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ASSESSING THE IMPACT ON EMPLOYABILITY AND QUALITY OF EMPLOYMENT OF NON-FORMAL APPRENTICESHIPS IN AGRICULTURE-RELATED TRADES IN EGYPT

September 2018

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TAQEEM INITIATIVE

WHAT WORKS
In Youth Employment

Assessing the impact on employability and quality of employment of non-formal apprenticeships in agriculture-related trades

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Contents

Preface **6**
1. Introduction **8**
2. The Upgraded Non-Formal Apprenticeship Project **10**
2.1. Intervention logic and related assumptions 12
2.2. Targeting beneficiaries 12
3. Evaluation design, surveying and identification strategy **15**
3.1. Comparing matched treatment and control groups 15
3.2. Applying PSM to evaluating the apprenticeship project 16
3.3. Data collection instruments 16
3.4. Beneficiary tracking, respondent identification, and field work 17
3.5. Quality control for the fieldwork 18
4. Beneficiary characteristics, project take-up and outcomes **18**
4.1. Descriptive statistics for beneficiaries 18
4.2. Project component take-up among beneficiaries 22
4.2.1. Contracts 24
4.2.2. Food subsidy 25
4.3. Time trends and beneficiary outcomes 26
4.3.1. Educational and employment outcomes 26
5. Evaluating project impact: Quantitative results **28**
5.1. Balancing analysis for treatment and control groups 28
5.2. Assessing project impact 30
5.2.1 Comparing the treatment group to CG1 31
5.2.2 Comparing the treatment group to CG2 32
5.3 Robustness of results 33
6. Evaluating project impact: Qualitative analysis **34**
6.1. Skill-building in low-skill fields as a key challenge 34
6.2. A focus on project benefits besides training 35
6.3. Weak communication in project implementation 37
7. Discussion of impact results **37**
7.1 Main drawbacks in project implementation 37
7.2. Project impact 38
8. Conclusion **39**
References **41**

Annex A: Sample skills scorecard **42**
Annex B: Survey questionnaire and interview guidelines **44**
Annex C: Tracking beneficiaries and identification of control groups **59**
Annex D: Description of the study sample **62**
Annex E: Assessing robustness of results **65**
E.1. Project impact for treatment group 65
E.2. Impact for treatment group receiving one or more project components 68

Preface

In June 2012, the International Labour Conference of the ILO resolved to take urgent action to tackle the unprecedented youth employment crisis through a multi-pronged approach geared towards pro-employment growth and decent job creation. The resolution – "The youth employment crisis: A call for action" – contains a set of conclusions that constitute a blueprint for shaping national strategies for youth employment. In 2016, the Global Initiative on Decent Jobs for Youth was launched to facilitate increased impact and expanded country-level action on decent jobs for young people through multi-stakeholder partnerships, the dissemination of evidence-based policies and the scaling up of effective and innovative interventions.

The ILO has responded to this by investing more in understanding "what works" in youth employment and supporting governments and social partners to translate evidence into integrated employment policy responses. In 2013, the ILO set up the Fund for Evaluation in Youth Employment and the Area of Critical Importance: What Works in Youth Employment to foster knowledge sharing and provide financial and technical assistance for rigorous assessment of youth employment interventions. Regional approaches have since been established, including the Taqeem Initiative: What Works in Youth Employment, which targets ILO constituents in the Arab states and African region. Taqeem ("evaluation" in Arabic) applies an iterative cycle of capacity development, impact research and policy influence to improve evidence and support youth employment policy-makers to take evidence-based decisions for better resource allocation and programme design.

The "Impact Report Series" disseminates research reports from Taqeem-supported impact evaluations. Reports include baseline, endline and qualitative reports which describe the research designs, methodologies, interventions under investigation and policy and programmatic findings and recommendations.

This report presents the findings of the impact assessment of the "Combating Worst Forms of Child Labour by Reinforcing Policy Response and Promoting Sustainable Livelihoods and Educational Opportunities in Egypt Programme", with particular concentration of the programme's apprenticeship component. The report explores net effects of the upgraded apprenticeship project on the beneficiaries' ability to secure decent work, improve working conditions and increase retention rates.

In evaluating the apprenticeship project, a quasi-experimental design relying on propensity score matching (PSM) is employed. The quantitative analysis is further supported by a qualitative study drawn from focus group discussions with beneficiaries' parents and interviews with officers in participating companies.

We would like to acknowledge the Cairo Demographic Centre, especially Professor Zeinab Khadr and Professor Nesma Gad who oversaw the study and the data collection and authored the first drafts of the paper. Ms. Amal Refaat and Ms. Eman Shady lead the data collection team in the field and were supported by Mr. Hussein Anwar, in charge of the office team, and Mr. Ali Abdallah who coordinated the overall study activities. The ILO Decent Work Country Team in Cairo and the Taqeem Initiative project team contributed valuable comments throughout the drafting process. Dr. Miquel Pellicier was the data expert and Dr. Ghada Barsoum was the qualitative researcher. Mr. Paul Dyer acted as the penultimate editor. Thanks are due to the implementing NGOs in selected governorates and to former ILO project staff for providing contacts to beneficiaries and partners, sharing project documentation and insights into

challenges faced. Lastly, the research team appreciates the availability and time spent of project beneficiaries and non-beneficiaries whose opinions and experience are reflected in this impact assessment.

The report was produced in partnership with the International Fund for Agricultural Development (IFAD) as part of an IFAD-financed project titled "Strengthening gender monitoring and evaluation in rural employment in the Near East and North Africa". Through rigorous impact research, this capacity development and learning grant project aims to understand "what works" in the promotion of gender mainstreaming, with the ultimate goal of reaching gender equality in rural employment outcomes across the region.

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1. Introduction

Child labour in Egypt is a widespread phenomenon, as it is in many developing countries. In 2010, an Egyptian Central Agency for Public Mobilisation and Statistics (CAPMAS) study on child labour revealed that nearly 1.6 million Egyptian children were engaged in child labour, according to international definitions, and that 9.3 per cent of children between the ages of 5 and 17 were engaged in some form of child labour.[1] Child labour was more prevalent among boys (14.3 per cent) than girls (4 per cent). Moreover, almost two-thirds of children engaged in labour worked in the agriculture sector, with more than half of these children working as unpaid family workers (52 per cent) on their families' farms and 45.7 per cent of them exposed to hazardous conditions (smoke, dust and other pollutants) in their work.

In 2010, in an attempt to tackle issues of child labour in Egypt, the Government of Egypt (GoE) launched the "Combating Worst Forms of Child Labour by Reinforcing Policy Response and Promoting Sustainable Livelihoods and Educational Opportunities in Egypt Programme" (CWCLP). Developed and implemented in collaboration with the International Labour Organisation (ILO), UNICEF, and the World Food Programme (WFP), the project had multiple goals at the local and national level.

At the national level, CWCLP aimed to strengthen policies on child labour, to support the development and revision of relevant legislation, and to strengthen the capacity of national institutions to combat child labour and address its root causes through effective child labour policy. In particular, the programme sought to develop the capacity of the Ministry of Manpower and Migration (MoMM), the Ministry of Social Solidarity (MoSS), and other relevant social partners to improve conditions for children engaged in work under exploitative conditions, engaged in traditional activities, or working in informal apprenticeships. The programme also sought to implement a National Action Plan on child labour, with a special focus on child labour in agriculture, within the context of Egypt's Decent Work Country Programme. In addition, it sought to reduce exposure of children to hazardous working conditions through the revision of the Hazardous Work List (HWL), supporting the GoE in the process of its adoption and enactment.

At the local level, the programme aimed to address the root causes of child labour through the promotion of sustainable livelihoods for target households and the provision of direct educational services to children. In doing so, the programme sought to raise awareness at the household and community level of child labour, its root causes, its negative consequences, and the importance of education for all children, as well as raising awareness of relevant legislation, policies, and children's rights. Moreover, the programme sought to strengthen the capacity of partner civil society organisations to design, develop, and implement projects to support income-generating activities, micro-enterprises, and cooperatives for women and households with children at risk.

To inform these efforts, both national and local, the programme planned to support research on child labour, project evaluation, and the collection of reliable data. It also planned the development of a child labour monitoring system. Components of the CWCLP were implemented across five governorates (Assiut, Minya, Souhag, Fayoum, and Sharqiyah) between December 2010 and December 2014. The CWCLP had a total budget of US$ 9.5 million.

This evaluation study focuses on a project component of the CWCLP: the upgrading of Egypt's non-formal apprenticeship system. Under Egypt's existing system, children between the ages of 13 to 17 can work and get on-the-job training under apprenticeship contracts overseen by MoMM. Under the

[1] This study was carried out with financial and technical assistance from the ILO's International Programme on the Elimination of Child Labour (IPEC). See ILO-IPEC/CAPMAS. 2012. *Working Children in Egypt: Results of the 2010 National Child Labour Survey* (Cairo: ILO/ CAPMAS), available at: https://www.ilo.org/ipec/Informationresources/WCMS_IPEC_PUB_21017/lang--en/index.htm

CWCLP, project implementers developed a new contract scheme for apprentices providing better benefits to participating children, a skills scorecard monitoring children's skills acquisition, occupational safety and health (OSH) training, and additional training (off-the-job) for children. The apprenticeship scheme also included a set of incentives for parents and children, including food rations and set wages and allowances that would increase over time.

The upgrading of the non-formal apprenticeship system component of the CWCLP responded to three of the identified CWCLP goals described above. First, it built capacities of relevant social partners to improve learning and working conditions for children engaged in exploitative conditions in traditional sectors. Second, it increased their capacity to eliminate hazards in the work place, focusing on the provision of decent work (particularly in agriculture). Finally, the apprenticeship project raised awareness of the negative consequences of child labour and the benefits of education, working with social partners, participating companies, and child workers on these issues. In doing so, it introduced a real-time application of efforts to improve working conditions and opportunities for child workers to learn important life skills that could advance their economic outlooks and help them unleash their potentials.

The main aim of this study is to assess the impact of the CWCLP programme's apprenticeship project on participating child labourers, their work environments, and working conditions. The central research question we attempt to answer is what the effect of the upgraded apprenticeship project was on the beneficiaries' ability to secure decent work. In particular, we are interested in evaluating the effect of the project on several key outcome variables that describe the employability of project beneficiaries, as follows:

- Exposure to work-related hazards and risks;
- Quality of current employment and working conditions (formal/informal, receiving fringe benefits and covered by employment protection, relations with supervisors and others);
- Retention rates at work and job tenure; and
- Aspirations and perspectives on career goals.

In addition, the evaluation attempted to address the gender impact of this project through answering whether the intervention affected female apprentices differently than male apprentices.

In evaluating the apprenticeship project, we adopted a quasi-experimental design relying on propensity score matching (PSM) to compare outcomes for project beneficiaries (the treatment group) against two control groups, with evidentiary data drawn from surveys of each group. Our quantitative analysis was further supported by a qualitative study drawn from focus group discussions with beneficiaries' parents and interviews with officers in participating companies.

In the context of these combined approaches, we find that the project – as delivered – demonstrated several structural deficits. The ability of the project to provide participating children with tangible employability skills was limited by the small share receiving off-the-job training as well as the low skill base of much of the work in which participating children engaged during their apprenticeships. Moreover, there were a number of communication challenges related to ensuring that stakeholders understood the goals of the project. In particular, many participating families saw food aid (an incentive for project participation) as the major project objective, a misunderstanding that likely skewed outcomes for participating children. Also, participating NGOs misunderstood or misrepresented the objectives in recruiting beneficiaries, affecting take-up and outcomes.

In terms of outcomes for beneficiaries, we find that the project had limited impact on young labourers' employability and improving their work environments. The low-skill nature of beneficiaries' work limited the scope for skill upgrading on-the-job, while additional core employability training activities were only offered to 10 per cent of beneficiaries, limiting the impact of life skills training provided under the project. The project did have an important gender impact: girls in the treatment group

compared positively to matched girls in the control groups in terms of employment, perceived ability to secure work with a contract, and having an appreciation for the importance of technical training. They were less likely to have to work seven days per week and be exposed to violence or risks at work. For boys, the project had positive impact on reducing the requirement to work seven days per week and increasing satisfaction of current jobs, but boys in the treatment group were less likely to have transitioned from trainee status to full worker, to retain a job, and to have high aspirations than peers in the control group, while they were more likely to be injured.

This report explores these outcomes in detail, providing lessons learned that are relevant to efforts to improve and upgrade non-formal apprenticeship programmes. The rest of the report is structured as follows. Section 2 provides an overview of the upgraded non-formal apprenticeship project, its design and its implementation. Section 3 presents the evaluation's methodology, data collection instruments, and sampling. Section 4 reviews beneficiary characteristics before project implementation, the nature of project take-up, and outcomes for beneficiaries. Section 5 presents our quantitative analysis of project impact, while Section 6 provides an analysis of qualitative findings. The report concludes with a general discussion of impact results (Section 7) and conclusions and lessons learned (Section 8).

2. The Upgraded Non-Formal Apprenticeship Project

Many developing countries, especially in Africa and the Middle East, are in a process of upgrading their informal apprenticeship systems.[2,3,4] Upgrading informal apprenticeships is considered a cost-effective way to enhance the employability of young people relative to investing in expanding formal technical education, because apprenticeship systems are integrated into the production process. Quality non-formal apprenticeship schemes allow apprentices to fully benefit from the workplace as a learning resource, ensuring skills transmission and the acquisition of broad occupational competence that is aligned with the business needs.

The Egyptian Labour Code includes provisions for apprenticeship contracts (*tadarrug el-meheni*), overseen by and implemented under the MoMM. These apprenticeship contracts target 13-17 year-old children who are receiving on-the-job training in an enterprise. The contract is signed between the employer, the child's guardian, and the Directorate of Manpower (DoM) at the governorate level and registered. The apprenticeship can last between one and three years; it is divided into three stages, with determined and increasing levels of wages or allowances. Apprentices undertake a health check at the beginning of the apprenticeship and receive accident insurance that covers health expenses in case of workplace accidents. At the end of each stage, the apprentice's learning progress is assessed. The MoMM issues a nationally recognized apprenticeship certificate (co-signed by the employer) at the end of the apprenticeship period.

