where we see that reservation wages for those in treatment are higher than those in control, implying that people have higher standards for employment now. We also find that there is no difference in the level of satisfaction in their current job.

Table 8 also showcases that those in treatment are no more or less likely to have problems in the past year with their boss, but are more likely to have problems with their co-workers. It is unclear why this may be the case. The table also reports that those in the soft & technical skills arm are more likely to plan to leave their job in the next 6 months, in line with their increased job searching behavior. It is also the case that those in the technical skills arm are more likely to own their own business. This may be because they are technically capable but less able to deal with others conductively since they did not get the soft skills training as well.

Table 9: Training Experiment Impacts on Personal Aspirations

Training Experiment Impacts	Control (1)	Soft Skills (2)	Technical (3)	Soft and Technical (4)
Planning to get married within one year	0.37 {0.48}	-0.13 (0.05)	*** (0.05)	** (0.05)
Planning to get married within three year	0.63 {0.48}	-0.05 (0.05)	0.01 (0.05)	0.05 (0.05)
Target number of children	2.32 {0.92}	-0.04 (0.10)	-0.02 (0.10)	0.12 (0.11)
How they describe their health (1=excellent 5=poor)	2.28 {0.98}	0.06 (0.10)	0.04 (0.10)	0.06 (0.11)
Felt worried for at least 1 month during the past 12 months	3.07 {0.93}	0.08 (0.10)	0.02 (0.10)	-0.01 (0.10)
How often they felt depressed in the past week (1=never 5=very often)	2.60 {1.06}	0.03 (0.12)	-0.16 (0.12)	-0.06 (0.12)
Would like to immigrate abroad	0.86 {0.35}	0.00 (0.05)	0.00 (0.05)	-0.04 (0.05)
Plans to retrun to school to study for another degree	0.42 {0.49}	0.04 (0.05)	0.09 (0.05)	* (0.05)

Notes: Table reports the average outcomes for individuals in the control group and the differences between the control and each treatment group. Standard deviations reported in brackets. Robust standard errors reported in parentheses. Regressions include cohort fixed effects. Significance *<0.1, **<.05, ***<.01

Table 9 outlines impacts on personal aspirations. We find that all three treatment groups are less likely to report that they are interested in getting married in the coming year. This may be because they are more focused on growing their careers in the short term. This is buttressed by the fact that there is no significant difference in intent to get married in the next 3 years. We find no difference in intended family size, or physical or emotional health. We also see no difference in interest in immigrating abroad, but it is worth noting that the control group average is 86%, showcasing that many people are looking to leave Egypt, and this does not change with training. Finally, all three groups are interested in returning to school for further studies.

Analysis of Results

Overall, these results paint a compelling picture of the impact of different types of training. While all three types led to an increase in the likelihood of their first job after training being formal, none of the trainings seem to be having an impact on overall employment 1-2 years after randomization. On the other hand, the trainings are impacting the type of employment people have and their aspirations for the future. The combined training seems to be the most effective in increasing wages, and is significantly different from the soft-skills only training. Those that received only soft skills do not seem to be benefitting much from the training in terms of the labor market outcomes.

Despite this, we find that individuals in the training seem to be taking their careers a bit more seriously. They have higher reservation wages and are more likely to be actively looking for work. They are also more likely to say they plan to delay marriage in the short term, but not the medium term. All three groups also seem to be interested in furthering their education by returning to school for another degree.

Policy Recommendations

The training had modest impacts in the 12-24 months after randomization. Most training programs would be happy to report that 70-75% of their graduates have found employment a year or two later, when none of them were working before the training. What they miss is the counterfactual – what proportion would have been working without the training. We estimate this directly and find that there is no difference in employment rates between groups. When we split this by gender we find the same result.

What this experiment has shown is that even though training doesn't impact overall employment it can impact the quality of the jobs that the trainees have and their goals and aspirations. Trainees seem to be more engaged in job search, more likely to want to return to school for an additional degree and women are more likely to say they are aiming to delay marriage in the short term, presumably to focus more on their careers.

Hence, governments and donor organizations should update their understanding of what they “get” when they fund training programs. They should not invest in these programs if their intent is to increase overall employment – this type of training does not do so. On the other hand if they are interested in increasing the quality of the jobs the trainees find, and increasing the aspirations and goals of the trainees then investing in job training could be a worthwhile investment.

Finally, it seems that a combination of soft and technical skills is more likely to benefit job seekers than either soft or technical skills by themselves. Furthermore, while soft skills training by itself may lead to increased aspirations and focus on job search, it does not seem to lead to improved labor market outcomes in the short and medium term. Government schools usually focus primarily on technical skills and building into it a soft-skills component may be beneficial, by marrying both types of training together. But if soft skills training is added in place of technical skills training, rather than as a complement to it, this is likely to be ineffective, as seen by the decrease in average income for those soft-skill only group.

MILESTONE 3

Produce evidence on the most efficient methods for recruiting youth for employment training.

Related Outputs

- 3.1 An impact evaluation testing the effectiveness and efficiency of different employment training program recruiting mechanisms in reaching different target youth populations, written for submission to a peer-reviewed journal (J-PAL)

Methodology

The recruitment study involved four different experiments, all of which used a similar randomized methodology, though with different outcomes and in different contexts. One of the experiments used street-level recruitment, one experiment used door-to-door outreach as a method for recruitment, and two of the experiments used Facebook as a medium for recruitment.

3.1.1 Street Level Recruitment

For the street-level recruitment experiment the survey began by collecting some basic data to determine eligibility for the program. We asked for basic information on gender, age, education, military status, typical transportation used, and current work situation. If the person was eligible for support then the survey proceeded.

In these experiments, potential recruits were given a random “pitch” to try to sell them on the program. The control group was simply told that the Egyptian government has a variety of training programs available, and thus received no information about EFE or the training program.

To test the value of basic information, the rest of the sample got some basic information about EFE and the training program. In addition, certain groups of people got one of three sets of information. The first was the “skills pitch”, in which we provided information about all the skills that a person might gain in the training program, including personal skills (e.g., presentation and negotiation skills), job search skills (interviewing, resume writing), labor law, English language skills, and technical skills like software and food safety information.

Another group got the “short-term returns” pitch, which gave information about the immediate job outcomes of recent program graduates. We used information from a survey of EFE program alumni and reported to the recruits that “In the past, our graduates have gotten jobs like waiters, retailers, marketers, sales associates, call center agents, and e-commerce associates, etc. Average starting salaries for employed graduates are 1450 LE per month.”

A third group got the “short and long term returns” pitch, which gave the previous information but also added that “after five years, the average employed person is making about 3400 LE per month”.

Of the people who got the full short and long-term returns pitch, some also got a pitch aimed at various types of stigma that might be affecting take-up of training programs. In each stigma pitch, we tried to counteract a negative stigma by sharing statistics and testimonials we obtained from a survey of program graduates.

There were three types of stigma that we talked about. The first was “professional stigma”, the idea that entry-level jobs associated with the training program are dead-end jobs. In this pitch, we said that “although some people might think that these types of jobs might be a professional dead-end...overall there is a high rate of professional development.” We followed that with real-life examples and testimonials: said that “For example, one EFE alumnus started as a content associate and 5 years later he is currently a senior content supervisor managing a team of over 60 employees. We also interviewed some recently alumni who said ‘I definitely felt like there was scope to grow in my first job’, and ‘There was definitely room to grow professionally, 100%.’”

The second stigma pitch was aimed at “personal stigma”, the idea that these jobs are boring and not enjoyable or fulfilling. Here the survey read: “Note that although some people might think that these types of jobs are not very enjoyable, there is actually high satisfaction among graduates of EFE who have taken these jobs. For example, one alumnus recently said, ‘I definitely enjoyed my first job because the workplace was very positive, and I got to know new people.’ And our records indicate that about 80% of EFE alumni stayed in their first job for more than 1 year.”

Finally, we had a “social stigma” pitch, aimed at the idea that entry-level jobs are looked down upon in society and by family and potential marriage partners. Here we said: “Note that although some people might think that these types of jobs might be looked down on in society, graduates of EFE who have taken these jobs report that their families and communities hold them in higher regard. For example, one alumnus recently said about his experience, “[My father] now supports me and encourages me to excel a lot more than he did in the past.” Another alumnus said, “My parents have always been very supportive of me, but they are definitely proud of me now.”

In the street-level recruiting, we also randomly varied the cost of the program. Some people were given a price of 200 LE, some 100 LE, some 0 LE (free), and some were offered a 100 LE incentive to sign up (a “price” of -100 LE).

Also in street-level recruiting, we tested the importance of “welfare stigma”, or the idea that people do not want to be part of a program that is intended for the poor. Some people were told that “the true cost of the program is usually around 4000 LE, but many organizations have donated to us so that we can provide this at a much lower cost.” Then, to test welfare stigma, we randomly added the phrase “to help those in financial hardship” to the end of that quote.

3.1.2 Facebook Recruitment

Following our efforts with the street level recruitment we decided that it would be worthwhile to attempt to utilize the reach of the Facebook platform to try to recruit individuals who would be interested in EFE's training. While the street-level recruitment was more likely to ensure people's attention it was quite expensive. Facebook gave the opportunity to reach a much larger number of people at lower cost.

We used two strategies on Facebook. The first strategy began by working with EFE to produce 20 different landing pages on their website where we randomized different aspects of the message and aspects of the application process. We ran one generic ad on Facebook which when clicked on would lead to the individual landing on one of the 20 pages at random. We then used the application rates on each of the 20 pages as an outcome for analysis.

Shortly thereafter Facebook introduced what they called a "split testing" option which is supposed to randomized which ads people see. We were then able to use that feature directly and we simplified our approach by produce three different ads that aimed to get people to learn more about EFE and to sign up for training if they were interested. The first ad was the standard ad that EFE uses, while the second and third ads contained new text that aimed to help people overcome and social or professional stigma that they associated with the type of jobs that EFE was helping train people for.

3.1.3 Door-to-Door Recruitment

In the final experiment we followed closely the earlier two methods for recruitment but instead of meeting people in the street or finding them on Facebook we implemented a door-to-door strategy where we enumerators would go into a residential building and knock on doors and ask if there were any job seekers living there. Conditional on eligibility the enumerator would then collect some information about the job seeker and then would read them a randomized "pitch", using the same method as described above but with different content.

In this experiment we decided to focus on trying to understand the importance of just mentioning stigma as opposed to trying to explicitly dispel stigma. We did this because our results in the earlier experiments ran counter to our expectations. We thought we would be able to use the pitches to get people to overcome stigma and found instead that just mentioning it led to lower take-up rates (which we will discuss in more detail in the results section below).

Progress towards milestones

The implementation of this component was delayed for some time in the beginning due to challenges in recruiting a consultancy firm. In May 2016 we contracted with Cairo Center for Development Benchmarking (CDB) to undertake the first phase of data collection and we obtained the CAPMAS approval in July. The street-level recruitment survey began, therefore in mid-July 2016. Prior to the start of data collection, we had done a good deal of research and literature review to construct different scripts for each recruitment pitch and we worked closely with EFE|Egypt to hone these scripts. When we tested those scripts in the field, during the first month of data

collection, further issues and questions arose and we worked with CDB to fine-tune and revise them for clarity and context.

The data collection of the first phase of the recruitment study was concluded in February 2017. Through this first phase, 5000 job-seekers matching EFE criteria were surveyed, however we faced considerable challenges in getting these job-seekers to continue the process, participate in pre-training activities in EFE and enroll in the training. From the 5000 youths surveyed 42 attended the information session, and 28 continued to the training and were included in the sample for cohorts 1 and 2.

In the second phase, we did not want to continue with the same survey firm from phase 1 because we had significant reservations regarding the quality of the surveys that were being implemented. We, therefore, contracted another survey firm, Athar, that we had found to deliver satisfactorily in other projects, to implement the second phase of data collection. We made sure to build on the lessons learned from the first year of this project vis-à-vis the long and slow process to obtain the CAPMAS approval and we applied for it well in advance that we received it around the same time we were contracting the new firm.

Athar subcontracted with the “Researchers Association” (which is basically a type of professional union for data collectors) to conduct the data collection. Building further on the lessons from phase 1 regarding the difficulty to locate interested job-seekers and potential training participants in the streets, in phase 2 we sought to partner with entities which have large networks of youth. We targeted local NGOs that have strong networks of participants in their communities as well as with governmental entities that have access to a large base of youth, particularly the ministry of social solidarity that has a program of public service for girls who have just graduated from universities. A series of partnerships was initiated between EFE, The Researchers Associations and several grassroots organizations. While this strategy seemed promising in the beginning, it failed to yield significant results. The main reason expressed by the NGOs as to why they could not mobilize large numbers of their members to participate in the information session was that EFE did not offer any stipend for their training.

Following the issuance of the new NGO law in May 2017, Athar had to suspend its contract with the Researchers Associations. The Researchers Association was a data collection association registered as an NGO under the ministry of Social Solidarity, and since the new law suggested changes in the process that NGOs have to follow to collect data, Researchers Association needed to revisit their usual process according to the new law and its executive regulations. The executive regulations were not issued for over a year, until the law was eventually revisited. The uncertainty of the situation made it impossible to continue on with the partnership with the Researchers Association. Athar then started extensive negotiations with two other data collection firms that both had previous experience in youth training and a network of active young people hoping that this will facilitate the recruitment of participants compared to former partners. Negotiations,

however, were futile. One firm suggested a budget that exceeded our capacity, and the other firm withdrew last minute explaining that they are not certain they can deliver the target.

Meanwhile, we conducted four focus groups with the aim to understand the reasons why youth do not show up for training sessions as well as their perceptions about the training courses and labor market. Focus groups were conducted with youth who attended the EFE training as well as youth who never heard of EFE, and we made sure that both employed and unemployed youth were represented in the focus groups. While these focus groups were useful in having a more in depth understanding of youth perceptions, it did not help us in understanding how to make them show up, especially that people who do not show up for training are typically people who won't show up for a focus group either. The point of view that we were most interested in was therefore not represented.

Following these difficulties with in-person recruitment we decided to pursue a new strategy and experiment with online recruitment. We believed this strategy to be promising given that EFE has had success in recruiting over Facebook. Towards the end of 2017, we worked closely with the IT and Social Media specialists at EFE to develop 20 web pages on EFE website with 20 different recruitment messages. These web pages were designed in a way that using a single link redirects the user randomly to one of the web pages. This link was included in a Facebook advertisement that targeted our desired demographic. The ad ran for four days. It was, however, not very efficient in boosting the application rate. While relatively high numbers viewed the ad, clicked the link and were redirected to the randomized web-page, a very small number actually filled in the application. Specifically, each of the 20 web pages was visited by 800 visitors on average but only 17 people filled in the application, about a 0.1% response rate. This gave us an indication that we possibly needed to shorten the messages and cut down the questions of the application.

In the beginning of 2018, by the time we were preparing to repeat the experiment building on the lessons we learned from the first trial, Facebook introduced a new feature to their advertisement, that is the split-test ads. These ads allow sending different versions of ads randomly to different portions of the same audience. This required an initial period of learning and exploring the mechanism through which Facebook allowed ad randomization. Two pilot campaigns were launched with very simple messages, randomizing mainly the language and the picture in the ad. The ads were viewed by over 16,000 users and brought in about 40 candidates. While the response rate was still very low, the cost was also very low, allowing us to bring in a candidate for less than around \$0.25. They were thus much more cost-effective than the earlier recruitment activities that were implemented on the street and over the phone. In addition, they are easier to implement and scale. This is why we viewed Facebook advertisement as a powerful recruitment tool that had the potential to attract large numbers of training participants and help us reach the remaining of our target.

The next step was to set up larger campaigns than our pilot campaigns with the actual recruitment messages that we wanted to test. However, due to a glitch in Facebook's ad platform, we went through many failed attempts in setting up Facebook campaigns. Our ads kept getting automatically denied for violating ad policies, but we looked at the policies closely and could not find any reason for their denial. The appeals process was automated and there was no way to speak to a human being or customer support to find out what the problem was. One of the PIs (Osman) found a paper about Facebook ads that was written by some researchers at Facebook and reached out to them for help. Thankfully one of the authors of the paper was kind enough to look into our situation and found that there was a glitch in the system that was denying our ad because we were asking people for their birth days (which is allowed). They fixed the glitch and we were able to do the ads again.

We then ran three successful Facebook campaigns that have reached nearly a million youths and resulted in 950 applicants to EFE training programs. The first campaign focused on the benefits of the job with a control ad, an ad providing information about potential employers and an ad providing information about employment rate for program graduates' employment rate and starting salaries. The second and third campaigns addressed the social and professional stigmas with a control ad, a professional stigma ad and a social stigma ad.