[2] International Labour Organization (ILO) (2011). "Upgrading Informal Apprenticeship Systems: Skills for Employment" Skills for Employment Policy Brief (Geneva: ILO) https://www.dcdualvet.org/wp-content/uploads/2011_ILO_Upgrading-informal-apprenticeship-systems_policy-brief.pdf

[3] International Labour Organization (ILO) (2008). Apprenticeship in the informal economy in Africa: Workshop report, Geneva, 3–4 May 2007, Employment Sector Employment Report No. 1 (Geneva). http://www.ilo.org/employment/Whatwedo/Publications/employment-reports/WCMS_104621/lang--en/index.htm

[4] Handoussa, H. & Tzannatos, Z. (2002) Employment Creation and Social Protection in the Middle East and North Africa. An Economic Research Forum Edition (Cairo: The American University in Cairo Press) http://documents.worldbank.org/curated/en/671181468052753713/pdf/733510PUB00Emp00Box371944B00PUBLIC0.pdf

While the MoMM apprenticeship contracts constitute a structured pathway into the labour market, combining earning and learning with social protection provisions, children working under the apprenticeship system have no access to formal learning opportunities and they often lack decent working conditions. Moreover, while the system provides children with MoMM certificates, it is considered non-formal because the certificates are not recognized by the Ministry of Education (MoE) and do not allow certificate holders to transit into formal education programmes.

Through the CWCLP apprenticeship project, the ILO provided technical support to the MoMM in upgrading the existing non-formal apprenticeship system, implementing the project in collabouration with a number of non-governmental organizations (NGOs) in four governorates (Assiut, Souhag, Fayoum, and Sharqiyah) over a period of two years. The overall objective of this intervention was to improve employment outcomes for targeted apprentices, including the provision of decent working conditions and wages. The intervention focused on agriculture-related trades due to the fact that more than half of child labourers in Egypt work in the agriculture sector and because the sector is not sufficiently covered by laws and regulations governing child labour.

The project aimed to engage 3500 children ages 14 to 17 who were either working or at risk of becoming child labourers.[5] For participating children, the project included four related components and a set of incentives (for apprentices, their families, and employers) to ensure interest and participation in the project. The four components included:

1) **Apprenticeship contracts:** The project provided beneficiaries with 12-month apprenticeship contracts.[6] Under the terms of the contracts, children were provided with a fixed wage (starting at 400 Egyptian pounds per month and increasing with each skill review, up to EP 750 per month at the end of the apprenticeship), insurance for work-related accidents, and a medical check-up. Contracts were signed between 2012 and 2014.

2) **Skills score cards:** The project introduced skills score cards for 20 agriculture-related occupations. These skill cards were used to monitor apprentices' progress in skills acquisition throughout the apprenticeship.[7]

3) **Certification**: Upon completion of the apprenticeship, beneficiaries were to receive a training certificate signed by the employer, their parents, and the DoM.

4) **Off-the job learning component:** In addition to on-the-job training, the project provided some apprentices with training on core employability skills. These included information and communication technology (ICT) skills, numeracy skills, occupational safety and health (OSH), environmental awareness, labour rights, basic entrepreneurship, and career development. This off-the-job training scheme included 350 apprentices (10 per cent of beneficiaries) and was imparted through 120 hours of classroom-based learning using active learning methodologies.

Except for the wage, which was paid by employers, additional costs related to the apprenticeship (health check, birth certificate, accident insurance, and administrative procedures) were covered by project implementers to encourage employer participation. Employers were also provided with OSH training

[5] Working children are designated as 'child labourers' according to international labour standards if 1) they perform hazardous work or 2) they are between 12 and 14 years of age and work for 14 hours or more per week. Under a supervised apprenticeship contract, children of 14 years of age are allowed to join. Children above legal working age who are working but not engaged in hazardous work are considered 'at risk' in case they work in enterprises with potential work hazards.

[6] Contracts were signed between June 2012 and November 2014.

[7] A sample skills scorecard is included in Annex A.

designed to increase knowledge of standards needed to avoid work-related injuries, following the ILO's Work Improvement in Small Enterprises (WISE) methodology.[8]

The scheme also provided incentives to families, who were suspicious of the project and its approach. To secure family buy-in, a food subsidy in the form of rations was provided to families whose children joined the apprenticeship project. This component was implemented by WFP. Moreover, to ensure that families kept their children engaged in the project, contracts were structured in a way that ensured that wages and allowances were set and would increase at regular intervals during the project, as described above.

Activities were implemented by local NGOs engaged as intermediary organizations. They helped facilitate formalities and provided guidance both to employers and to families and children. They also joined regular monitoring visits by DoM. According to the terms and conditions of the apprenticeship contract, a DoM representative would meet three times with each apprentices (at the end of each stage in the contract). The DoM also conducted additional visits to monitor and ensure application of contract terms.

2.1. Intervention logic and related assumptions

In upgrading the existing non-formal apprenticeship system in Egypt, the project sought to provide working children with a more formalized learning structure, as well as more secure and decent working conditions. The project's upgraded non-formal apprenticeships formalized contracts to better ensure the existence of and transfer of technical skills for trade mastery while children are working. The contracts also secure decent working conditions and wages for apprentices. Over time, positive outcomes for working children and companies should foster institutional changes to Egypt's apprenticeship system, while ensuring gains for child beneficiaries in terms of skills development, employability, and access to decent work.

For the introduced theory of change to hold, a number of conditions are assumed to exist. The most important assumption is the adequacy of existing institutional environment to embrace and sustain introduced institutional upgrading in targeted institutions. This assumption is of crucial importance in Egypt given the fragmented and inefficient institutional framework governing the provision of technical and vocational education and training (TVET), the large size of the unregulated informal economy, and weak monitoring and enforcement mechanisms with respect to decent working conditions. Other assumptions include:

- the relevance of skills offered through the apprenticeship and trainings to those demanded by the labour market;
- the quality of training (on- and off-the-job), skills of workplace tutors, and technology available in the workplace;
- the existence of quality assurance and monitoring mechanisms;
- wide acceptance of awarded certificates by employers other than the supporting company and local networks;
- institutional, technical and financial capacity of employers and partner organizations to undertake and sustain related activities; and
- adequate economic and social conditions and availability of job opportunities.

2.2. Targeting beneficiaries

As noted above, the ILO and its partners sought to provide upgraded apprenticeships to 3500 children between the ages of 14 and 17 who were working or at risk of becoming child labourers. Beneficiaries

[8] WISE is a tested ILO training programme that empowers small and medium enterprises to take practical and low-cost action to improve working conditions. The training emphasizes the link between good working conditions and productivity and the importance of employer-employee cooperation to achieving positive change.

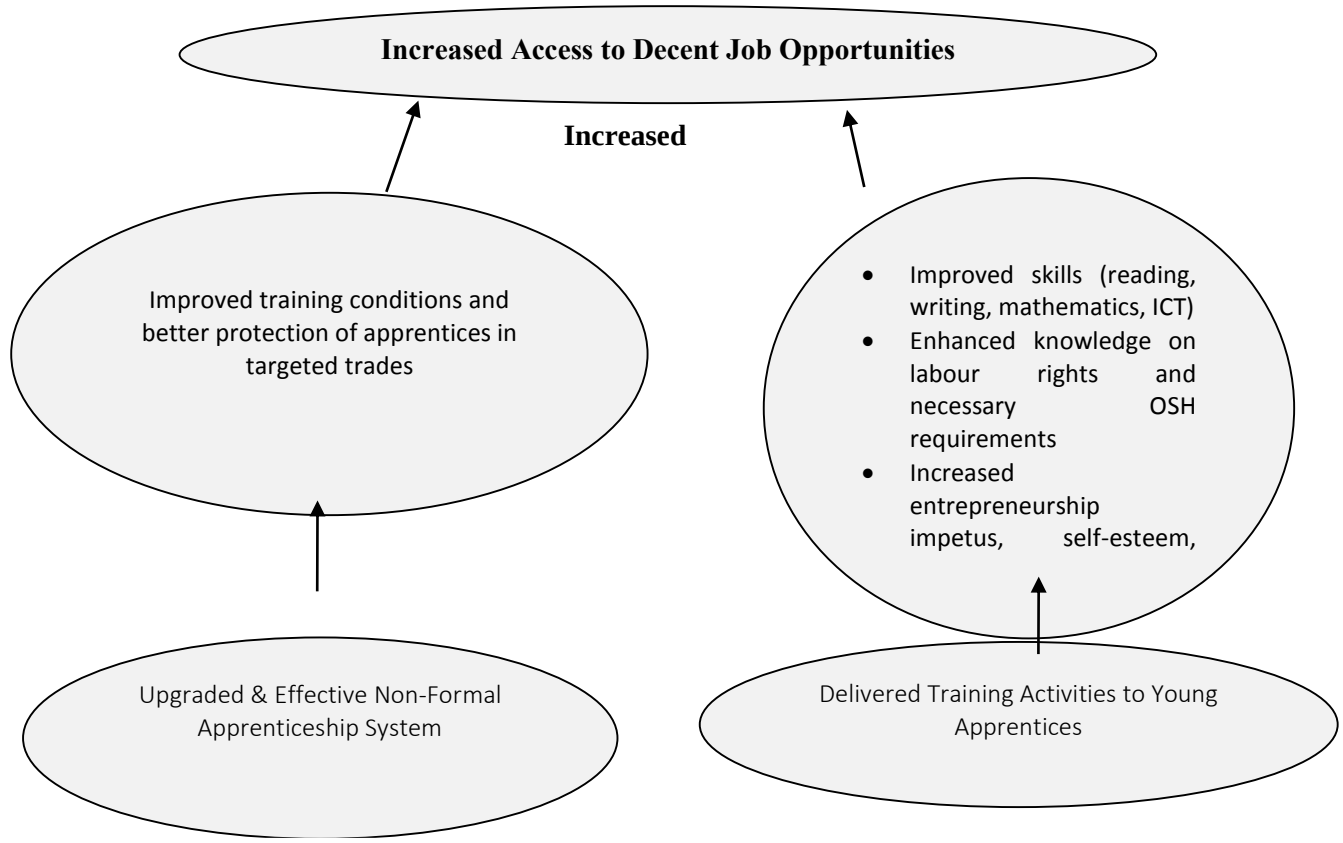
were working children identified through partnering NGOs in four governorates. Following an assessment of occupations suitable for apprenticeships, which could not be seasonal and had to require a sufficiently broad skill sets, the project focused on identifying companies working in farming, poultry processing, the dairy industry, and food processing. Working relations here are informal, wages low, social protection absent, and working conditions often hazardous.[9] It was expected that beneficiaries would come largely from poor rural families who relied on the young person's support for family income. Targeted beneficiaries were children who were already working, most of them in hazardous work, and all of them informally, without any formal, written employment contract. It should be noted that some families were reluctant to enrol their children out of distrust or because they preferred that children have the flexibility to change workplaces more often than contracting under an apprenticeship would allow.

To secure participation by companies, project implementers contacted companies that were formally registered and engaged young workers between 14 and 17 years old in the selected occupations. Those interested in joining the project were selected, and all eligible children interested in joining the project were included. Originally foreseen geographical targeting was abandoned due to difficulties of identifying sufficient numbers of apprentices in the pre-selected governorates.

[9] ILO-IPEC/CAPMAS. 2012. Working Children in Egypt: Results of the 2010 National Child Labour Survey (Cairo: ILO/ CAPMAS)

Upgrading Informal Apprenticeship System in Agriculture-related Trades in Egypt

Results Chain



- Development of 12-month apprenticeship contract
- Introduction of skills scorecards in 20 related agriculture occupations
- Training employers on OSH

- Numeracy and literacy skills training
- ICT training
- Labour rights and OSH training
- Basic entrepreneurship and career development

3. Evaluation design, surveying and identification strategy

No impact evaluation was planned during the project's design and implementation phase. As such, the evaluation team lacked a mechanism – such as randomization – needed to generate an *a priori* comparable control group. Hence, this evaluation adopted a quasi-experimental design relying on propensity score matching (PSM) to match the treatment group (beneficiaries) with a comparable control group (non-beneficiaries) on the basis of observable characteristics. To evaluate the impact of the upgraded non-formal apprenticeship project, we compare outcomes between matched treatment and control groups, as described below.

3.1. Comparing matched treatment and control groups

According to the PSM approach, we fit a logit model where CWCLP beneficiary children are assigned a value of 1 and non-beneficiary children a value of 0. This dichotomous variable for participation status in the CWCLP apprenticeship project is then regressed on a number of individual attributes. The logit equation for the PSM implementation to match members of the treatment group and control group, can be written as follows:

$$logit\frac{p}{1-p} = X_i'\beta + \varepsilon_i (1)$$

where P is the dichotomous dependent variable equal to 1 if the child is a CWCLP participant/beneficiary and 0 otherwise. The variable X is a vector of covariates that includes some of the participant attributes. The results of the logit model make it possible to calculate the propensity scores that fall within the common support area.[10] These scores are equivalent to the probability of being a CWCLP beneficiary considering a set of covariates defined in the logit equation. The matched sample is constructed using the one-to-one nearest match criterion in which every beneficiary is matched with a non-beneficiary group, imposing the common support condition.[11] Subsequently, we check whether the balancing property holds to verify whether the mean values of observable attributes are the same after matching.

With the matched control groups selected, the impact analysis of the project depends on the comparison of outcomes for matched treatment and control samples using the following equation:

$$y_i = \beta_0 + \gamma P_i + \beta X_i' + \varepsilon_i, \;\; i = 1, .., n; (2)$$

where the left side variable (y_i) represents the value of the outcome variable of interest, Pt is a dummy that measures the treatment status (1 if the individual is a project beneficiary and zero otherwise); γ is the treatment effect; X_i' is a vector of covariates; $\varepsilon_i$is the error term.[12]

[10] Caliendo, Marco and Sabine Kopeinig. 2005. "Some Practical Guidance for the Implementation of Propensity Score Matching," IZA Discussion Paper No. 1588 (Bonn: Institute for the Study of Labour)

[11] Sianesi, Barbara. 2001. "Propensity score matching," United Kingdom Stata Users' Group Meetings 2001 12, Stata Users Group, revised 23 Aug 2001.