After resolving some legal issue with how best to pay for these advertisements we were planning to significantly ramp up our Facebook experiments and use it as an opportunity to test different theories as to why the take-up rate for job training is so low in this context. However, given that EFE program activities were halted due to the end of the project we could not proceed with our plan.

Nevertheless, after the end of EFE's activities we took the opportunity to continue to improve our understanding of how to recruit youth to employment support services by building on top of our other IDRC project that is focused on getting youth to job fairs. Instead of looking at stigma towards job training we looked at stigma in going to job fairs. We did door to door data collection and collected data from 1,170 job seekers that we invited to the job fair, 54 of them showed up at the fair, that is a 4.6% show-up rate. While this may seem like a low show-up rate, it is much higher than any show-up rate we made through all our previous attempts.

Implementation Timeline

- *September 2015*: Early drafts of the recruitment pitches were generated.
- *October 2015*: Field trip to Menoufia, where EFE is working with another NGO, Sonaa el Hayaa, on recruitment for their training program. This field trip was to learn about their recruitment activities so that we can model our own recruitment better.
- *November 2015*: a first tender to recruit the research firm that will conduct the recruitment study was announced.

- *January 2016:* a second tender was announced due to the withdrawal of the firm selected after the first tender.
- *February - March 2016:* Cairo Center for Development Benchmarking (CDB) was selected to conduct the data collection and the contract was signed with AUC.
- *May 2016:* CDB started administrative procedures to obtain the CAPMAS approval.
- *June 2016:* CDB started the recruitment process for the data collectors. From a pool of 250 applicants, 40 were shortlisted for interviews and 4 were finally selected: 2 males and 2 females in addition to the field supervisor.
- *July 2016:* Data collectors attended a three-day training that covered an introduction to the study and its objectives, Randomized Controlled Trials methodology, sampling strategies, presentation and communication skills, and an overview of the Egyptian labor market and youth characteristics.
- *July 2016:* CAPMAS approval obtained. Data collection began and the next several weeks included constant tweaking and changes to the design of the implementation to overcome the difficulties faced in the field.
- *November 2016:* Start of negotiations with a new data collection firm for phase 2.
- *February 2017:* CAPMAS approval for phase 2 obtained.
- *February 2017:* Phase 1 of data collection consisting of 5000 surveys completed
- *March 2017:* Athar contracted by AUC to conduct the data collection of phase 2
- *March – May 2017:* Partnerships with grassroot organizations that attempted to mobilize their base of participants to attend the information sessions held in the NGOs premises and negotiations to initiate a partnership with the ministry of solidarity to access girls enrolled in the public service program.
- *End May 2017:* Issuance of the new NGO law and suspension of the partnership with the Researchers Association
- *June 2017- August 2017:* contacting different data collection firms, to explore the possibility of collaboration. Two firms applied and sent their proposals and we had parallel negotiations with both of them on the terms of the partnership.
- *October 2017:* Selection of Gisir consultancy firm to conduct part of the recruitment survey over the phone
- *November 2017:* Further negotiations with Gisir consultancy firm led to their withdrawal from the study.
- *November 2017:* Coordination between J-PAL and EFE to develop 20 different web pages with different recruitment messages and a randomized access to these pages to test recruitment messages through Facebook.
- *December 2017:* Facebook campaign with randomized access to application page on EFE website launched. Over 16,000 people clicked on the link and viewed the randomized pages but response rates were very low.

- *January - February 2018:* Exploring and learning how the ad randomization feature on Facebook works. Facebook provides very little support and so a lot of trial and error was necessary
- *March 2018:* Successful launch of two pilot Facebook advertisement campaigns with randomized ads.
- *March-April 2018:* Continuous failed attempts to set up ads due to a glitch on Facebook website
- *May-June 2018:* Challenges to set-up randomized ads on Facebook were communicated to Facebook and first 2 successful ads were set-up. The first ad presented different sets of information about the benefits of the training, reached 200,000 (60% women and 40% men) and resulted in 223 applicants (133 (60%) women and 90 (40%) men). The second presented different types of stigma linked to entry-level jobs and refuted these stigmas, it reached 130,000 (54% women and 46% men) youths and resulted in 209 applicants (117 (56%) women and 92 (44%) men)
- *July-August 2018:* discussions with EFE to coordinate the billing of Facebook ads
- *September 2018:* A third ad was set-up that presented stigma information once again, it reached 640,000 youths (55% men and 45% women) and resulted in 504 applicants (269 (53%) men and 235 (47%) women)
- *December 2019:* Delivering the recruitment messages in a door to door data collection to invite job seekers to a job fair
- *December 2019:* Talks with the National Employment Pact to advertise their employment services through door to door data collection.

Challenges Faced and our Response

This component, in particular, has seen many challenges throughout its lifetime which caused significant delays. Nevertheless, these challenges were very rich learning experiences that will have informed our other projects and the lessons will continue to be useful for other J-PAL projects in the future. We outline the 11 main challenges we faced implementing this part of the project.

- 1) *Hiring Competent Data Collection Firms:* for We faced difficulty in finding competent and relevant research firms to undertake the data collection for the recruitment study. Hiring competent firms for this component was particularly hard because of the difficult nature of street level data collection without pre-constructed sampling framework. Throughout the lifetime of this project, we had three firms withdraw after extensive negotiations. In the first phase, Crown consultancy withdrew after revising their budget higher than was possible. In the second phase, both firms we were negotiating with and that we thought had the potential to mobilize a large network of youth to reach the target, withdrew. One of them requested a larger budget than plausible and the other was concerned they would not be able to complete the target given that, at that moment, EFE was planning to target blue collar workers for the hospitality training and this

firm had better reach with white collar workers. When we did find a suitable partner we had to suspend it in response to the issuance of the new NGO law.

2) *General Lack of Trust of Surveyors:* The first attempt at outreach utilized street-level data collection. This strategy required data collectors to stop people in seemingly random places, check whether they fit the EFE criteria for training applicants and conduct the questionnaire with them. There was no pre-constructed sample framework that the data collectors were following. This proved to be quite challenging for several reasons. One major reason was a general lack of trust in the data collectors and the project. Since the data collectors were stopping people randomly in the street, people were often skeptical. They thought it was a scam and they didn't want to stop to answer the questionnaire, and even if they did they did not want to give their contact information. The bad reputation of training for employment business in Egypt contributed to this lack of trust.

3) *Restricting Eligibility Criteria:* Even when people did stop to talk with the surveyors EFE's eligibility criteria were very specific making difficult to find the "right" candidates. We found that 68% of the individuals who began the survey did not match EFE's criteria, and so we were unable to complete the survey with them.

4) *Using Referrals as a work-around:* On strategy we used to overcome the lack of trust and difficulty to find adequate candidates was to introduce referrals in the survey. This meant that if the surveyor stops a respondent and they turn out to be ineligible, the surveyor asked them if they would like to refer any friends or relatives who fit the EFE criteria and if they would provide their contact information. Surveyors also used referrals to contact acquaintances who knew them to be matching the training criteria, and they also collected referrals from individuals they interviewed in the street or over the phone. This gave the surveyors the chance to reach more respondents, in addition, respondents were generally more responsive when the surveyor mentions that he got their contact information from a person they know. We managed to survey about 650 individuals who were referred by others.

5) *Inexperienced Data Collectors:* We also had trouble hiring high quality data collectors. As described in milestone 1 above, we have had experience with falsification and corruption in data collection and so we needed to be extra careful here. Another issue was that in the beginning of the experiment our survey included an English exam to match with EFE's eligibility criteria, and hence a certain level of English proficiency was required for data collectors. Since most of the experienced data collectors do not have that level of English proficiency we needed to turn to fresh graduates who had a strong command of of English and train them on data collection. However, the lack of experience was a barrier to stopping random respondents in the street, and combined with the challenges mentioned above, this made the data collector's mission even more difficult. Therefore, the number of surveys conducted per day was very low. At some point the

number of surveys per surveyor per day was as low as 5 (although the time to administer the survey did not exceed 15 minutes).

Later on, due to a change in EFE application process we no longer needed to have an English exam in the questionnaire, which gave us more freedom in selecting surveyors. Accordingly, we were able to hire experienced surveyors, who have previously participated in several studies and thus are aware of the nature of the job, and more comfortable stopping random people in the street.