[12] Khandker, Shahidur R.; Koolwal, Gayatri B.; Samad, Hussain A. 2009. *Handbook on impact evaluation: quantitative methods and practices (English)*. Washington, DC: World Bank. http://documents.worldbank.org/curated/en/650951468335456749/Handbook-on-impact-evaluation-quantitative-methods-and-practices

3.2. Applying PSM to evaluating the apprenticeship project

In practice, our evaluation design relies on one treatment group consisting of children ages 14 to 17 who participated in the non-formal apprenticeship project within the CWCLP and who received one (or several) of services provided under the project. This treatment group is compared with two different control groups. The first control group (CG1) consists of children who did not participate in the apprenticeship project but who worked at companies that were involved in the project (other children at the same company were CWCLP beneficiaries). The second control group (CG2) consists of children working in companies that did not take part in the apprenticeship project.

It should be noted that, in accordance with the project's criteria for selection of beneficiaries, only families that were in need enrolled their children in the project. Hence, it was expected that, on average, members of CG1 might have relatively better social standing than members of the treatment group, given that they were not self-selecting into the project. Furthermore, the project targeted working children who were out of school. Those not enrolling in the project would be more likely to have been enrolled in school even while they were working (possibly working sporadically or during school breaks). This also creates a selection bias among the identified workers in the two control groups. The matching of child labourers within the treatment and control groups under the PSM is carried out on a number of basic individual and family attributes (age, gender, family structure and living standards) to counter these biases.

The impact evaluation study was limited to two of the four governorates in which project activities were delivered (Assiut and Souhag). Together, the project activities that took place in Assiut and Souhag included 1648 participants, accounting for over 47 per cent of project participants. Evaluation design aimed for a sample of 300 beneficiaries within the treatment group (18.2 per cent of beneficiaries in these two governorates). Among these 300 children, the evaluation aimed to include at least 50 beneficiaries who received off-the-job learning on core skills for employability as part of the project. The sample also was designed to include 10 participating companies (an average of 30 beneficiaries per company).

Table 2: Project beneficiaries and sample information in Assiut and Souhag

Attributes	Assiut	Souhag	Total
Beneficiaries	1228(714)	420	1648 (1134)
Companies	64	35	99
Female beneficiaries	565	180	745
Male beneficiaries	663	240	903
No. of completed interviews	175	125	301
per cent of beneficiaries interviewed	14.3 per cent (24.5 per cent)	29.7 per cent	18.2 per cent (26.5 per cent)

* Parentheses include the number of beneficiaries within the selected districts in Assiut.

For the implementation of the matching design of the study, the sample design also included an additional 900 children equally divided between the two above-described control groups. The larger size of the control groups in comparison with the size of the treatment group was required to allow for more precise matching of the treatment group.

3.3. Data collection instruments

For our quantitative analysis, a survey questionnaire was used to collect data from each of the individuals included in the treatment and control groups. The questionnaire includes four modules. The first module collects demographic background information on the respondent and, for beneficiaries, data on the particulars of their engagement with the project (e.g. start dates, take-up of project

components, project administration, etc.). Module 2 addresses issues related to labour market participation, work status and working conditions. Module 3 focuses on aspirations and perceptions of empowerment and self-efficacy. The final module collects information related to household welfare and economic status.

Regarding education and work status, the questionnaire requests that respondents provide both current information and retrospective information. For beneficiaries, the questionnaire asked about three points in time: "before the project", "during the project," and "currently." Members of each control group were asked to consider two points of time: 2011 (aligned with pre-project implementation) and "currently." The evaluation had to depend on retrospective questions because no impact evaluation had been planned before project implementation and, as such, no baseline survey was available.

The evaluation team also collected qualitative data through in-depth interviews with officials from companies employing beneficiaries and focus group discussions with parents of beneficiaries. The goal of interviews with company representatives was to obtain perspectives from these officials regarding the impact of the project on beneficiaries from an employer's perspective and the project's impact on beneficiaries' work and living conditions in general. Ton company officer interviews were planned to be carried out as well as 24 focus group discussions with parents of the beneficiaries using a structured guide to assess the project's impact on the beneficiaries from a household perspective. The analysis of the qualitative data followed an open coding approach, where themes emerged from the data, as common to this research paradigm.

See Annex B for the field work tools, including the survey questionnaire and the guidelines for the in-depth interviews and focus group discussions.

3.4. Beneficiary tracking, respondent identification, and field work

Fieldwork started on 15 November 2017 with initial beneficiary tracking activities. These activities took place until 18 December 2017. Actual data collection started on 18 December 2017 in Assiut and on 20 December 2017 in Souhag. Data collection was concluded on 27 December 2017. The final completed sample consisted of 301 beneficiaries, 455 child workers in CG1, and 450 child workers in CG2. In addition to quantitative field work, field activities included nine in-depth interviews with officials representing participating companies and 16 focus group discussion with parents of the beneficiaries. Focus groups each included five parents on average. They included both fathers and mothers, although the participation of mothers were usually higher than that of fathers. The following is a brief description of the tracking and identification activities undertaken to ensure correct identification of the treatment and control groups, as well as the quality controls activities in the field. For more details on these activities, see Annex C.

Absence of contact information for beneficiaries since the end of the project was a major concern for the study. As such, tracking beneficiaries 3 to 4 years after their completion of the project was a significant part of the fieldwork. The evaluation team had to rely on collaborating NGOs for contact information and to assist in the tracking of beneficiaries. While the evaluation team was able to secure a complete list of beneficiaries and contact information at the time of project participation, only 26.5 per cent of beneficiaries were available for interviews, leaving us with an attrition rate of about 73.5 per cent in the areas where the study was carried out. The most important reasons for this high level of attrition were the migration of many male workers out of their governorates, as they moved to urban centres to secure better work opportunities; and the marriage of female workers, where cultural traditions restricted our ability to communicate with them at their marital households.

Our first control group (CG1) consisted of non-beneficiary child labourers working at the same company as beneficiaries. Our identification of members of this group depended largely on contacting the colleagues of beneficiaries who were not enrolled in the project but who were of similar age and

had similar jobs. The study team, in collaboration with the local NGOs and employers, was able to identify the required number of this control group (455 labourers).

For our second control group (CG2), we planned to include young labourers working in companies that did not participate in the project. Identification was mainly dependent on local partner NGOs working in the villages where the field work was carried out. The main criteria regarding fieldwork was observed in the selection of the matching companies, while the age criterion was observed in the selection of the individual workers. Care was taken to ensure representation of female workers. The study team, in collaboration with local NGOs, was able to identify the required number of this control group (450 labourers).

The study team was able to meet the desired numbers for the treatment group and both control groups. However, we faced constraints in terms of identifying individuals in the treatment and control groups (see also description in Annex C). As a consequence, whether or not an individual participated in the study was a matter of whether the person could be tracked by the project team or not. There was not a large enough sample frame (of individuals that could be tracked) from which to draw a random sample to be included in the study. For example, for the treatment group only 18 per cent of beneficiaries could be tracked and all were interviewed for the study (in part because participants have since married or moved to other regions). This might lead to attrition bias affecting our results as the sample of interviewed (and tracked) individuals is likely to be an imperfect representation of the three groups they represent. The PSM approach helps to balance treatment and control groups based on observable characteristics but cannot take attrition bias into account. For a complete description of the members of the treatment and two control groups, see Annex D.

3.5. Quality control for the fieldwork

The evaluation team dedicated one team member who served as a coordinator for all tracking activities for project beneficiaries and identification of members of each control group. Working closely with supporting NGOs and partnering employers, the coordinator oversaw the implementation of a three-stage plan for tracking beneficiaries (see Annex C).

For qualitative and quantitative data collection, the evaluation team included two persons responsible for quality assurance. These individuals oversaw a share of interviews to ensure that survey enumerators were following training instructions for data collection. In addition to this, the quality assurance team was responsible for re-interviewing 5 per cent of respondents in face-to-face interviews and interviewing an additional 5 per cent by telephone to ensure that responses matched those of initial interviews.

4. Beneficiary characteristics, project take-up and outcomes

Before assessing the impact of the CLCWP upgrading of the non-formal apprenticeship project, we provide an analysis related to the project's beneficiaries based on survey results from our treatment group. As follows, Section 4.1 provides an overview of descriptive characteristics of beneficiaries before the start of the project, providing an assessment of the project's ability to reach beneficiaries as aligned with targets. Section 4.2 assesses project take-up among interviewed beneficiaries, including the components of the project they received, while Section 4.3 addresses changes in educational and employment outcomes among beneficiaries over time.

4.1. Descriptive statistics for beneficiaries

Table 3 presents a detailed profile of the sampled beneficiaries by gender. It shows that 47.2 per cent of surveyed beneficiaries were girls (compared with 45.2 per cent of total beneficiaries in Assiut and

Souhag). Prior to the launch of the project, the majority of surveyed beneficiaries had only completed primary school (53.5 per cent), while 21.3 per cent had completed preparatory school (9 years of schooling) and almost one-quarter had never attended school or dropped out before completing primary (24.9 per cent). Current age among beneficiaries, at the time of the survey, averaged 18.3 years, while the average age among beneficiaries at the start of the project was 14.4 years.

Table 3: Demographic characteristics of project beneficiaries

	Girls	Boys	Total
Total respondents (n)	*142*	*159*	*301*
per cent	*47.2*	*52.8*	*100*
Child attributes			
Age, current (years)	18.4	18.4	18.3
Age at project start (years)	14.3	14.5	14.4
Educational attainment (per cent)			
Never attended or less than primary	28.2	22.0	24.9
Primary	46.5	59.8	53.5
Preparatory	24.6	18.2	21.3
Secondary (general or technical)	5.7	0.0	0.3
Work status before project (per cent)			
Work for wage (or self-employed)*	55.6	80.5	68.8
Help family in farm or business*	59.1	51.6	55.1
Selling family products	4.2	7.6	6.0
Do housework*	62.7	18.9	39.5
Looking for work	14.8	14.5	14.6
Father attributes (per cent)			
Father dead	6.3	8.8	7.6
Educational attainment			
No education*	61.3	54.1	57.5
Read and write	5.6	8.2	7.0
Primary	23.2	14.5	18.6
Technical education	7.8	18.2	13.3
Other	2.1	5.0	3.6
Work status			
Not working*	16.9	25.7	21.6
Agriculture-related activities	42.3	32.1	36.9
Labourer in industrial sector	34.5	27.7	30.9
Other	6.3	14.5	10.6
Mother attributes (per cent)			
Education attainment			
No education	82.4	71.1	76.4
Technical education	7.0	8.8	8.0
Work status (no work)	99.3	95.0	97.0
Household attributes			
Head of the household (per cent)			
Father	88.0	90.6	89.4
Mother	8.5	5.7	7.0
Number of siblings (number)	5.6	4.8	5.2
Living conditions (per cent)			
Ceiling material			
Concrete	52.8	55.3	54.2
Wood plank	41.6	38.4	39.9
Source of cooking fuel (LPG cylinder)	93.0	96.9	95.0

Toilet facility (traditional without septic tank)	90.9	88.7	89.7
Ownership of land	27.5	43.4	35.9
Ownership of livestock	74.7	72.3	73.4
Household wealth[13]			
Poorest tertile	53.5	50.3	51.8
Middle tertile	28.2	31.5	29.9
Wealthiest tertile	18.3	18.2	18.3

* Significant at $\alpha<0.05$

Figure 1 explores the age of beneficiaries at the start of the project in more detail. This is important, as age was one of the main criteria for project participation. As described above, the project targeted working children between the ages of 14 and 17. Our analysis of our sampled treatment group shows that for the 288 beneficiaries who reported age at the beginning of the project, responses ranged from 10 to 18, well beyond the targeted bounds of the project. However, 76.4 per cent of girls and 78.9 per cent of boys were within project age criteria, and 88.2 per cent of girls and 92.1 per cent of boys were within the age criteria for apprenticeship contracts under the Egyptian Labour Code (13-17). At the same time, 9.4 per cent of respondents reported being 12 or under at project start. It should be noted that cross checks between current age and the age at year of joining the project showed that 94.3 per cent of those who reported this data were within the acceptable range of error (± one-year difference).

Figure 1: Age distribution of beneficiaries at project start*

*Those who reported their age at joining the project (96 per cent of all surveyed beneficiaries)

Before the start of the project, more than two-thirds of surveyed beneficiaries were employed (working for a wage or self-employed). However, boys were employed at a higher rate (80.5 per cent) than girls (55.6 per cent). More than half of beneficiaries were helping on their families' farm or business (55.1 per cent) with girls more likely to be working in such positions than boys (59.1 per cent compared to 51.6 per cent). As expected, doing housework was significantly more prevalent among girls (62.7 per

[13] Relative economic status under the study was assessed in terms of a wealth index based on a principal component analysis (PCA) of family possessions based on a list of 23 household items, as recorded in the survey. The reference period was before the beginning of the program (2011). We classified families into three tertiles (33.3per cent); in other words, the "wealthiest" in this classification refers to the top 33.3per cent of standard of living in the sample.