6) *Disagreements between the data collection firm and their employees:* We also suffered from high turn-over among data collectors and field supervisors. As a response to the low achievement, the field supervisor was changed twice to ensure better management of the field activities and a higher achievement. In addition, after a few weeks of work, given the challenges faced in the field and their lack of experience with the nature of the job, many of the data collectors eventually left because they found the job harder than they thought. After some time the data collection firm managed to hire a set of surveyors who were more which took the number of surveys conducted per day from below 10 to an average of 17. However, due to internal disagreements between the original data collection firm and the surveyors team, the team was dismissed and replaced. Several batches of surveyors followed with very high turn-over and lower achievement.

Due to all these challenges, the data collection firm eventually cancelled the street recruitment and started an online recruitment through posts on Facebook promoting the training or partnerships with employment companies which shared their database of job-seekers. The data collection firm would get the job-seekers information and call them to deliver the different pitches and conduct a phone survey.

7) *General culture of stipends for training:* We eventually began working with a different data collection firm. To capitalize on the lessons learned from phase 1 and overcome street-level recruitment challenges, we decided to build partnerships with entities which have large networks of youth hoping they could facilitate access to our target demographic. We thus targeted local NGOs that have strong networks of participants in their communities as well as with governmental entities that have access to a large base of youth, particularly the ministry of social solidarity that has a program of public service for girls who have just graduated from universities. A series of partnerships was initiated between EFE, The Researchers Associations and several grassroots organizations. While this strategy seemed promising in the beginning, it failed to yield significant results. The main reason expressed by the NGOs as to why they could not mobilize large numbers of their members to participate in the information session was that EFE did not offer any stipend for their training.

8) *Egypt's new NGO Law:* Egypt introduced a new NGO law in 2017 that included significant increases in the restrictions placed on civil society and how funds can be spent from foreign sources. The law was not officially passed in 2017 but the draft law was released which led to all

our partners, including data collection firms (one of which was explicitly registered as an NGO) to pause many of their activities and move with extreme caution. This led to the dissolution of our relationship with our preferred data collection partner and delays in implementation of online recruitment.

9) *Facebook Ads Technical Glitch:* We then moved to Facebook ads but struggled with a technical glitch on their end. In the beginning of 2018, the introduction of the split-test ad feature to Facebook advertisement provided a new online randomization and recruitment tool. While pilots showed response rate to be still low, this method was much more cost-effective than the earlier recruitment activities implemented on the street and over the phone. The implementation of large Facebook campaigns was, however, delayed due to a glitch in Facebook's ad platform. Our ads kept getting automatically denied for violating ad policies, although we had looked at the policies closely and could not find any reason for their denial. The appeals process was automated and there was no way to speak to a human being or customer support to find out what the problem was. One of the PIs (Osman) found a paper about Facebook ads that was written by some researchers at Facebook and reached out to them for help. Thankfully one of the authors of the paper was kind enough to look into our situation and found that there was a glitch in the system that was denying our ad because we were asking people for their birth days (which is allowed). They fixed the glitch and we were able to do the ads again.

10) *Facebook Ads Payment Difficulties:* To implement Facebook ads at the time of the study required payment in US dollars. This was difficult because of both the currency crisis that Egypt was facing in 2016-17 and the new NGO law which included restrictions on what NGO could spend money on. Eventually we found a work around utilizing the business account of one of the data collection companies that we contracted with.

11) *Very Low show-up rates to the Training:* Low show-up rates were a consistent challenge across all the phases of this project. It added another layer of complexity to the aforementioned challenge of low response rates: not only is it difficult to get people to respond to the survey and apply for the training, whether through on the street or online recruitment, once they apply the likelihood that they will actually show up to the training is very low.

In the first phase of data collection, we believed this to be due to a mistargeting of the survey sample. Youth surveyed in the streets, although matching the hard criteria of EFE turned to be not exactly their target group. The nature of the EFE training, being a multiple week long training that mainly targets white collars (for the retail and IT sectors) and requires commitment and a high work ethic is not compatible with the nature of youth surveyed in the streets; most of them are street vendors with intermediate education, generally blue collared, and most importantly not willing to stop working for four weeks to attend a training especially that they may not have any other source of income. The online strategy was somewhat more successful in attracting a different

profile of candidates who are more compatible with EFE target group and the number of participants who showed up for the information session rose (although still modest).

To overcome the problem of low attendance rates we have tried to conduct reminder calls to youth surveyed in the street. EFE generally doesn't have the capacity to call each of the participants who expressed interest to invite them to the information sessions and give them the needed details, so they use SMSs for this purpose. Following the low attendance rates we saw, together with EFE we started calling all applicants to remind and encourage them to come to the introductory sessions. In order to control the quality of the message delivered and to avoid burdening EFE with a task they don't usually have the capacity for, we hired two persons to do phone-calls and invite the job-seekers to the information session. However, the numbers didn't really change, respondents would still express interest over phone and end up not showing up. Overall, out of the 5000 youths surveyed in the first phase, 42 attended the training information session.

While online recruitment was much more cost-effective than any other recruitment method we have experimented with, show-up rates were still very low. In our last campaign that ran in September 2018 and got 500 sign-ups, we were only able to match 10 participants who showed up to EFE orientation session.

Overall low take-up rates were not a problem that we were able to overcome. We believe that there is important information in the fact that take-up rates are so low and discuss its implications further in the policy recommendations below.

Results and Analysis

Our project reveals several key findings on the reasons that unemployed and underemployed young people might not sign up for or attend a labor market assistance program. First, there are large information frictions that prevent take-up of programs. Simply giving people information about the program led to a huge increase in take-up. In the street-level recruitment, while virtually nobody who did not receive specific information about the training program signed up, giving this information led to an increase in sign-up rates of 35-40 percentage points. This effect was slightly larger among less wealthy young people, so the information frictions may be especially large for them. On the other hand, once they get that specific information, it does not seem to make much difference if they are told about the skills they will gain or the past earnings outcomes of program graduates.

Table 10: Recruitment Information Impacts on Application Rates

OLS, Dependent Variable: Applied for Job Training=1

Omitted Group: Government Training Information

	Not-Wealthy (1)	Relatively Wealthy (2)	Not-Wealthy vs Wealthy P-Value
Basic NGO Information + Skills	0.456 *** (0.030)	0.378 *** (0.052)	0.19
Basic NGO Information + Short Term Returns	0.400 *** (0.031)	0.300 *** (0.053)	0.10
Basic NGO Information + Short & Long Term	0.407 *** (0.031)	0.371 *** (0.054)	0.56
Mean of Dependent Variable in Control Group	0.000	0.000	
Observations	1677	473	

Notes: Table reports regressions of three binary treatment variables on whether the individual applied for the training. No one in the control group applied for the program through the other channels they had available. Regressions include surveyor fixed-effects. We report P-values from a test of equality across the relatively wealthy and not-wealthy groups. Relatively wealthy defined by utilization of private transport (taxi, private cars, uber, etc). Robust standard errors in parentheses. Significance * .10; ** .05; *** .01.

The cost of the program also matters, but effects of price are not linear. Compared to offering it for free, charging a 200 EGP fee lowers application rates by 17 percentage points among less wealthy people and 10 percentage points among the wealthy. A 100 EGP fee also lowered application rates by a similar amount. Surprisingly, though, offering a 100 EGP incentive to sign up did not increase sign-up rates. This confirms that while demand curves slope downwards – a lower price induces more sign-ups – it can also be that offering an incentive backfires, as people perceive the program to be of lower quality or legitimacy.

Table 11: Training Fee Impacts on Application Rates

OLS, Dependent Variable: Applied for Job Training=1

Omitted Group: Free Training

	Not-Wealthy (1)	Relatively Wealthy (2)	P-Value
200 EGP Fee	-0.173 *** (0.043)	-0.096 (0.075)	0.37
100 EGP Fee	-0.127 *** (0.044)	-0.181 ** (0.072)	0.52
100 EGP Incentive	-0.029 (0.044)	-0.068 (0.077)	0.66
Mean of Dependent Variable	0.423	0.423	
Observations	2970	855	

We also test for the existence of “welfare stigma” – the idea that people stay away from programs designed to help them because they do not want to be seen as receiving benefits designed for the poor and less fortunate. This type of stigma is widely believed to exist, but experimental evidence has been mixed at best. We randomly told some people that the cost of the program had been subsidized, and others we told it has been subsidized “for those in financial hardship”. This had no effect on sign-up. We find no evidence of welfare stigma.

Table 12: Welfare Stigma Impacts on Application Rates

	(1)	(2)	(3)	(4)
Welfare Stigma	0.051*** (0.018)	0.024 (0.018)	0.005 (0.023)	0.015 (0.020)
True Cost	0.027 (0.018)			
Welfare Stigma*Old			0.050 (0.037)	
Welfare Stigma*Rich				0.042 (0.046)
Mean of Control Group	0.407	0.432	0.432	0.432
Mean of Control of Interacted Group			0.458	0.444
P-Value for Combined Effect of Interaction			0.059	0.173
N	4390	2950	2950	2950

Notes: Proportion of old: 0.38
 Proportion of rich: 0.19

Finally, we tested for the importance of three other types of stigma in keeping people away from training: personal stigma, professional stigma, and social stigma. We find that these negative stigmas surrounding entry-level jobs do lower take-up of training, but only for certain groups. In the Facebook experiment, the stigma treatments lower take-up by about 5 percentage points, but the effects are quite different – even positive – for those older than 25. Unfortunately, in this study we do not have much information about the recruits, so we cannot do much to interpret this heterogeneity.

Table 13: Effect of Stigma Treatments on Take-up in Facebook Experiment

	(1)	(2)	(3)	(4)
Professional Stigma	-0.036 (0.028)	-0.069** (0.032)		
Social Stigma	-0.057** (0.027)	-0.072** (0.032)		
Professional Stigma*Old		0.141** (0.065)		
Social Stigma*Old		0.065 (0.057)		
Combined Stigma			-0.046* (0.024)	-0.071** (0.029)
Combined Stigma*Old				0.100* (0.052)
Mean of Control Group	0.190	0.190	0.190	0.190
Mean of Control for Interacted Group		0.211		0.211
N	131008	131008	131008	131008

Notes: Proportion of old: 0.24

Fortunately, in the job fair recruitment study, we have far more information about the recruits, so we can test several potential theories for the heterogeneity. We develop four theories. The first is that maturity (age) reduces stigma, because people care less about what others think of them as they age. The second is that those with more accomplished peers – college graduates and wealthier people – will be most sensitive to stigma. The third is that work experience reduces stigma, because these people already know about the jobs and should not be affected by how we describe them. The fourth is that those with greater professional aspirations will be most sensitive to the stigmas surrounding entry-level jobs.

We test these four theories in the table below and find support for the first and third theories. Older people are less sensitive to stigma – especially those over 30 – as are those who are currently working. For younger people and those without work experience, there is a strong negative stigma surrounding entry-level jobs; they worry about what their peers and family will think of those jobs. Education and professional aspirations do not seem to be related to stigma.

Table 14: Social, Professional and Personal Stigma Impacts on Job Fair Attendance

	Theory 1		Theory 2	Theory 3	Theory 4	All
	(1)	(2)	(3)	(4)	(5)	(6)
Combined Stigma	-0.149** (0.067)	-0.061* (0.031)	-0.017 (0.015)	-0.042* (0.022)	-0.046* (0.025)	-0.098** (0.044)
Stigma*Age	0.005** (0.002)					
Stigma*Age 20-24		0.016 (0.039)				0.003 (0.036)
Stigma*Age 25-29		0.069* (0.040)				0.069* (0.040)
Stigma*Age 30+		0.090** (0.040)				0.085** (0.039)
Stigma*College grad			-0.015 (0.038)			-0.055 (0.044)
Stigma*Rich			-0.004 (0.034)			-0.018 (0.035)
Stigma*Currently working				0.050* (0.027)		0.052* (0.029)
Stigma*White collar expectation					0.039 (0.035)	0.066 (0.043)
Stigma*High salary expectation					0.029 (0.025)	0.011 (0.026)
Constant	0.196*** (0.058)	0.098*** (0.028)	0.054*** (0.014)	0.085*** (0.019)	0.076*** (0.022)	0.129*** (0.037)
Observations	1,170	1,170	1,170	1,170	1,170	1,170
R-squared	0.010	0.012	0.005	0.009	0.007	0.026

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Policy Recommendations

Increasing take-up of social programs and socially beneficial technologies (like vaccines and wearing masks during a pandemic) is a consistent challenge in both developing and high-income countries. In our recruitment experiments we have found that information frictions are very important- many people simply don't know about the opportunities that are available to them. Investing in information campaigns is a promising way to increase application rates to these types of programs.

We have also found that the messages that are used in the information campaigns are important. The content of the message will affect take-up rates and things like underlying stigma and perceptions of how the social program will reflect on the person who takes it up will contribute to who signs up. Changing the way information is presented could be a promising way to help target the intervention or technologies to the people that organizations most want to take-up the program. For example, if they want older people to sign up, talking about stigma may be an effective way to screen out applicants that are not in the target group.

Financial considerations are also of paramount importance. The higher the price, the lower the application rates. On the other hand, many organizations have realized that to get individuals to participate in training they need to provide stipends to cover their costs – both the financial costs of transportation as well as their opportunity costs because they are giving up the ability to work and make money in other things during this time. Problematically, that produces a different incentive structure, with anecdotal evidence of people who taking training courses only for the stipend with no intention of actually benefiting from it or using the skills in their jobs. It also leads to a culture of expectations of stipends which may undermine legitimate and effective programs that are not able to pay people to undertake the training.

Addressing the information and financial aspects of selling a program helped increase application rates but did not ultimately solve the take-up problem; it was very difficult to fill up the training classes with committed students. This may not actually be a problem, especially when coupled with the impacts (or rather the lack of impacts) that we found in the training impact evaluation. There is not strong demand for these programs in Cairo and the impacts are low, implying that maybe these applicants know that the returns to these programs minimal and not worth the time and effort they would put into it. Hence, if a program is not able to attract excess demand organically it may not be worthwhile to spend significant resources to produce that demand through incentives and other strategies.

MILESTONE 4

Analyse the perceptions that may obstruct marginalized youth access to the labor sector.

Outputs

- 4.1 Analysis of data collected on employer perceptions, focusing on those that may affect underprivileged Egyptian youth access to employment opportunities (J-PAL)
- 4.2 Analysis of data collected on youth perceptions (J-PAL)
- 4.3 Stakeholder engagement materials mobilizing knowledge on youth and employer perceptions, including two videos developed to address these perceptions (EFE)

Methodology

This part of the project is nested in the work that we implemented in the preceding 3 milestones. We have included relevant questions in both the skill demand surveys (milestone 1) the training survey (milestone 2) and the recruitment survey (milestone 3) to support expanding our understanding of perceptions of both youth and employers about the job market.

In the surveys that were performed on firms, we have asked employers what skills are most important in their jobs, what skills are hardest for them to find, and the typical gender and socioeconomic status of the workers they hire. This type of information is designed to tell us about firms' perceptions of the labor market and its problems.

In the training survey we included questions related to their perception of the benefits and value of job training, how comfortable they are dealing with opposite genders in the workplace, their thoughts about the importance of work and education for women relative to men, and how work affects their marriage prospects.

In the recruitment survey we ask about the reasons why people may not be interested in training, and by design, we are exploring the differential impacts of addressing different types of underlying stigma associated with the types of professions most commonly available to many unemployed youths.

Results and Analysis

We tackle several of these issues in the milestones above as there is significant overlap in the questions that are considered here and the analysis that we do above.

In the skill demand enterprise survey we documented evidence of significant discrimination against women and those of lower socio-economic status. Employers were unabashed in directly reporting their preference for discrimination. We also were able to document which skills employers perceived as the most important and hardest to find, with a clear desire for individuals with both high technical skills and high “soft” skills.

In the training experiment we collected data on people’s perceptions of training. We found that people thought the training was worthwhile in retrospect, and 90% of respondents said they would have paid at least a nominal sum to take the training (250EGP ~ \$15). On the other hand 66% of respondents believed that they would be in the same job they are in now if they hadn’t taken the training, showcasing that even if they liked the training most of the participants don’t think it materially affected their labor market outcomes. This lines up with the results of the experiment, showcasing the minimal impacts of the program on labor market outcomes.

We also collected data on perceptions regarding the opposite sex. We find that men and women differ in some of their opinions about the role of women in society. The women in our sample felt strongly that women should hold leadership positions in society (4.43/5, where 5=strongly agree), while men were neutral (3.15). The training seemed to increase this slightly for men’s beliefs and had no impact on women. Both genders felt strongly that education is equally important for men and women.

We found that both gender felt comfortable working in mixed gender situations, with 88% of men and 90% of women agreeing with the concept. Both genders believe their spouse or future spouse will also be ok with them working in a mixed gendered environment, with 83% of men and 80% of women agreeing. While these proportions are high they still showcase a non-trivial proportion of the population who worry about mix gendered work environments.