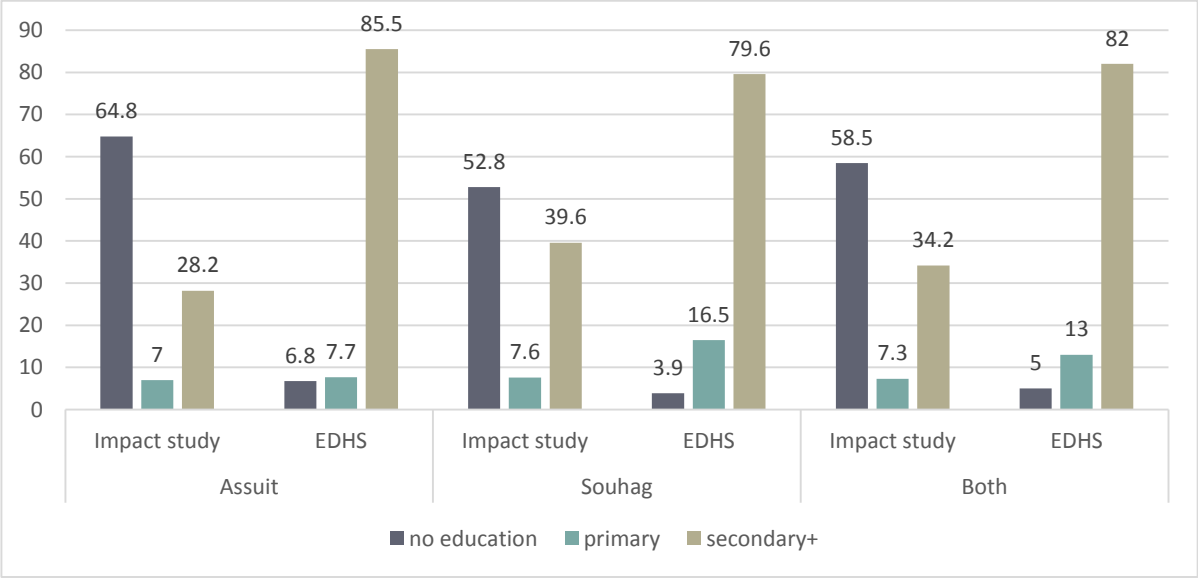
cent) than among boys (18.9 per cent). Data also show that almost 15 per cent of the sampled beneficiaries were looking for work before the start of the project.

With regard to the attributes of beneficiaries' parents, the data show that 7.6 per cent of sampled beneficiaries were paternal orphans. More than 57.5 per cent of fathers had no education, with the fathers of participating girls significantly more likely to have no education (61.3 per cent) than boys' fathers did (54.1 per cent). Fathers' work was mainly in the agricultural activities or as labourers, which account for almost two-thirds of sampled beneficiaries. Fathers of the beneficiary girls were more likely to be in these two categories (76.8 per cent) than fathers of beneficiary boys (59.8 per cent). In contrast, boys were more likely to have fathers who were not working (25.7 per cent) than beneficiary girls (16.9 per cent). As for the mothers of beneficiaries, about three-fourths of mothers had no formal education (76.4 per cent), and 97 per cent of mothers were not working. Fathers headed the majority of the beneficiary households (89.4 per cent), while mothers headed only 7 per cent of households (generally in line with the number of paternal orphans). On average, the beneficiaries had 5.2 siblings.

For the beneficiary family's economic status and living conditions, the data showed that more than 35 per cent of beneficiaries reported that their families owned land or buildings, while 73.4 per cent reported that their families owned livestock. In terms of the physical structure of the beneficiary houses (a proxy measure of household wealth), about 54 per cent of the houses had concrete ceilings, while 40 per cent had wood plank ceilings. More than half of the beneficiary families were classified in our lowest wealth category (poorest), while only 18 per cent of them were classified in our highest wealth category (wealthiest).[14] It should be emphasized that these categories were calculated on the basis of data collected from working children beneficiaries. As such, they should not be interpreted as representing wealth status in a way that is comparable to national norms. Rather, they represent the distribution of relative household wealth among what are presumed to be poor families.

Finally, we compared our beneficiary sample to a corresponding sample of same-age children residing in the poorest households in rural areas of the selected two governorates (Assiut and Souhag) drawn from the 2014 Egyptian Demographic and Health Survey (EDHS). As indicated in Figure 2, this comparison shows that the beneficiary sample includes a much larger share of uneducated children than seen among children in the EDHS.

Figure 2: Comparison between beneficiary sample and corresponding EDHS sample



[14] See preceding footnote on calculation of wealth index.

Overall, this beneficiary profile demonstrates that the main criteria for project enrolment were observed during project implementation. The project had sought to support 14-17 year-old children from poor families who had not attended school or who had dropped out of school to help support their families. While the project did engage a number of children below the target age (and a minimal number above 17), the majority fit the age criteria. Most were out of school and had attained no formal education or only a basic education. Nearly all were working (either for family, self-employed or working for a wage) or looking for work. Finally, while many families had evidence of some asset ownership that might serve to address vulnerability, participating children were by and large from poor families, with parental work status suggesting further concerns about vulnerability for many.

4.2. Project component take-up among beneficiaries

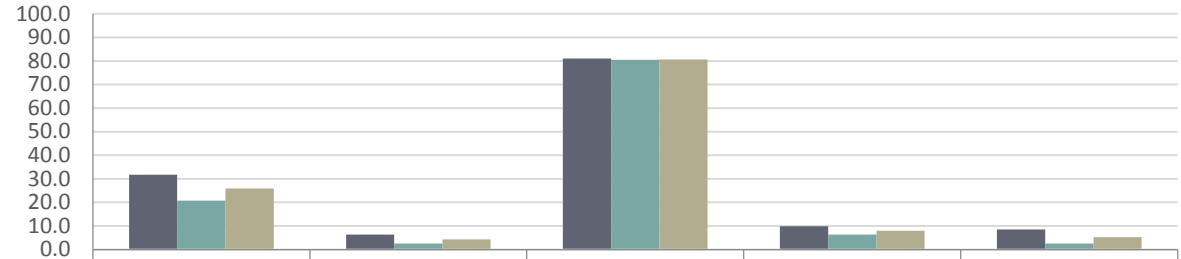
As described above, the upgrading of the non-formal apprenticeship project included several different components. First, the project sought to ensure that participating children would be provided work contracts. Second, the project sought to provide each child with a skills scorecard that would allow project implementers to assess tangible skills development over the course of the project. Third, participants would be provided with a certificate upon project completion. Fourth, the project planned to provide 10 per cent of participants with additional off-the-job training. Finally, as an incentive to parents to enrol children in the project, children would be provided with food subsidies in the form of rations.

Our survey asked project beneficiaries to self-report take-up or receipt of different project components. As shown in Figure 3, take-up rates varied substantially. Moreover, for most intended services, reported component take-up was strikingly low:

- In contrast to expectations, only 25.9 per cent of respondents reported having a contract. In this regard, there were significant differences by gender, where 31.7 per cent of girls reported having a contract compared to 20.7 per cent of boys.
- Just over 4 per cent reported awareness of a skills scorecard (6.3 per cent among girls and 2.5 per cent among boys).
- Only 5.3 per cent of beneficiaries reported receiving a final certificate. Here, difference between girls and boys were similar to other components, at 8.5 per cent and 2.5 per cent respectively.
- Eight per cent of beneficiaries reported receiving additional off-the-job training (9.9 per cent among beneficiary girls and 6.3 per cent of beneficiary boys), which is generally aligned with expectations given that the project (under its pilot) planned to provide such training to 10 per cent of beneficiaries.

The most frequently reported component was the receipt of the food subsidy, although this was intended as an incentive rather than a project component. Data show that 80.7 per cent of participants reported received the food subsidy, with comparable rates between girls and boys.

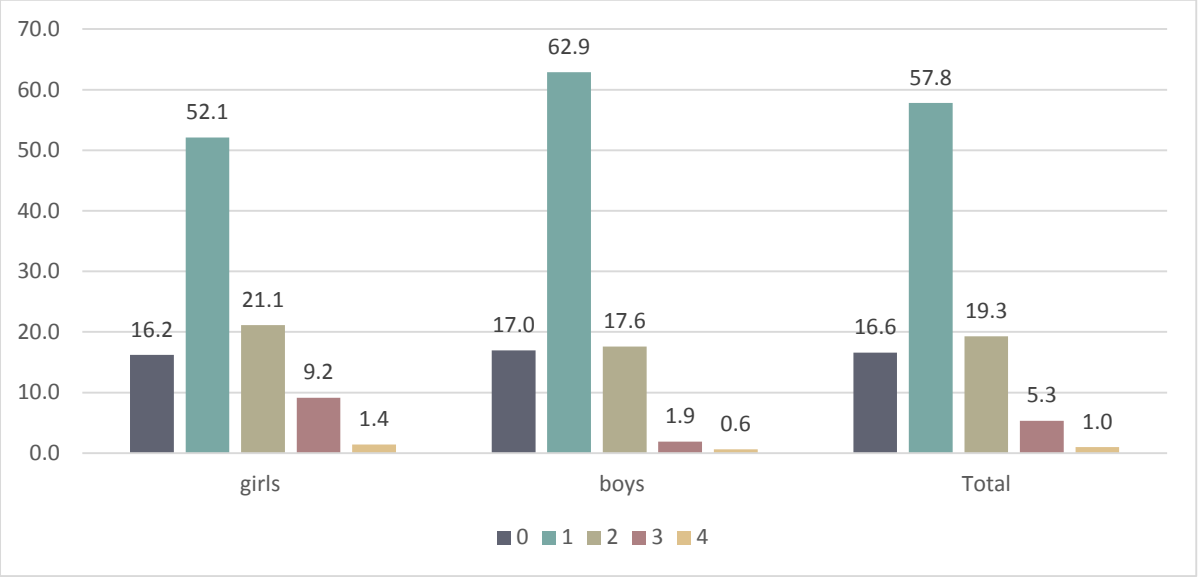
Figure 3: Proportion of participants reporting receipt of different project components



	contract	score card	food subsidy	skill development training	certificate
Girls	31.7	6.3	81	9.9	8.5
Boys	20.7	2.5	80.5	6.3	2.5
Total	25.9	4.3	80.7	8	5.3

Figure 4 shows the full number of project components taken up by the participants, as reported within the beneficiary survey. Excluding the skill development training, 16.6 per cent of participants reported no take-up of any of the project's components, while 57.8 per cent reported receiving one component only. In most cases, this one component was the food subsidy. Receiving all five project components (contract, score card, skills training, certificate and food subsidy) was reported by 3 per cent of respondents only. Figure 4 also shows that girls were more likely to report receiving more components than boys did. On average, girls reported receiving 1.3 components while boys reported receiving 1.1 components.

Figure 4: Reported number of project components received by participants



In considering these results overall, the reader should bear in mind that these results are based on respondent recollection. For example, administrative records confirm that contracts were signed for all beneficiaries. Here, as with retrospective data reviewed in the above section on descriptive statistics, memory recall may be a factor in lower than expected rates. This is a long time horizon given that the intervention, for most beneficiaries, occurred four years ago. At the same time, children may not have been fully aware of the use of the skills scorecard, existence and terms of any contract, or certificates, particularly in situations where parents or guardians signed contracts or received certificates on behalf of their children. As such, they may not accurately reflect real outcomes in terms of the delivery of services (or particular components). However, the failure of participating children to demonstrate

awareness of key aspects of the project – particularly in regard to holding a skills certificate – suggest weaknesses in regard to project implementation. At the same time, the stark differences in recollection between the receipt of project components and the receipt of the food subsidy (perceived as a project component rather than as an incentive) suggest challenges with how the goals of the project were communicated to participants (discussed in more depth below).

4.2.1. Contracts

As noted above, just over a quarter of interviewees reported receiving a contract for their apprenticeship. For the 78 respondents confirming receipt of a contract, Table 4 provides details on the core attributes of received contracts and the contracting process.

Of respondents reporting receipt of a contract during the project, 56.4 per cent indicated that they had signed their own contracts. For 24.4 per cent of respondents, parents signed the contracts on their behalf, while other relatives signed contracts for an additional 11.1 per cent. A further 1.3 per cent of interviewed beneficiaries confirmed that their employers had signed the contract on their behalf. Table 4 reveals that girls were more likely to report that they signed their own contracts compared to boys (73.3 per cent versus 33.3 per cent). For boys, parents and other relatives were more likely to sign the contract than for girls. Non-responses for this question were recorded for 6.4 per cent of interviewed participants.

The second signature required on the contract was a representative of the participating company signing on the company's behalf. In many cases, respondent beneficiaries did not know who represented the company on their contract, with more than 71 per cent of the children reporting not knowing who signed their contract. About 22 per cent of respondents reported that their boss at work or the director or owner of the company signed their contract as the second party.

About 79.5 per cent of participants who reported having a contract joined their apprenticeships when they were between 14 and 17 years. In addition, 15.4 per cent of respondents reported joining between the ages of 11 and 13. Missing data accounted for 5.1 per cent of respondents (5 participants). The reported year during which the contract was signed ranged between 2012 and 2017. Most contracts (47.4 per cent) were signed in 2014. The second most reported year was 2012, which accounted for 18 per cent of all the contracts. Missing responses accounted for 11.5 per cent.

Few participants were able to remember the terms and benefits included in their contracts. When asked about specific terms and benefits (agreed fixed wage, health insurance, accident insurance, bonuses, etc.), 18 per cent of interviewed participants indicated that there were no terms or benefits in the contract (15.6 per cent among girls and 21.1 per cent among boys). The most frequently reported benefit was health insurance, reported by 11.5 per cent of all contracted participants. Participant girls also reported the inclusion of a fixed wage (13.3 per cent) and paid leave (13.3 per cent).

Notably, only 2.6 per cent of respondents (all boys) reported receiving a copy of their contract.