In the recruitment survey we explored the potential of stigma effecting the likelihood that people will take-up training as well as if it affects the jobs they are willing to consider. We found evidence that their beliefs about how others in their social group will perceive them is an important determinant of if they are willing to take these entry-level jobs. We also found evidence that their beliefs about how employers will view them was also important as was how they view themselves. This is the first randomized field experiment that was able to showcase the importance of stigma and perceptions on utilization of social assistance.

In the street-level recruitment experiment we asked people who didn’t apply to the training why they didn’t apply. The most common reason can from people said “they don’t want training” (33%). Another group said they “can’t afford not working for several weeks to attend training” (also 33%) and 17% said that the date and length of the training wasn’t suitable. Other reasons

included that the jobs weren't suitable, or that they weren't really looking for a job. This tells us that most people are not willing to go out of their way to get trained.

Policy Recommendations

In line with our earlier results and recommendations the data on firm and employee perceptions lead to important implications for policy and its role in shaping norms and expectations. The explicit discrimination from hiring managers against women and those of low socio-economic status needs to be addressed to help level the playing field in the labor market.

Similarly, in line with our results in the training experiment, while many youth think there is value in training programs, they feel like the value is low and not directly related to actually improving their labor market situation. They do not think training really helps them get a job that they would not have gotten anyway. Based on the results of the training impact evaluation, this may be a correct belief. Hence, decreasing investment in job training programs may be reasonable.

Gender norms are an important topic in Egypt and among the sample of young education individuals in Cairo perceptions are relatively egalitarian. Nonetheless, there are a small subset of individuals who are concerned about mixed gender workplaces. Continuing to support the ability for firms to provide these types of work opportunities will help deal with the low labor force participation rates of women in the short run as attitudes continue to evolve over time.

The recruitment experiments showcase clearly the importance of stigma and the importance of how other people's perceptions of an individual affect their behavior. Working to decrease the stigma associated with lower-skill jobs is an important undertaking and can help get young people on the job ladder sooner, allowing them to climb it earlier in their lives.

MILESTONE 5

Develop online, video, and other targeted knowledge products tailored for various youth employment stakeholders.

Outputs

- 5.1 Videos and online materials targeting youth and employers addressing skill mismatch, information asymmetries, and perceptions (EFE)
- 5.2 Research presentations at annual EFE network learning meeting (EFE and J-PAL)
- 5.3 Workshops, webinars and online mechanisms targeting youth training practitioners, researchers and policymakers, sharing knowledge on skills and competencies, training program composition, recruiting and perceptions (EFE and J-PAL)
- 5.4 Annual knowledge sharing and capacity building workshops with three public university Career Development Centers (EFE)
- 5.5 Briefs summarizing main findings from research tailored for different youth employment stakeholders available online (EFE and J-PAL)

Progress towards milestones

(5.2) Once we completed the market demand data collection we shared with EFE a report with the results as well as a simplified version of the data which helped inform their activities. But due to the myriad of problems faced in each of the different aspects of this research project we dealt with significant delays in getting the data necessary to be able to do the analysis necessary to generate results to share with related stakeholders in time for the completion of this grant. On the other hand, we are now in a position to finalize data analysis and aim to begin publicizing the results of our work widely. When analysis is complete we intend to reach out to EFE to organize a webinar with their network to explain the study and the results (since their annual meetings will likely be virtual due to the Covid-19 pandemic).

(5.3) The PIs have started sharing preliminary results to academic and policy audiences. Adam Osman has presented preliminary results from the recruitment study in a research seminar at the University of Connecticut early 2017, and presented updated evidence to the World Bank's MENA group in the summer of the same year. He later presented the findings from this study to Southern Illinois University, Illinois State University, and the Psychology Department at the University of

Illinois. Jamin Speer also presented results from this project at the American Economic Association's annual conference in January 2017.

(5.5) We have produced 3 policy briefs that outline the progress on each of the first three milestone of the project and have included them in the appendix below. We intend to post these policy briefs on our websites as well as on the J-PAL website in the near future.

Section 3: Project Outputs

This project has produced three types of outputs: (1) Five datasets associated with project activities, (2) Three academic papers that report the results of analyzing the data and explain how they contribute to scientific knowledge, and (3) Three policy briefs that describe the results in ways that are accessible to a general audience. We describe below each individual output:

Section 3.1: Datasets

As part of the research program undertaken by this grant we have produced five different datasets that will be used in the analysis of the academic papers and policy briefs. We describe each of the datasets below. After publication of the academic papers we intend to make all 5 of these datasets publically available (after removing any personally identifying information) so that others can benefit from the data if they so choose.

i. Market Skill Demand

This dataset includes the data collected from over 1100 surveys of establishments in Egypt. As described above the data include detailed information about the hiring strategies and hiring history of each of the establishments in the sample, as well as information about the types of skills they look for when hiring, and which are hardest to find. These data provide the ability to dig deep into how hiring happens in 4 important industries in Egypt: retail, restaurants, hotels and IT.

ii. Recruitment for Training using Facebook

This dataset includes the data from the first recruitment experiment that we ran on Facebook. It includes data from 131,000 ads impressions that were implemented following the design of the experiment outlined in section 2 above. It which ad the individuals received, if they signed up for the training, their age and gender (as estimated by Facebook).

iii. Recruitment for Training using Street Level Outreach

This dataset includes the data from our street level outreach efforts. It includes information on the nearly 2,500 people who answered in the affirmative when we asked them if they “would be interested in hearing about a job training program”. The dataset includes information about each person’s gender, age, education, working status, as well as what treatments they received and if they decided to apply to the program. Conditional on applying for the program we collected additional information that is in the dataset including information on employment history, and family income.

iv. Recruitment for Job Fairs using Door to Door Outreach

This dataset includes the data from out door-to-door outreach efforts for a job fair being held in Cairo. For each of the approximately 1500 people in the sample we have basic demographic information, as well as information about current and previous employment

and education. We also collected detailed data on job market expectations and aspirations. The dataset also includes information about what treatment the individual received as well as whether or not they ultimately attended the job fair that took place a few weeks after the survey.

v. Training and Employment

This dataset includes the data from the baseline survey we implemented on all individuals who ended up in our training experiment. It includes data on their previous education, work experience, aspirations and family background. The dataset also includes data from our endline survey which occurred a bit more than a year after the training and includes information about the individual's current job as well as the job they took right after training. We also collect additional data on aspirations including data on aspirations for the marriage market which is an important consideration in the Egyptian context.

Section 3.2: Academic Papers

We are in the process of finalizing the academic papers for the three main research projects associated with this project. We are optimistic that we will have a completed draft of each of these papers by the end of this year (and likely sooner). Below we outline the progress on each draft, describe the intended timeline for submission to an academic journal, and include a link to where the most recent version of the paper can be found. We have also included the current abstract of each paper.

Academic Paper 1: Market Skills

Working Title: Connections, Formality, and Hiring Outcomes: Evidence from an Egyptian Establishment Survey (Link to most recent version: https://www.adam-osman.com/hiring_osw/)

Progress and intended timeline of submission: We have made significant progress on this paper and have a bit more work to do to complete the first draft. We intend to have a first completed draft ready by the end of July 2020 and then we will send to colleagues for feedback. We intend to send this to leading journals in development economics by the end of August 2020.

Abstract: Network-based hiring is believed to be widespread in developing countries, but few details are known about the prevalence and types of hiring that are used. Using a unique survey of Egyptian businesses, we examine establishments' use of "connections" (those known by the owner) and "referrals" (those known by employees) and their relationship with informality, skill demands, and outcomes. While referrals are common across industries and types of establishments, use of connections is concentrated in industries that use less formal labor and demand more soft skills. Even among informal establishments, though, there is large variation in use of connections. Connections are used mostly by smaller establishments that are not part of larger firms, while referrals are used more by larger establishments. Connections are more common among

establishments that say soft skills are the hardest skills to find, so they may be used to screen for difficult-to-observe soft skills.

Academic Paper 2: Recruitment Experiments

Working title: Stigma and Take-Up of Labor Market Assistance: Evidence from Three Experiments (Link to most recent version: https://www.adam-osman.com/stigma_os/)

Progress and intended timeline of submission: This paper is the furthest along of the three. We expect to have a completed draft by the end of June 2020. We will then seek feedback from colleagues and scholars who are experts in this space and then we intend to submit to a leading general interest economics journals by the end of July 2020.

Abstract: Take-up of many social programs is low, and the reasons are not well understood. Using three randomized experiments in Egypt to recruit people for labor market assistance programs, we provide some of the first experimental evidence on the importance of stigma in the field. In all three experiments, we find that stigma related to entry-level jobs, especially how those jobs are seen by society, has a negative effect on take-up. Effects are heterogeneous, however: maturity and work experience seem to mitigate the negative effect of stigma on take-up, while education and job aspirations do not alter the impact of stigma. We also find no evidence of "welfare stigma", as telling people the program is subsidized to help those in financial hardship has no negative effect on take-up.

Academic Paper 3: Job Training Experiment

Working Title: Job Training Curriculum for College Graduates: Experimental Evidence on Hard and Soft Skills (Link to most recent version: https://www.adam-osman.com/training_os/)

Progress and intended timeline of submission: While the analysis for this paper is nearly complete this draft requires the most amount of work to complete. Nonetheless we are optimistic that we can get a first draft completed by the end of September 2020. We will then seek feedback from colleagues and scholars who are experts in this space and then we intend to submit to a leading journal in development by the end of November 2020.

Abstract: To study the impact of training in soft and technical skills for labor market outcomes, we conduct a randomized controlled trial in Cairo, Egypt. Unlike most training interventions, the participants were well-educated. Participants were either given a 4-week training in soft skills (e.g., grooming, time management, and listening skills), technical skills (e.g., Microsoft programs, English language), or a combination of the two. Those who received only soft skills showed no labor market benefits in the short or medium term, while those who received only technical skills saw a first-job boost in income that did not last. Only the group that received both trainings had a lasting impact on income of roughly 10%. This is driven by large impacts for females (about 20%) with no impact for males. Females also show an increase in reservation wages and an expectation

to delay marriage. Results suggest that soft skills only have labor market returns when combined with other types of skills necessary for the job.

Section 3.3: Policy Briefs

We have produced 3 policy briefs that are intended to be accessible to a general audience, one for each of the main research undertakings of the project. Each of these policy briefs summarizes the context of the research project, the results and the implications and recommendations for policymakers and practitioners.

We have included all three policy briefs in appendix 1 of this final report. Policy brief 1 is titled “Understanding Market Employer Skill Demands and Hiring Practices in Egypt”. The second policy brief is titled “Understanding Take-up of Labor Market Training Programs”. The third policy brief is titled “The Impact of Technical and Soft Skills Training on Employment Outcomes in Egypt”.

Section 4: Ongoing Dissemination Plan

We have made significant progress on disseminating our results but intend to increase this further in the coming years. We began to disseminate our results through academic and policy venues. In particular we have presented our work on stigma and selection into job training at academic conferences and university seminars. These include the American Social Science Association meetings in 2018. We've also presented at university seminars including the University of Connecticut, Southern Illinois University, & the University of Illinois – Urbana Champaign (Psychology Department). Additionally we presented the results at the World Bank headquarters in Washington DC at the invitation of the office of the chief economist of the Middle East and North Africa. We have also shared our results with our implementing partner Education for Employment.

As we are on track to complete drafts of all three academic papers in the coming months (as discussed above). We will use those and the policy briefs to further disseminate our findings. In particular we intend to submit our papers to well known working paper series including the one by the Economic Research Forum, and by IZA Institute for Labor Economics. We will also submit the academic papers to leading economic journals for publication, we will begin to present the “market skills” and impact evaluation of training papers at more conferences and seminars when the opportunities arise.

From the policy side we will follow four main strategies for dissemination. First, we will include these studies in the policy slide decks that are used by the Jameel Poverty Action Lab ‘s (J-PAL) regional office in the Middle East and North Africa. The policy team at J-PAL MENA regularly interacts with policymakers across the region through workshops and individual meetings, and so they will be trained on how to present the results of our studies to interested policymakers whenever the opportunities arise. Second, J-PAL MENA is planning a large conference open to the public in the late fall of 2020 (assuming Covid permits this type of gathering), where we will present the results of this study. Third, we are identifying places where we can publish our policy briefs, including well known mediums like VoxDev. Finally, we aim to host webinars with Education for Employment about the studies.

Section 5: Overall Assessment and Recommendations

We have completed a series of projects in Egypt that have built a foundation for many more studies to come. Unlike some other developing countries, Egypt has little infrastructure, personnel, or history with randomized trials. Our project is among the first to start to change this. In our survey of employer skill demands, our recruitment experiments, and our training program experiment, we have worked with local NGOs, the government, and private survey firms, in each case deepening their understanding of how randomized experiments work and of their value. In some cases, we had to work very hard to convince our partners that randomized experiments were needed. This itself is important work that will pay dividends for us and future researchers doing work in Egypt.

The projects we have completed provide important insight into many aspects of the Egyptian economy. In our survey of employers, we uncovered the skills demanded by firms, how firms recruit, and the biases firms may harbor when evaluating potential workers. These help us understand some of the reasons for unemployment among even highly educated people in Egypt. It seems that mismatch between firms' skill demands and workers' skills are a factor, but so are discrimination and unfair hiring processes.

Many employers in Egypt are biased against women, and this is seemingly something they will admit without any shame. Clearly, this is a major barrier to employment for women in Egypt. Many employers are also biased against potential workers of lower socioeconomic status, and while fewer firms admit this openly, it is still a problem. Even if a potential worker overcomes these biases, they still have to deal with the fact that much of the hiring, especially in industries like retail, is done using connections. A worker without ties to current employees or to the company owner is at a serious disadvantage. Policymakers should seek to give workers the skills they need, but they should also push firms to hire in more open and fair ways. Because connections are important for helping firms identify soft skills, the government could try to encourage schools to provide official reference letters that make it easier for employers to know which students are the most conscientious.

Even if the government provides opportunities for workers to improve their skills and employability, however, our recruitment study showed that there are a number of reasons why those most in need of such programs may not sign up. There are clearly massive information deficiencies, where unemployed young people do not know about potential opportunities that would help them get a job. Our study reveals that the simple act of giving information can direct people to such programs. The government should work to publicize these opportunities widely.

Even with that, though, unemployed young people can be kept away from helpful programs by stigmas that they may have surrounding entry-level employment. This seems to be especially true for younger people, who may care about how their friends and family view those jobs, and those without work experience, who may have an overly negative view of entry-level positions. These

feelings seem most prevalent in people under the age of 25. Thus, the very people who might be most helped by a training program – those without work experience and those who are younger – are the ones most affected by the negative stigma surrounding entry-level jobs. The government should actively target these people with advertising campaigns touting the value and dignity of any type of work. Since work experience also seems to diminish the negative stigma of these jobs, they might also consider apprenticeship or internship programs that give young people experience in entry-level jobs before they hit the labor market. Then, if they are not able to obtain their “dream” job, they will know that there are other options that are feasible for them.

The final piece of the puzzle that we reveal is what types of skills training will do the most good for these young people trying to find stable jobs. For increasing employment, it does not seem that training programs are effective. However, training can give workers more skills and thus increase their earnings. While one popular narrative is that young people have all the technical skills but no soft skills, our study shows that training people in soft skills alone does no good, either in the short or longer term. The solution is not this simple. Instead, it seems that even college-educated young people are lacking some key technical skills. Once they get these, they seem to be more likely to find good jobs. However, this is not enough, and soft skills do, it turns out, have value. Only those who got technical and soft skills had lasting benefits from training. The policy implications here are obvious. Universities and training programs should certainly be adding soft skills to their curriculum, but not at the expense of technical skills training.

Overall, we have made institutional, methodological, and policy contributions to economic research in Egypt. We have helped build a foundation that will continue to support quality research in the coming years, both for us and for other researchers. We have taught local institutions and officials the value of randomized experiments and how to make them work. For many of them, this is a completely new way of thinking. And we have contributed research results that will help policymakers make better decisions about how to help workers and firms find each other. We hope that our efforts can help create a better future for the people of Egypt.

Policy Brief #1

Understanding Market Employer Skill Demands and Hiring Practices in Egypt

By Adam Osman, Jamin Speer & Andrew Weaver

May 2020

Egypt faces high unemployment, including among people with high levels of education. One possible reason for this is that the skill demands of businesses do not match the skills possessed by potential workers. It is also possible that businesses' hiring practices favor those with connections and exclude more qualified workers, or that they are biased against women and those of lower socioeconomic status. It is thus important to understand businesses' skill demands, hiring practices, and biases.