Table 4: Contract attributes reported by beneficiaries

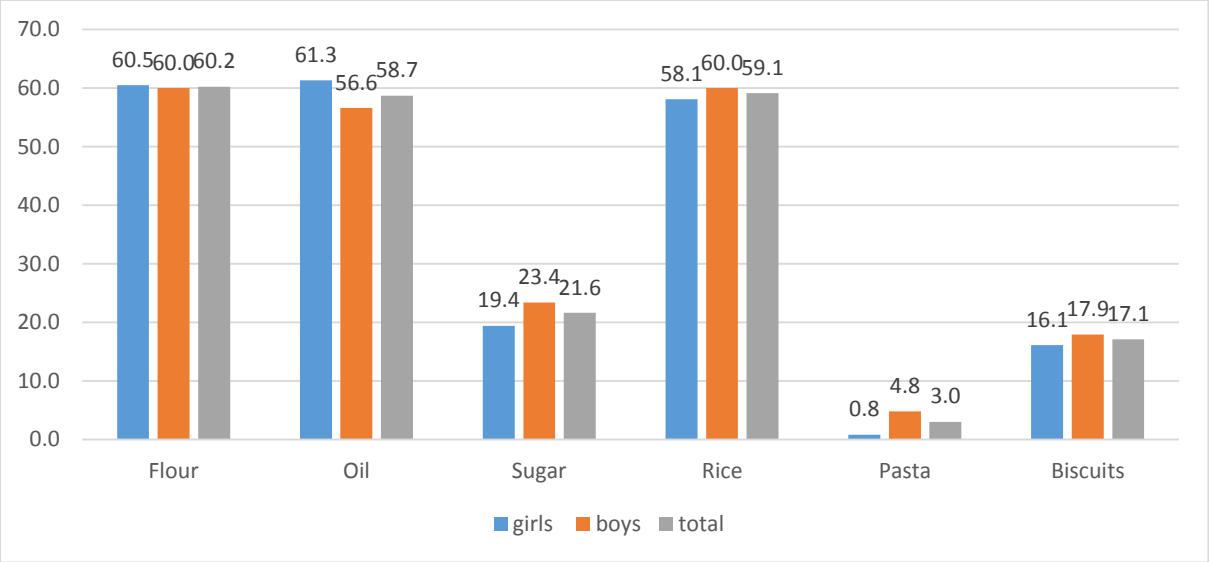
	Girls	**Boys**	**Total**
No. of beneficiaries with a contract	**45**	**33**	**78**
Who signed the contract on your behalf?			
Self	73.3	33.3	56.4
Parent	15.6	36.4	24.4
Relative	4.4	21.2	11.5
Employer	2.2	0.0	1.3
Missing response	4.5	9.1	6.4
Who signed the contract on behalf of the company?			
Boss at work	13.3	24.2	18.0
Company director	2.2	0.0	1.3

Company owner	4.4	0.0	2.6
Do not know	71.1	72.7	71.8
Missing response	9.0	3.0	6.4
Did you receive a copy of the contract? (yes)	0.0	6.1	2.6
What was your age at the signature of the contract?			
11-13	15.6	15.2	15.4
14-17	84.4	72.7	79.5
Missing response	0.0	12.1	5.1
When was the contract signed?			
2012	22.2	12.1	18.0
2013	6.7	24.2	14.1
2014	51.1	42.4	47.4
2015	8.9	3.0	6.4
Missing response	11.1	18.3	14.1
What were the main terms of the contract?			
None identified	15.6	21.2	18.0
Agree fixed wage	13.3	0.0	7.7
Accident insurance	6.7	6.1	6.4
Health insurance	13.3	9.1	11.5
End-of-year bonus	2.2	9.1	5.1
Paid leave	13.3	0.0	7.7

4.2.2. Food subsidy

As noted above, the food subsidy was the most commonly cited component of the project received by project beneficiaries. This was confirmed through in-depth interviews with company officials and focus group discussions with parents (see Section 6 below). Figure 5 shows the types of food received as part of the food subsidy, as reported by interviewed participants. The main components of the food subsidy included flour, oil and rice, and almost 59.1 per cent of respondents reported receiving these items in their food subsidy. Although this component of the project was referred to as the "Biscuit Programme" by company officials and parents, only 17.1 per cent of the participants reported that they received biscuits in their rations. Notably, according to the qualitative study, the specific content and frequency of provided food subsidies varied over the life of the project.

Figure 5: Food subsidy components received by the participants



4.3. Time trends and beneficiary outcomes

Comparing beneficiary responses to questions about current educational status and employment against retrospective responses about status prior to the launch of the project provides us with the ability to analyse changes over time, which we review in this section. Here, we emphasize that reported statistics reflect beneficiary outcomes which may or may not be attributable to project participation. As such, they should not be interpreted as project impacts, which are the focus of Section 5. Still, an exploration of changes in beneficiary outcomes over time provides an interesting and useful understanding of changing conditions for beneficiaries, as well as changing perceptions – as participating children mature into adulthood – on work status and conditions.

4.3.1. Educational and employment outcomes

As indicated in Table 5, the share of beneficiaries who had never attended school or dropped out prior to completing primary did not change between the two periods (remaining at just under a quarter of participants). Among those who were attending school before the start of the project, however, educational progress continued. Slightly more than 23 per cent of respondents managed to complete secondary education (general and technical). Continued educational attainment was significantly higher among boys than girls, with 28.3 per cent of boys completing secondary educations compared to 17.6 per cent of girls.

Project participants also showed significant increases in terms of participation in the labour market, particularly in terms of wage work. While 68.8 per cent of the children were employed in wage work before the project, 77.7 per cent of the participants were employed after the project, a change that is statistically significant. The increase in participation was significantly higher among boys (13.8 percentage points) compared to girls (3.6 percentage points). This might be attributed to the fact that girls at this age are increasingly getting married and are confined to home. No substantial changes are evident in terms of family work between the two periods. There is a slight increase in the number of individuals looking for work (although this difference is not significant).

Table 5: Comparison of the beneficiary background characteristics before and after project

Background attributes	Girls		Boys		Total	
	Before	After	Before	After	Before	After
Age (mean)	14.3	18.2	14.6	18.4	14.4	18.3
Educational attainment						
Never attended or less than primary	28.2	27.5	22.0	22.0	24.9	24.6
Primary	46.5	36.6	59.8	39.0	53.5	37.9
Preparatory	24.6	18.3	18.2	10.7	21.3	14.3
Secondary (technical)	0.7	9.2	0.0	20.1	0.3	15.0
Secondary (general)	0.0	8.4	0.0	8.2	0.0	8.3
Participation in labour market						
Working for wage (or self-employed)	55.6	59.2	80.5	94.3*	68.8	77.7*
Help in a family /farm business	59.2	57.8	51.6	49.1	55.2	53.2
Sell products that you or your family produced	4.2	7.8	7.6	7.6	6.0	7.6
Perform household chores	62.7	64.1	18.9	18.2	39.5	39.9
Looking for work	14.8	18.3	14.5	16.4	14.6	17.3

*significant at $\alpha<0.05$

Changes in employment status reflecting improved outcomes are confirmed by a comparison of the work status and conditions among those who are working for wages (Table 6). Most beneficiaries currently engaged in wage work transitioned from trainee status to being full workers (79.5 per cent), with 9 per cent still reporting their status as apprentice or trainee. This move was more sizeable among boys than girls: Among boys, there was an increase of 35 percentage points in the share who are now workers, while among girls, the increase in worker positions accounts for 0.9 percentage points. At the

same time, the share of those working for their families (as contributing family workers) grew by 15 percentage points among girls compared to a decrease of 2.6 percentage points among boys.

Working days and hours significantly increased for beneficiaries after the project. Those working for seven days a week increased from 34.2 per cent to 49.8 per cent, with the average number of working days per week increasing from 5.5 days to 6 days. A comparison by gender reveals that share of respondents working seven days a week increased significantly more among girls (21.1 percentage points) than boys (10.7 percentage points).

In terms of working hours, 19.8 per cent of beneficiaries reported working for more than 8 hours a day before project participation, a proportion that increased to 39.7 per cent after the project. This increase is also reflected in an increased average number of working hours among beneficiaries, from 7.0 hours to 8.5 hours. This increase is seen among both boys and girls, although boys saw their hours increase more drastically, from an average of 7.4 hours a day to 9.4 hours a day, with 58 per cent working for more than 8 hours a day. Among girls, the proportion working for more than 8 hours increased from 16.5 per cent to 26.2 per cent, with no significant change in the average number of working hours between the two periods (6.5 hours versus 6.8 hours).

Care should be taken in assessing the implications of increasing time at work, whether in terms of days per week or hours per day. Given averages here, this likely reflects the greater ability of project participants to secure more full-time wage work, as they grow older, which is a positive development. By and large, however, data suggest overemployment, with assumed income pressures and job requirements driving them to work every day of the week and, in many cases, full work days. This is captured by the share reporting working for 7 days a week and over 8 hours a day (14.5 per cent up from 4.8 per cent before the project). Notably, 18 per cent of male respondents working for a wage report these conditions (up from 3.1 per cent).

Table 6: Beneficiaries' work attributes before and after the project

	Girls		Boys		Total	
	Before	After	Before	After	Before	After
Number of currently working beneficiaries	79	84	128	150	207	234
Attributes of work among workers						
Position						
Apprentice (*mutadareb*)	21.5	6.0*	43.0	10.7*	34.8	9.0*
Worker	64.6	65.5	53.1	88.0	57.5	79.5
Other (working for the family)	13.9	28.5	3.9	1.3	7.7	11.5
Working days						
7 days a week (per cent)	32.9	50.0*	19.5	34.0*	24.6	39.7*
Days per week (mean)	5.7	6.3*	5.3	5.8*	5.5	6.0*
Working hours						
More than 8 hours a day (per cent)	16.5	26.2	21.9	58.0*	19.8	46.6*
Hours per day (mean)	6.5	6.8	7.4	9.4*	7.0	8.5*
7 days a week/8+ hours per day (per cent)	7.6	8.3	3.1	18.0*	4.8	14.5*
Having contract (written or verbal; per cent)	15.2	11.9	28.1	30.7	23.2	24.0
Experience injuries at work (per cent)	2.6	2.8	2.9	2.7	2.8	2.7
Exposure to disabling injuries or sickness (per cent)	9.6	7.7	13.7	15.6	13.1	12.8
Risks at work (per cent)	7.1	6.5	7.6	7.7	7.4	7.3
Doing heavy duty work (per cent)	39.2	40.5	46.9	40.0	44.0	40.2
Experience acts of abuse (per cent)						

Shouting	93.7	33.3*	96.9	44.7*	95.6	40.6*
Insults	43.0	7.1*	44.5	10.0*	43.9	9.0*
Beating	8.9	0.0*	15.6	3.3*	13.0	2.1*
Use of safety gear at work	1.3	2.4	6.3	10.7	4.3	7.7
Satisfaction with work	35.1	82.0*	40.1	72.7*	38.2	76.1*

*significant at $\alpha<0.05$

There were no statistically significant differences among beneficiaries between the two periods regarding the formality of working arrangements with their employers. Retrospectively, 23.2 per cent of working beneficiaries reported having a contract (written or verbal) before the project, while 24 per cent reported currently having a contract. Similarly, the share reporting experiencing work-related injuries or risks changed marginally. In contrast, however, there is a significant change evident between the two periods in regard to exposure to acts of abuse at work. Comparing respondent's retrospective responses about the period before project start and after project completion, exposure to shouting declined by over 50 percentage points, insults decreased by nearly 35 percentage points, and reported incidents of beating almost disappeared (2.1 per cent reporting down from 13 per cent). Although use of safety gears at work showed an increase in the proportion from 4.3 per cent to 7.7 per cent, this increase was statistically insignificant.

Notably, the level of satisfaction with work increased from 38.2 per cent before the project to 76.1 per cent after the project. This sizeable increase in work satisfaction is evident among both girls and boys engaged in wage work, with girls reporting 82 per cent satisfaction and boys reporting 72.7 per cent satisfaction. This increase may be in part due to access to more decent work, both in terms of wages, work status, and decreased exposure to abuse. Moreover, it is important to note that, in the context of current reporting, respondents are now of an age where work is more appropriate and comes with adequate duties and responsibilities. While decent work deficits do persist, the child workers who participated in the project are now mostly adults. As such, they may be naturally positioned to be more enthusiastic about work and may perceive associated opportunities, risks and abuses through a much different lens.

5. Evaluating project impact: Quantitative results

Building on the above presentation of differential outcomes for beneficiaries over time, we present below an analysis of project impact estimates aimed at determining long-term outcomes for project participants that are directly attributable to the project itself These estimates are drawn from a comparison of project participants with an estimated counterfactual, here represented by data from members of two control groups. The counterfactual is estimated through a one-for-one PSM analysis.

First, Section 5.1 compares the treatment group with our two control groups on the basis of characteristics at baseline to assess comparability of PSM results. Section 5.2 presents impact estimates for the treatment group against matched individuals in CG1 and CG2. Section 5.3 describes results from efforts to assess the robustness of these findings (with detailed analyses provided in Annex E).

5.1. Balancing analysis for treatment and control groups

The evaluation team matched individuals from the treatment group to individuals of the respective control group (either CG1 or CG 2) using propensity score matching; that is, predicting the probability of programme participation through a number of observable socio-economic variables. Programme participants were matched with individuals from the control group on a one-to-one basis. Following matching, the treatment group and respective control group are statistically comparable in terms of observable characteristics. Below, we provide a balancing analysis showing differences between the treatment group and both control groups. Table 7 presents the balance between the treatment group and

CG1 prior to the start of project activities, while Table 8 provides the balance table between the treatment group and CG2.

The main differences between CG1 and the treatment group were educational attainment levels among children and their fathers. Children with secondary education and with fathers with secondary education were less likely to enrol in the project. In contrast, children with primary education were more likely to enrol in the project. In addition, girls were more likely to participate in the project than boys. For girls, having three or more siblings and having a secondary education was correlated with lower project enrolment, while girls who were working at baseline were more likely to enrol in the project. For boys, having fathers with secondary education decreased the likelihood of enrolling in the project, but having educated mothers, a large number of siblings (seven and more) and having primary education increased the likelihood of enrolling.

Table 7: Logit regression coefficients for project participation against CG1

	Girls			**Boys**			**Total**		
Variable	Coef.	Std. Err.		Coef.	Std. Err.		Coef.	Std. Err.	
Female							0.42	0.18	*
Father education (ref: no education									
Primary	0.60	0.35		-0.35	0.38		0.23	0.24	
Preparatory	0.13	0.49		-0. 21	0.34		-0.07	0.26	
Secondary +	-0.31	0.72		-1.19	0.53	**	-0.84	0.40	*
Educated mother	-0.41	0.33		1.13	0.33	***	0.39	0.22	
Number of siblings (ref=0-2 siblings)									
3-6 siblings	-2.41	0.87	***	0.37	0.42		-0.11	0.32	
7+ siblings	-2.28	0.91	**	0.86	0.48	***	0.18	0.36	
Education at baseline (ref= no education)									
Primary	0.44	0.32		0.24	0.30	***	0.46	0.21	*
Secondary +	-0.92	0.32	***	-2.20	0.33		-1.42	0.22	***
Working at baseline	0.91	0.35	**	-3.50	1.15		0.26	0.31	
Wealth index (ref=poorest tertile)									
Middle tertile	-0.35	0.28		0.13	0.26		-0.15	0.19	
Wealthiest tertile	0.16	0.39		0.52	0.34		0.36	0.24	
Constant	1.70	0.91		2.93	1.25		0.38	0.50	
Number of observations	300			455			755		
Log likelihood	-184.014			-226.768			-437.999		
LR chi2(12)	47.01			136.19			140.45		
Prob > chi2	0			0			0		
Pseudo R2	0.11			0.23			0.14		

Comparing the treatment group with CG2, Table 8 shows that children with secondary education and fathers with preparatory educations or higher were less likely to enrol in the project, but children with educated mothers and those who were working at baseline were more likely to enrol. For girls, the

differences between treatment group and CG2 were found in a higher likelihood to enrol among those working at baseline and a lower likelihood among girls with secondary educations. For the boys, having secondary educations or fathers with preparatory educations and above were correlated with lower likelihood of enrolment. Boys with educated mothers were more likely to enrol in the project than those with mothers with no education.

Table 8: Logit regression coefficients for project participation against CG2

	Girls			**Boys**			**Girls and boys**		
Variable	Coef.	Std. Err.					Coef.	Std. Err.	
Female							-0.29	0.18	
Father education (ref: no education									
Primary	0.06	0.30		-0.37	0.38		-0.06	0.23	
Preparatory	-0.69	0.41		-0.75	0.33	**	-0.74	0.25	**
Secondary +	-0.10	0.77		-0.76	0.59		-0.36	0.46	
Educated mother	0.31	0.32		0.77	0.33	**	0.53	0.22	*
Number of siblings (ref=0-2 siblings)									
3-6 siblings	-0.10	0.45		0.44	0.46		0.10	0.32	
7+ siblings	0.07	0.49		0.89	0.52		0.35	0.35	
Education at baseline (ref= no education)									
Primary	0.28	0.30		-0.33	0.36		0.13	0.22	
Secondary +	-1.07	0.31	***	-2.26	0.39	***	-1.49	0.23	***
Working at baseline	1.69	0.28	***	-0.30	0.56		1.39	0.25	***
Wealth index (ref=poor)									
Middle	0.23	0.27		0.34	0.30		0.22	0.19	
Rich	0.40	0.32		0.38	0.38		0.35	0.24	
Constant				0.63	0.72		-1.09	0.44	
Number of observations	412			339			751		
Log likelihood	-223.257			-188.93			-421.136		
LR chi2(12)	84.21			90.79			169.08		
Prob > chi2	0			0			0		
Pseudo R2	0.16			0.20			0.17		

Overall, the comparisons between the treatment group and control groups shows that major differences lie in the educational attainment of individuals in the treatment group and their parents against those in control groups. In both cases, fathers with secondary educations were less likely to enrol their children in the project than fathers with lower education levels. Children with secondary educations children were also less likely to enrol than those with no education or those with primary education.

5.2. Assessing project impact

We assess the impact of the upgraded apprenticeship project through comparisons between the treatment group and the matched control groups over six outcome categories. These categories include:

1. Participation in wage work (or self-employment);

2. Formality of current job (which includes aspects of having a contract, receiving fringe benefits, and moving up in status from trainee to worker);
3. Working conditions (including consideration of number of working days per week and working hours per day);
4. Quality of working environment (exposure to violence, injuries and risks; satisfaction with current work);
5. Improved work opportunities (improved employability, ability to retain a job, ability to secure work with a contact);
6. Personal aspirations and general attitudes (ability to make personal choices, self-confidence, optimism, heightened aspirations, appreciation for education and technical training).

5.2.1 Comparing the treatment group to CG1

Table 9 presents the results for project impact based on a comparison between the treatment group and CG1. It shows that the project had the effect of significantly increasing the treatment group's participation in the wage-earning work compared to the matched control group. In regard to the formality of work, however, participation in the project reduced the treatment group's chances of transitioning from being a trainee to being a full worker compared to CG1.

Table 9: Effects of the project on treatment group compared to CG1

Variables	Girls			Boys			Girls and boys		
	Coef.	**Std. Err.**		**Coef.**	**Std. Err.**		**Coef.**	**Std. Err.**	
Working for wage (or self-employed)	0.138	0.077	†	0.041	0.039		0.107	0.043	**
Formality of work									
Having a contract	0.070	0.065		-0.068	0.072		-0.008	0.043	
Having fringe benefits in current work	-0.033	0.083		0.068	0.052		0.060	0.038	
Transitioned from trainee to worker status	0.002	0.038		-0.074	0.040	†	-0.050	0.025	**
Working conditions									
Working 7 days per week	0.042	0.074		0.023	0.074		0.013	0.049	
Working 8 hours per day	-0.048	0.064		0.106	0.080		0.076	0.048	
Working 7 days per week and 8 hours per day	-0.004	0.048		0.011	0.062		-0.008	0.035	
Exposure to bad working environment									
Exposure to violence at work	-0.307	0.104	***	0.059	0.133		-0.173	0.086	**
Injury at work	0.190	0.075	**	0.016	0.072		0.107	0.048	**
Exposure to risks	-0.917	0.444	**	0.985	0.455	**	0.090	0.294	
Satisfaction with current job	0.192	0.117	†	0.070	0.135		0.140	0.086	†
Improved work opportunities									
Improved employability	-0.066	0.180		0.023	0.152		-0.041	0.113	
Ability to retain a job	0.210	0.175		0.065	0.154		0.031	0.116	
Ability to secure work with a contract	-0.103	0.142		-0.132	0.139		-0.229	0.091	**
Personal aspiration									
Ability to make personal choices	0.057	0.154		-0.139	0.134		-0.111	0.102	
Having self confidence	0.054	0.144		-0.011	0.109		-0.017	0.091	

Feeling optimistic	0.153	0.144		0.108	0.143		0.180	0.097	ŧ
Higher aspirations in life	0.152	0.559		-0.193	0.452		-0.367	0.371	
Appreciating the importance of education	0.346	0.155	**	-0.071	0.148		0.098	0.109	
Appreciating the importance of technical training	-0.106	0.154		-0.161	0.151		-0.076	0.105	

*** significant at α<0.001 ** significant at α<0.01 * significant at α<0.05 ŧ significant at α<0.1

There was no significant project impact on working conditions, while exposure to a negative working environment showed mixed results. Members of the treatment group were less likely to be exposed to violence at work than matched members of CG1, but they are more likely to have been injured at work.

Regarding improved work opportunities, there were significant differences between the treatment group and CG1, with members of the treatment group feeling better able to secure work with a contract. The project had the effect of significantly increasing the treatment group's satisfaction with current work compared to the matched CG1. Impact results on personal aspirations reveal that project participation increased the treatment group's feelings of optimism compared to CG1.

Differences by gender revealed that girls in the treatment group were significantly more likely to participate in wage-earning work, be exposed to injuries at work, be satisfied with current work, and have an appreciation for education than girls in the control group. They were less likely to be exposed to violence and risks at work. Boys in the treatment group were significantly less likely than boys in CG1 to be promoted at work, while also more likely to be exposed to risks at work.

5.2.2 Comparing the treatment group to CG2

Comparisons of outcomes between the treatment group and CG2 confirm some of the patterns observed in the comparisons between the treatment group and CG1 above. Table 10 shows that the treatment group experienced an increase in participation in wage-earning work compared to the matched CG2.

In terms of working conditions, the project decreased the likelihood of the treatment group to have to work seven days per week. As noted above, to an extent, a decreased likelihood here could reflect decent work in that beneficiaries are less inclined to be at risk of overemployment. However, for some, working seven days a week might represent an ability to achieve employment and earnings potential. There is no statistically significant difference observed for those reporting working seven days a week and more than eight hours a day, which would more definitively suggest overemployment.

In regard to exposure to poor work environments, treatment group members saw significantly decreased exposure to violence at work compared to the children in CG2. Significantly higher levels of satisfaction with the current work were observed among the treatment group. In terms of personal aspirations, members of the treatment group reported lower perceived ability to make personal choices and lower appreciation of the importance of technical training than members of the matched CG2. On the other hand, the project significantly increased appreciation of education. No significant differences were seen for the treatment group in regard to increased work opportunities.

Gender differences in terms of project impact suggest that girls in the treatment group were significantly more likely to be employed and to have stronger appreciations for education than peers in CG2. In contrast, they were significantly less likely to work with a contract or have confidence in their ability to secure work with a contract. They were less likely to have to work for seven days per week or to be exposed to violence at work. Treatment boys were significantly more likely to be satisfied at the current work and have the ability to retain a job than CG2 counterparts, while having higher aspirations in life and appreciation of education. They were significantly less likely to work seven days per week compared to their CG2 counterparts.

Table 10: Effects of the project on treatment group compared to CG2

Variables	Girls			Boys			Girls and boys		
	Coef.	Std. Err.		Coef.	Std. Err.		Coef.	Std. Err.	
Working for wage (or self-employed)	0.340	0.068	***	0.049	0.052		0.195	0.045	***
Formality of work									
Having a contract	-0.092	0.039	**	-0.046	0.085		-0.038	0.042	
Having fringe benefits in current work	0.075	0.059		0.021	0.063		0.058	0.040	
Transitioned from trainee to full worker status	0.007	0.036		0.005	0.057		0.048	0.034	
Working conditions									
Working 7 days per week	-0.118	0.063	†	-0.186	0.095	**	-0.125	0.053	**
Working 8 hours per day	-0.093	0.057		0.139	0.095		0.054	0.051	
Working 7 days per week and 8 hours per day	-0.065	0.045		-0.070	0.075		-0.026	0.039	
Exposure to bad working context									
Exposure to violence at work	-0.383	0.119	***	-0.125	0.148		-0.338	0.095	***
Injury at work	0.089	0.062		-0.046	0.075		0.044	0.047	
Exposure to risks	-0.350	0.344		-0.381	0.585		-0.173	0.306	
Satisfaction with current job	-0.077	0.104		0.352	0.194	†	0.172	0.104	†
Improved work opportunities									
Improved employability	0.205	0.148		-0.167	0.173		0.180	0.113	
Ability to retain a job	0.157	0.146		-0.452	0.196	**	-0.056	0.121	
Ability to secure work with a contract	0.291	0.125	**	-0.194	0.169		0.105	0.096	
Personal aspirations									
Ability to make personal choices	-0.232	0.157		-0.099	0.147		-0.257	0.109	**
Having self confidence	0.091	0.144		0.164	0.118		0.144	0.097	
Higher aspiration in life	-0.795	0.518		0.877	0.527	†	-0.341	0.384	
Feeling optimistic	0.102	0.148		0.178	0.171		0.007	0.114	
Appreciating the importance of education	0.187	0.146		0.334	0.150	**	0.277	0.104	***
Appreciating the importance of technical training	-0.432	0.169	**	-0.271	0.212		-0.203	0.116	†

*** significant at $\alpha<0.001$ ** significant at $\alpha<0.01$ * significant at $\alpha<0.05$ † significant at $\alpha<0.001$

5.3 Robustness of results

The above analysis reveals that while the project had limited impact on the treatment group, in general positive impacts were recorded in terms of wage work, selected benefits in terms of formality of work and working conditions, and aspects of outcomes related to personal aspirations. When compared to matched control groups, girls in the treatment group exhibited more positive project impacts than beneficiary boys did. This conclusion was particularly true in comparing the treatment group with the CG1 (non-participating apprentices working in the same companies).

Tests for the robustness of the above results were carried out using different statistical analysis and different beneficiary groups, details of which are provided in Annex E. One set of analyses includes regression results comparing outcomes between the treatment group with the full (unmatched) control groups, while controlling statistically for differences in background characteristics for included children. Another set of analyses show results from a PSM analysis restricted to include only those respondents within the treatment group reporting take-up of at least one component of the apprenticeship project.

Both analysis confirm the project's positive impact in regard to employment, with regression results suggesting positive impacts against both CG1 and CG2 and the more restrictive PSM results suggesting positive impacts against CG2. However, they show mixed and often conflicting results in regard to other outcomes, including the ability to transition from trainee to full worker, exposure to risks, injuries and violence in the workplace, and perceptions about employability.

6. Evaluating project impact: Qualitative analysis

The qualitative component of our study sought to provide a more in-depth understanding of the context of project implementation and related processes, allowing for a more comprehensive analysis of the project in the context of an impact evaluation. Qualitative data collection was based on in-depth interviews with nine officials from beneficiary companies to obtain detailed opinions regarding the impact of the programme on the beneficiaries and its impact on their work and life conditions in general. In addition, focus group discussions were conducted with the parents of the beneficiaries using a structured guide to assess the programme impact on the beneficiaries within their family context. The analysis of the qualitative data followed an open coding approach, where themes emerged from the data, as common to this research paradigm.

Our analysis of qualitative data identifies three key themes that help elucidate this evaluation's quantitative data and the results of the statistical exercise. These three themes pertain to 1) the context of the implementation of the skill building activities and the challenges presented by the low skill base in targeted communities; 2) the focus of project stakeholders on benefits that were not related to training; and, 3) the challenge of communicating the project's objectives, target groups, and implementation process to the different stakeholders. Data on each of these themes is discussed below.

6.1. Skill-building in low-skill fields as a key challenge

The key objective of any apprenticeship project is to build skills among apprentices to improve their employability. In design, this project followed this principle. However, in implementation, the project's skill building objective was hampered by the low-skill base of the economic activities carried out within the targeted communities. This allowed participating children little exposure to skill building opportunities.