We conducted a large-scale survey of Egyptian businesses in 4 different sectors: retail, information technology (IT), restaurants, and hotels¹². On skill demands, we asked each business to rate the importance of many different skills for the jobs their workers perform. They were then asked the most important skills and the hardest skills to find. In addition to skills normally taught by schools – say, reading, writing, and math – we asked about “soft” skills like punctuality, interpersonal skills and grooming. For hiring methods, we asked businesses how often they used connections (with other existing workers or with the owner) to hire.

We have several key findings. First, especially for businesses in retail and restaurants, soft skills are typically more important than technical skills, and businesses say that they are difficult to find. Second, while hiring using connections is common, the popular perception that most hiring is done through connections does not seem to be true. Use of connections is most common among businesses using informal labor, especially in retail and restaurants but not in higher skill industries like IT and hotels. Third, we found widespread bias against women and those of low socioeconomic status. Fourth, a large percentage of businesses prefer to hire those of higher socioeconomic status, rather than those who are most qualified.

Digging deeper into the question of connections, we found that businesses who hire people who are connected to the company owner tend to be firms that are looking for soft skills. Some of this could be nepotism, but likely some of it is that there are skills that are difficult for businesses

¹² More details about this project can be found in the paper “Connections, Formality, and Hiring Outcomes: Evidence from an Egyptian Establishment Survey” by Osman, Speer & Weaver (2020).

to identify through a resume. To get someone with the right technical skills, hiring via resumes seems to work. To get someone who can show up on time, have a good attitude, and interact well with customers, the company owner may opt for his or her acquaintance rather than take a chance on an unknown applicant.

While it clearly helps to have connections, it is not true that you cannot find a job without “knowing someone”. More than half of hiring takes place without connections, including about 75% of hiring in the IT industry. So while this is a feature of the labor market, it cannot explain everything. There is evidence from our survey that the skills taught by schools may not be the ones most in demand in the labor market, especially in industries like retail and restaurants. On top of that, there are blatant biases against women and those of lower socioeconomic status.

We show that firms hold widespread biases against women and those that come from low socio-economic backgrounds. Using List Randomization, an innovative survey technique, we ask firms directly if they weigh socio-economic status higher than skills when making hiring decisions and about one third of firms confirm this to be the case. When we use list randomization we find that the true proportion of firms that do this is closer to half. This stands in contrast with a similar set of questions aimed at getting at gender bias. We ask firms directly if they prefer to hire men over women and over 50% admit to this. When we use the list randomization we find the same proportion. Together these provide two important facts: discrimination by SES and gender is widespread, and firms do not feel that discriminating against women is normal and not worth hiding.

Based on our research, we recommend the following policies. First, schools and universities in Egypt should incorporate soft skills training into their curriculum for students. In addition to technical skills, students should be taught proper workplace practices and interpersonal skills as businesses report this to be lacking. Second, because connections are important for identifying soft skills, the government could try to encourage schools to provide official reference letters that make it easier for employers to know which students are the most conscientious. Third, strengthening and enforcing existing laws that ban discrimination could help decrease the rampant levels of discrimination currently plaguing the labor market.

Policy Brief #2

The Impact of Technical and Soft Skills Training on Employment Outcomes in Egypt

By Adam Osman & Jamin Speer

May 2020

Egypt faces some of the highest unemployment rates in the world among young people. There is a widespread perception among both businesses and unemployed people that the skills people are taught in schools are not the skills demanded by the labor market. Thus, job training programs might be able to fill in that gap by giving people those skills and helping them become better matched with existing jobs. But what types of skills should training programs teach to be most effective, and how does that training affect employment and earnings?

We conducted a large randomized trial to answer these questions¹³. With our NGO partner, Education for Employment Egypt (EFE), about 1,000 young people received a 3-6 week training course (the average participant was 25 years old and a college graduate). The content of the training was varied randomly, so that there were three different treatment groups. One group got “technical” skills, including Microsoft Word and Excel, English grammar and punctuation, and labor law. A second group got “soft” skills, including time management, small talk, communication and interpersonal skills, and how to understand and respond to customers’ complaints. A third group got a combination of the two – half soft, half technical. These were all compared to a control group, which got no training.

We surveyed all of the trainees one year after the training had ended. What we found suggests that training programs have minimal impacts on employment yet can make a big on earnings outcomes, but the type of training matters. For the short-term outcomes – the first job after training – the groups that received technical skills training (the technical group and the combination group) had earnings about 10-15% higher than the control group. Soft skills alone did not help.

¹³ More details on the experiment can be found in the paper “Training Unemployed College Graduates: The Impacts of Hard and Soft Skills” by Osman & Speer (2020).

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However, 12-24 months later, only one group was still earning more than the control group – the combination group, which received soft and technical skills. This group was again earning 10-15% more than the control group. It seems that technical skills certainly help one get a job, but to succeed and increase your earnings, you need technical *and* soft skills. None of the three treatment groups led to any difference in overall employment rates relative to the control group 12-24 months after the training.

All of our results were strongest for women, who showed earnings increases of 20-25% in some cases. This is important, because women have very low labor force participation in Egypt. Our results show that training programs have especially high returns for them, if they get a mix of technical and soft skills.

We also found significant impacts of training on women's expectations and preferences. Most importantly, in our survey, women who got training reported lower desire to get married in the next year or next three years – but not in the next five years. This suggests that their improved labor market prospects had shifted their current priorities toward work and away from immediate marriage. They still want to get married at the same rates as the control group, but only later.

Based on these results, we recommend the following policies. First, well-run training programs have the promise of helping job seekers improve their skills and their earnings outcomes but does not address unemployment directly. Second, the content of the training matters. Programs should be encouraged to provide a combination of technical and soft skills. Soft skills alone seem to offer no benefit, and technical skills alone have only a short-term benefit. Programs need to teach both to be successful. Lastly, these programs should certainly be open to women, and may want to particularly target women, especially in contexts where women have a harder time gaining a foothold in the labor market. In our study, women gained more from the training than men did.

Policy Brief #3

Understanding Take-up of Labor Market Training Programs

By Adam Osman & Jamin Speer

May 2020

Egypt, like many middle income countries, suffers from high unemployment and a potential mismatch of skills between job-seekers and businesses. Job training programs are common. They seek to give unemployed and underemployed people the skills they need to compete for existing jobs and to help them in the job search process. However, as with many such programs around the world, lots of people who could benefit from the programs do not sign up. This project seeks to understand why, and asks how recruitment can be used to improve the take-up rates of training programs.

We conducted three large randomized experiments to study the issue.¹⁴ The first experiment recruited Egyptian young adults to a job training program with Facebook advertisements. The second experiment recruited people for the same training program using street-level marketing. The third, which was a bit different, tried to help people better look for jobs by attending a job fair. In all three cases, the recruiting pitch was randomly varied across people which allows for clear estimates of the impacts of the different messages. Some people got some basic information, while others got information on the types of training they could receive and the earnings and employment outcomes of those who had gone through the program. Others got information designed to test whether there are negative stigmas associated with attending these programs to take entry-level jobs. A final group of people served as a control group and were not told about the available job assistance.

Our first main finding is that there are large information frictions. Just giving someone basic information about the program dramatically increases application rates. This suggests that some of the low take-up of programs comes from people simply not knowing about the program. Beyond getting that information, hearing about the job and earnings outcomes of recent program

¹⁴ More details on the experiment can be found in the paper “Stigma and Take-Up of Labor Market Assistance: Evidence from Three Experiments” by Osman & Speer (2020).

graduates does not improve application rates relative to just telling them about the content of the training.

We do find evidence that stigma is an important factor that holds down take-up of these programs. People are concerned that a training program that leads to an entry-level job will be a professional dead-end and will be looked down upon in society. These concerns seem to be mitigated for older, more mature people, as well as those with work experience, who already know what working in the labor market is like.

Finally, we find evidence that while lower prices encourage more applications, offering cash incentives to sign up actually leads to fewer applications. Offering small incentives may delegitimize the program and raise the recruit's suspicions.

Based on our findings, we recommend the following policies. First, much more information needs to be provided to unemployed people about potential training and job fair opportunities. Clearly, a lack of information is a major reason people do not attend. Information can be provided through schools, television, internet advertising, and text messages. Just getting basic information to people seems more important than specific, detailed information about programs. Second, steps need to be taken to overcome the stigma of entry-level jobs for younger people without job experience. This might be achieved through advertising aimed at showing a positive, respected image of all types of jobs including waiters, cashiers, salespersons, and the like. Third, training programs can improve their recruitment by focusing on basic information and by lowering prices – but not by offering cash small incentives to attend.