It is important to remember that the project focused on child labour in the field of agriculture. According to one official who was part of project implementation in Abu Tig in Assiut, "Children received training on how to work in agricultural activities. Also, they received training on first aid and how to deal with injuries." During the interview, however, the official noted that children were expected to learn about agriculture from their parents, who were in some cases their employers. These children continued carrying out the same low-skill tasks related to harvesting and weeding as they had been doing before the project, as focus group discussions with parents show. Therefore, for many participating children, the skill building component in this field was limited to knowledge about first aid, hardly meeting the objective of improving skills for employability.

Even when trainees were attached to (relatively) larger enterprises, the skill base remained low, reflecting the industrial ecosystem in targeted communities. For example, the owner of Al-Hamd Pickles Factory, which packages pickled vegetables in Abu Tig (Assiut), described the training phase for employment in his factory as follows:

> "The girl would come to the factory knowing nothing. She comes to us saying, 'I want to work.' I teach her everything. I show her how to cut the carrots, the beets, and the lemons. I can also get another worker to teach her. In one month, she would learn everything."

This factory engaged some project participants who were already working in the factory when the project started, while others started work as part of the intervention. There factory owner did highlight other training components specific to the project during the interview, including literacy training and sessions on workplace safety. These were provided by the partner NGO.

In another instance, the participating enterprise was a bakery. According to our interview with the employer, children's role in the bakery was limited to placing baked bread on trays to cool, moving trays of bread between different stations, packing baked bread in plastic bags, and sweeping the floor. Despite the low-skill requirement for these tasks, this bakery had 13 apprentices according to the owner.

This explains the commonly reported notion from parents that children learned little during the project. In one focus group discussion, a parent from Abu Tig (Assiut) noted:

> "Nothing changed for the kids. [The project] should have taught them a skill or anything."

Qualitative data also shows a great variance of the level of training received and the issues covered in the training. One explanation is that training activities were customized to the field of economic activity, and hence varied from one context to the other. Another explanation could be that participants were unable, at the time of data collection, to recall specific details of the training, as a number of years have lapsed.

There was also a serious discrepancy in the data about the training component according to the source of data. While officials from participating companies listed numerous training activities, parents thought training was minimal and, in some cases, non-existent. In one focus group discussion, training activities described were limited to a one-day trip to a factory. Here, it is important to highlight that parents may not have been in a position to witness on-the-job training or see it as training per se. Moreover, it is relevant to reiterate that only 350 out of the 3500 project beneficiaries received additional off-the-job training.

6.2. A focus on project benefits besides training

While project beneficiaries (and parents) commonly downplayed the training component, other project components were much appreciated, as described in Section 4.2. In particular, different stakeholders, including government officials who were part of the project, employers, and parents, highlighted food staple rations as a key benefit to participation in the project. These in-kind rations of biscuits, sugar, flour, rice, and cooking oil were provided to beneficiaries as an incentive to join the project, rather than serving as an intended project component.

While all participants highlighted the rations, reporting of quantities and the mix of goods provided varied. Some mothers reported that children received a kilogram of sugar, flour and rice every two months. Other mothers recalled these being delivered every three months. Some mothers also noted that rice and flour were provided on an alternating basis. Interestingly, reporting on quantities provided differed significantly between beneficiaries and interviewed officials. One official at the Agricultural Association of El-Beliza in Abu Tig (Assiut) listed the quantities as follows:

> "The rations were biscuits (24 packets), oil and a 25-kilo sack of flour. They received [the ration] 5 or 6 times. There was no rice or macaroni, and they received the flour one or two times only."

Data discrepancy aside, parents highlighted these in-kind benefits as the key positive characteristic about the implemented project. In one focus group discussion, a parent in El-Zera (Abu Tig, Assiut) noted:

> "I did not benefit except for the food rations. The [project] did not do what was suitable for the children."

The provision of safety equipment (boots, glasses and some clothing items) were also mentioned by stakeholders as a benefit, although not across all groups. While mothers did not acknowledge the training aspect of the project, they gave details during focus group discussions about the colours of the shoes given to their children. Factory owners highlighted the safety equipment given to workers.

When parents were prompted to specifically describe training activities, their focus commonly diverted to these in-kind benefits. In the following quote, a parent highlights the meal, the gifts, and the monetary gift his child received on the day of a trip to a factory, which was the main training activity the child received. He notes:

> "Yes, they took [the children] to a factory in El-Zarabi. They gave them a meal. Each one received a chicken meal. They got a big bus and took them. They gave them a pencil, a notebook and a meal. They went one time. They did not use these in anything. During the trip, they gave [the children] 40 Egyptian pounds. They went in the morning and came back at noon. They took the boys only."

This quote confirms the earlier point about the minimal training activities provided to some children. Monetary gifts were not integral to the design of the project, as discussions with employers and parents show. Monetary allowances were only given during trips. Children who were working were paid regular pay for their tasks.

Outside of the upgrading of the apprenticeship project, the CLCWP included a separate component for the *prevention* of child labour which aimed to keep children in school by providing families with food rations. It seems that some of the participating children were able to get both the school food support and the food support provided for apprentices. While this food ration was unrelated to the apprenticeship project, parents seemed to have confused different services delivered. In one focus group discussion, a parent in El-Zera noted:

> "There was no training or anything else. Our kids were in school. [The children] went to the association when they called us for the rations… even when they went to the association or the club where they would go to play football. Everybody went there for the rations. Last time they gave us oil and biscuits."

In these poor communities, food rations were a strong appeal to the project. It also seems that some participating NGOs leveraged the food rations to gain support for the project, even if that meant giving food rations to groups that were not supposed to take these rations from the NGO. What was obvious from the qualitative data, however, is that these rations were much appreciated in communities, to the extent that they overshadowed any training component. In one focus group discussion, a woman whose child worked at the bakery in Souhag noted, "The kids would go regularly to the bakery because they did not want to miss the giveaways."

Interviews with both employers and project implementers at NGOs show that, in some instances, the apprenticeship project was perceived as a poverty alleviation intervention rather than a job skills project. This corresponds with the attitude of parents towards rations. One official at the EDFA Agriculture Association in Nag El-Ghawanem (Souhaq) described the project purpose and recruitment method noting:

> "[The project team] dropped by EDFA, and they explained what they wanted. They wanted very poor people. They told us there is this project, and we are looking for poor people to support them."

This same notion was repeatedly highlighted by employers who emphasized that a key incentive to hire more children was to make sure that these children benefit from the free staples.

6.3. Weak communication in project implementation

Examples of poor communication throughout the different phases of project implementation were rife. This was obvious in the discrepancy of data about basic project features such as target groups, objectives, and implementation modalities. For example, different stakeholders described the target age group differently (e.g., "13-14-year-olds," "14-15-year-olds," "12-16-year-olds," and "15-year-olds"). Also, they highlighted "poor" as a criterion, as noted above. This does not correspond with project documents and implementation guidelines.

Project implementers conveyed the main objective of the project to participants in different ways. As one parent in Monshat Anber, Tahta (Souhag) noted, "Mr. Souni from the labour office gathered people in the bakery and informed us that they will be permanently hired in the bakery." Another parent in Nag El-Ghawanem (Souhag) said, "We knew (about the project) through the community development association [EDFA]. They said that they provide help for young people." Permanent hiring was not related to the project's objective, nor was the notion of an unqualified "help for young people." In other focus group discussions, parents mentioned that they were told about access to loans, which also was not part of the intervention.

Project phases also were not clarified to participants. Qualitative data suggest that the project ended in an unceremonious fashion. Some officials indicated that they knew the project ended when NGO representatives stopped visiting or calling. Parents were not informed about the conclusion of the project. One parent from El-Zera in Abu Tig (Assiut) noted:

> "When they stopped giving us the rations, we knew that the project was done. We used to go to the association from time to time, and they would say there are no rations."

While discrepancies in data about the age category can be explained by challenges relating to recall, the lack of clarity about project objectives and the project's timeline signifies weak communication in project implementation. However, it is relevant to highlight the low rates of literacy within these communities, which further contributed to challenges related to the communication of project details, specifically among parents.

7. Discussion of impact results

The main aim of the current study is assessing the impact of the CWCLP apprenticeship component on young persons' employability, work environment and working conditions. This evaluation demonstrated some evidence of a positive impact on beneficiaries, particularly in regard to employment and improved working conditions. However, demonstrated effects were not strong enough to achieve the main objectives of the project. The weakness of the demonstrated impact can be attributed mainly to weaknesses of project implementation on the ground. The following section discusses the evident impact in this context.

7.1 Main drawbacks in project implementation

The study started with a theory of change that highlighted basic conditions for the implementation, success and the sustainability of the project. These conditions can be summarised as the existence of a

supportive social and institutional environment. By and large, these conditions were not met, which affected the apprenticeship project's implementation, success and sustainability.

On the social level, understanding the particular nature of the poor communities in which the project (and the wider CWCLP programme) was applied and the needs of community members with regard to the aim of the project was a precondition for project implementation. These are poor communities with high levels of illiteracy. In these communities, families needed a tailored effort to communicate the main objective of the project and its details with clear distinctions made between the project's components and related incentives. Local collaborating NGOs responsible for project recruitment needed to be well informed and trained on how to assert the main objectives of the project and how to be able to communicate this to stakeholders and participating families.

Poor communication of project objectives contributed to the participating families' misinformation and weak participation of these families in terms of supporting the implementation of the project for the benefit of their children. In addition, introduction of associated food aid as an incentive for project participation was completely misunderstood by the families. Within these poor communities, the food aid became the major project objective, and all other objectives retreated to a secondary level of importance. This led to low uptake of the other project components. The sustainability of the project was completely tied to the sustainability of the food aid.

On the institutional level, the main basic conditions were the existence of a proper institutional structure that understood the nature of child labour in the informal sector. This institutional structure needed to ensure the adequacy of an enforcing and monitoring mechanism for decent work conditions, appropriateness of training contents, and an updated level of knowledge about the nature of the informal child labour activities carried out in these communities along with demand in the labour market. Importantly, there should have been an ongoing and effective monitoring system throughout the life of the project.

Overall, the engagement of the local NGOs was a positive step since they are more closely engaged with the local communities. However, proper introduction to the project and its objectives was miscommunicated to these NGOs. In turn, project recruitment was carried out without proper reference to its goals and was based on personalized assessment and communications by NGOs. This recruitment mechanism contributed to poor uptake of the project's intended components, as did the different levels of project information provided by involved companies to potential beneficiaries. Also, involved companies implemented their own criteria and assessments for the selection of beneficiaries; a lack of structured selection of the beneficiaries led to improper recruitment in the project in some cases.

While the off-the-job training provided to some beneficiaries within the project aimed to enhance their core employability skills, the informal nature of the beneficiaries' work limited their attendance. Practically speaking, the choice of attending training and losing a workday was left to the assessment of the company heads. While some stakeholders saw merit in core skill training, most parents were more keenly interested in securing vocational skills training for their children, which they saw as enhancing their children's employability later in life.

Although representatives of the DOM monitored project activities routinely, a multilayered monitoring mechanism was lacking. Project implementers were able to track progress against a skills score card and certify participants upon conclusion. However, they were not able to track outcomes in terms of familial welfare or changes in employment status for project beneficiaries upon completion. This is particularly true for the large number who exited the labour market or migrated.

7.2. Project impact

The project showed limited (but positive) impact on the young workers' employability and work environment. It did show significantly more impact on girls in the treatment groups compared to matched girls in the control groups. Girls in the treatment group were more likely to be employed, were

more likely to be working with a contract, and appreciated the importance of technical training more than their peers. In contrast, they were less likely to work seven days per week or to be exposed to violence or risks at work. They also demonstrated less appreciation for the importance of education. For boys, the project had the impact of reducing requirements of working seven days per week, while increasing satisfaction in current jobs compared to control groups. Unexpectedly, boys in the treatment group were less likely to have transitioned from apprenticeships to full worker status and to perceive themselves as having the ability to retain a job.

In addition to the quantitative assessment of project impact, our qualitative data show that there was an impact in raising awareness about a number of issues pertaining to decent work deficit, as reported by parents. Project beneficiaries also seem to have gained a better understanding of what constitutes poor work conditions. Quantitatively, reports of dissatisfaction with children's current work and exposure to poor work conditions were more recurrent than among matched control groups. Beneficiaries reported that they were more exposed to work risks compared to the two control groups. They also indicated significant lower levels of acts of violence at work. In other words, the project succeeded in raising children's awareness regarding the different risks they are exposed to in their work environment, which in turn heightened their sense of dissatisfaction with their current work. Within the background of poor implementation of the project, this impact is a major success for the project.

Here, it is important to note that concerns with attrition bias likely affect these results. We were not able to interview children – primarily boys - who had migrated to other (urban) areas to secure work since project completion, nor were we able to interview girls who had married. Particularly when one considers boys (now young men) who left targeted regions to secure work elsewhere, it is likely that this exclusion ensured a failure to capture a significant population who have been able to apply skills and certificates in securing more gainful employment. However, the lack of data on these individuals does not inferences about their potential socio-economic outcomes.

8. Conclusion

Overall, the apprenticeship component of the CWCLP succeeded in effecting positive changes among its beneficiaries, even though effect sizes are small in most cases. These include marginal improvements in employment status and the quality of employment, as well as shifts in the mindsets of beneficiaries. However, improvement results were not strong, particularly when viewed in the context of a cost-benefit analysis. Importantly, these gains came despite major setbacks in project implementation, the communication of project goals among stakeholders, and the ability of the project's approach to deliver skill improvements in a low-skill work environment. Important lessons learned in regard to project implementation and future efforts to ensure that projects focused on improving and upgrading non-formal apprenticeships secure better results.

- Projects of this type should only be rolled out once a pre-inception study has been carried out. A pre-inception study is important for understanding the communities in which the project is to be applied and determining adjustments to project implementation plans needed to ensure that the project is aligned with community needs.

- The project needed to set clear mechanisms and criteria for the recruitment of beneficiaries. While project designers provided a target demographic, there is qualitative evidence that selection of beneficiaries did not always align with this targeting and was left largely to participating companies and NGOs, which often followed a personalized approach to beneficiary selection or an approach that emphasised selection of children (and families) on the basis of economic need rather than employment and educational status criteria.

- Holding a pre-inception meeting with involved partners, both implementing NGOs and employers, to explain the main objectives of the project, related logistics, and project components is essential. In this regard, there should be more emphasis on ensuring that partners understand the project and that they work directly with communities to clarify the differences between the project components and added incentives for participation.

- Interventions within the informal sector need to have a comprehensive monitoring and evaluation mechanism, with activities, outputs and outcomes assessed on a regular basis. This approach should cover all project logistics and project components to ensure the adherence to the project plans and criteria. These monitoring mechanisms enable the adjustment of the project where challenges are identified and help explain anomalies as they occur.

- Although training on core employability skills is an important dimension in building children's overall capacities and providing them with an understanding of their rights and duties at work, combining this training with technical skill development would have a more direct impact on employability and provide more encouragement for families to enrol their children.

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Annex A: Sample skills scorecard

Ministry of Manpower and Immigration	International Labour Organization	Non-formal apprenticeship program

SKILLS SCORE CARD

Photo

Apprentice Name:	**Occupation Name:**
Date of Birth:	
Apprentice Code:	**Enterprise Name and Activities:**
Occupation Code:	
Name of Supervisor:	

Duty	**Tasks**	**First Phase**			**Second Phase**			**Third Phase**		
		From:		**To:**	**From:**		**To:**	**From:**		**To:**
		Evaluation		**Supervisor Signature**	**Evaluation**		**Supervisor Signature**	**Evaluation**		**Supervisor Signature**
		Able			Able			Able		
		Not yet			Not yet			Not yet		
		Able			Able			Able		
		Not yet			Not yet			Not yet		
		Able			Able			Able		
		Not yet			Not yet			Not yet		
		Able			Able			Able		
		Not yet			Not yet			Not yet		
		Able			Able			Able		

		Not yet			Not yet			Not yet		

Notes of the quality assurance:	**Summative evaluation of the duty**			This is to certify that the apprentice (name):…… …….. passed the apprenticeship programme on: (date):…… …….
	1	Exceeds expectations		
	2	Meets expectations		
	3	Approaches expectation		
	4	Not yet		
	This table is filled by the assessor at the end of the third stage and before graduation (select a grade from 1-4).			
	Evaluator Name:		**Signature**:	
	Position of Evaluator:		**Date:**	

Annex B: Survey questionnaire and interview guidelines

The study called for the implementation of both quantitative and qualitative data collection approaches in gathering the information needed to assess the impact of the upgrading apprenticeship project under the CWCLP. Towards this end, the evaluation team collected survey data from a sample of 300 project beneficiaries and 900 members of the two control groups. In addition, the evaluation team collected qualitative data, interviewing a sample of beneficiaries' parents (15 focus group discussions) and officials from participating companies (9 in-depth interviews). The following section presents a brief description of the questionnaire development and guidelines set for in-depth interviews and focus group discussions, as well as providing a copy of the questionnaire and interview guidelines.

Development of the survey questionnaire

The survey questionnaire developed by the evaluation team was guided by previous questionnaires in similar projects, including the Egypt National Child Labour Survey and the Uganda Youth Entrepreneurship Facility Survey. Building on these inputs, the questionnaire was designed to gather all the information needed to construct impact indicators and answers to basic research questions. The questionnaire included a background section with basic socio-demographic data on all respondents. The second section was limited to beneficiaries and covered the main attributes of project and the nature of beneficiary engagement with the project. The third section was dedicated to exploration of the situation of the beneficiaries and members of the control groups before and after project implementation. This section investigated different dimensions of the respondents' lives including educational attainment and participation, work status, and work conditions. The fourth section investigated respondents' aspirations, future intentions, and sense of empowerment.

Prior to fielding, the questionnaire was shared with the project team and consultants. The questionnaire then was piloted with 15 respondents in a village in El-Minya. The questionnaire was revised to incorporate all the needed revisions identified in the review and piloting process.

Survey Questionnaire

Questionnaire ID |__||__||__||__||__|

IMPACT ASSESSMENT OF A NON-FORMAL APPRENTICESHIP PROGRAM IN AGRICULTURE-RELATED TRADES IN EGYPT

This research data is confidential and used only for research purposes

Questionnaire ID |__||__||__||__||__|

GENERAL INFORMATION

Governorate |__|	Kism/Markaz |__||__|	city/ village/Shiakha |__||__||__||__|
Place of residence 1- Urban 2- Rural	Street name/ Block No.:.....	Building Number:.....
Name of HH. Head	**PHONE No.**	**MOBILE NUMBER** .....

INTERVIEWER VISITS				**RESULT CODES**
Number of visit	**Date of visit**	**Time of visit**		1-Completed 2-Completed partially (mention reason) 3- No household members at home or no competent respondent 4- Entire Household absent for extended period of time 5- Dwelling destroyed 6- address not a dwelling 7- Refused 8- Dwelling not found 96- Other (Specify)……..……..
		From	**To**	
First visit	/ /			
Second visit	/ /			
Third visit	/ /			

Field staff	**Name**	**signature**
supervisor: |__||__|	.....	.....
Interviewer: |__||__|	.....	.....
Field editor: |__||__|	.....	... .
Coder: |__||__|	.....	.....
Data entry: |__||__|	.....	.....

Hello/Good Morning. Are you _____? My name is _____ and I am working as an Enumerator with **the Cairo Demographic Center.** We are doing a field study on young people who participated in the program entitled "CW"during the period 2011-2014 that were supported by the **NGO name**. Participation in this survey is voluntary. This interview should take approximately 20 minutes, and I will ask questions about yourself, your household, and your social activities.

May we have your permission to ask these questions, and would you be willing to participate in this interview?	1. Yes 2. No, because: _____ ***IF NO, STOP INTERVIEW AND REFER THE CASE TO THE SURVEY SUPERVISOR***
Name of the respondent	----------
Gender	1 =Male 2=Female
Program Status	1=Beneficiary 2= control1 3 = control 2

SECTION ONE : BACKGROUND INFORMATION				
1.	How old are you in years?	_____years		
2.	What were your parents' education levels?		Father	Mother
		1= Pre-school 2= Primary 3= Preparatory 4= Secondary- general 5= Secondary-Technical 6= Above intermediate 7= University or higher 8= Non-stand. curriculum 9= do not know	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
3.	What was your parents' occupation when you were 15 years of age?	Not working Do not know Specify job	00 } Q5 99 } _____	00 } Q5 99 } _____
4.	What was your parents' sector of employment	1=Public 2= Private 3=Joint venture 4=Cooperative 8= other specify 9=do not know	1 2 3 4 9	1 2 3 4 9
5.	How many brothers and sister did you have? How many of them were sick and needs help?	0. No siblings 1. Brothers _____ 2. Sisters _____		00
6.	What was your order among your siblings?	_____		
Interviewer: For Beneficiary only: ask Q7-Q34, Fo**r control 1 or control 2**: ask Q34				
7.	How old were you when you joined the apprenticeship program?			
8.	When did you sign your apprenticeship contract?	Year 201_____		
9.	Did you receive your apprenticeship certificate?	Yes---------- No----------	1 2 → Q11	
10.	When did you receive your apprenticeship certificate? (Go to Q12)			2 0 1
11.	Why did you leave the program?	The program ended Lost interest Left the company Other reasons (Specify) _____	1 2 3 4	

12.	Who introduced you to the program?	One of the parents Employer An NGO (name) A relative A friend My self Others (Specify) _____	1 2 3 4 5 6 7	

13.	Why did you join the program? **(interviewer allow for multiple responses)**	1= My parents joined me 2= The boss joined me 3= My friends joined 4= I was interested in joining 5= Others (Specify) _____	1 1 1 1 ☐☐	
14.	**If previous question =4 ask** Why you were interested?			
15.	What did the program include for you? **(interviewer allow for multiple responses)**	1= Contract 2= Skills score card 3= Food ration 4= Off-the job Training 5= A certificate at the end of the apprenticeship 6= Others (Specify) _____	1 1 1 1 ☐☐	
16.	Who signed the contract on your behalf?	My self One of the parents Other relative Others (Specify) _____	1 2 3 ☐☐	
17.	Who signed the contract on the behalf of your employer	The foreman The head of the company The owner of the company	1 2 3	
18.	Did anybody else sign the contract?	Government representative (Specify) _____	☐☐	
19.	Did you or your family obtain a copy of contract?	Yes No	1 2	
20.	What were the main items on the contact?	1=salary 2= Accident insurance 3= Health insurance 4= Subsides for training 5= Year-end bonus 6= Holiday bonus 7= None 8= Other (specify) _____ 9= do not know	1 1 1 1 1 1 1 1 9	☐☐
21.	Did you have a skills score card at the program?	Yes No Do not remember	1 2 Q23 3	
22.	Why was this score card provided?	Track training progress I don't know Other (specify) _____	1 2 3	
23.	Did your family receive food ration?	Yes No Do not remember	1 2 Q25 3	
24.	What did this food ration include?	1=_____ 2=_____ 3=_____ 4=_____	☐☐ ☐☐ ☐☐ ☐☐	
25.	Did you receive any additional off-the-job training in this program?	Yes No Do not remember	1 2 Q27 3	
26.	What type of training did you receive in the program? **List all that apply**	1= Core skills for employability 2= ICT skills 3= Environmental awareness 4= Labour rights 5= Basic entrepreneurship and career education	1 1 1 1 1	

		6= Business Plan/Proposal Writing 7= Agricultural Techniques 8= HIV Prevention, Impact Mitigation and AIDS 9= Occupational Health and Safety 10= Gender Transformation 11= Record Keeping 12= Numeracy 13= Entrepreneurship 14= Others (Specify) _____				1 1 1 1 1 1 1 1 1 ☐☐	
27.	During the program, have you or your family been visited by any NGO?	No visits Yes, rarely (less than 7 times) Yes frequently (more than 7 times)				00 1 2	
28.	During the program, have you or your family been visited by any officials from the MOMM?	No visits Yes, rarely (less than 7 times) Yes frequently (more than 7 times)				00 1 2	
29.	Did you continue to work for the same company after the program?	Yes No				1 2→Q31	
30.	How long did you stay in the same company?	Till now months_____ years				00 ☐☐ ☐☐	
31.	Did your position at work improve after the program?	Improved a lot Improved a little Same Got little worse Got a lot worse				1 2 3 4 5	
32.	Did your work conditions improve after the program? Did you gain	Improved a lot	improved	same	Became worse	Became worse a lot	
A	Access to health insurance	1	2	3	4	5	
B	Access to social security	1	2	3	4	5	
C	Access to paid leaves	1	2	3	4	5	
D	Access to skill certification	1	2	3	4	5	
E	improved employability	1	2	3	4	5	

Interviewer: Those who left even after some years ask:				
33.	Why did you leave the company?	Withdraw from labour market for personal reasons (marriage/ illness/ family reasons) Better position Better salary Better work conditions Better benefits Other (specify) _____	1 2 3 4 5 6	
34.	**Interviewer:** **For the beneficiary: I would like to ask you about your experience with the project over three points of time: before the project, during the project and currently**			

For the control: I would like to ask you about your experience over two points of time: 2012 and currently						
			Before /2011	During /2012	Currently	
35.	Have you ever attended school?	1=Yes 2= No	1 □ Q37 2	1 □ Q37 2	1 □ Q37 2	
36.	Why have you never attended school? (**read each of the following options and circle the most appropriate option)**	1=Too young. 2= Disabled/ illness 3= I can't go to school at the same days of work 4= No school/school too far 5= Cannot afford schooling 6= Family can't afford other education costs 7= Family did not allow schooling 8= Not interested in school 9= Education not considered valuable. 10= School not safe 11= To learn a job 12= To work for pay 13= My family not allow me to go to school because I'm a girl and my body grow up 14= To work as unpaid worker in family business/farm 15= Others (specify)_____	01 02 03 04 05 06 07 08 09 10 Q39 11 12 13 14 15	01 02 03 04 05 06 07 08 09 10 Q39 11 12 13 14 15	01 02 03 04 05 06 07 08 09 10 Q39 11 12 13 14 15	
37.	What is the highest level of education you have achieved?	1. Pre-school 2. Primary 3. preparatory 4. Secondary- general 5. Secondary-Technical 6. Above intermediate 7. University or higher 8. Non-standard curriculum	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	

38.	**If respondent less than secondary education, ask this question:** Why did you leave school? (**circle the most appropriate option)**	1. Completed his/her compulsory schooling 2. Too old for school 3. Disabled/ illness 4. No school/school too far 5. Cannot afford schooling 6. Family did not allow schooling. 7. Poor in studies/not interested in school. 8. Education not considered valuable 9. School not safe 10. To learn a job 11. To work for pay as employee or (as paid/ unpaid worker) in family business or farm 12. Help at home with household task 13= Physical or emotional violence from teachers or peers 96. Other (Specify) _____	01 02 03 04 05 06 07 08 09 10 11 12 13 _____ _____ __	01 02 03 04 05 06 07 08 09 10 11 12 13 _____ _____ __	01 02 03 04 05 06 07 08 09 10 11 12 13 _____ _____ ____	

39.	Have you attended/are you currently attending a vocational / skills training course outside of school?	1=Yes currently 2= Yes attended in the past 3= No	1 2 3 ⇒ Q41	1 2 3 ⇒ Q41	1 2 3 ⇒ Q41	
40.	Have you /will you obtained a certificate for this vocational training?	1=Yes 2= No	1 2	1 2	1 2	
SECTION TWO : LABOUR MARKET PARTICIPATION & BUSINESS MANAGEMENT						
41.	Were (are) you		1=Yes 2=No	1=Yes 2=No	1=Yes 2=No	
A	working for a salary		1 2	1 2	1 2	
B	help in a family /farm business		1 2	1 2	1 2	
C	sell products that you or your family produced		1 2	1 2	1 2	
D	perform household chores		1 2	1 2	1 2	
E	Were you looking for work		1 2	1 2	1 2	
42.	Describe your actual work (in 10 words or less)	**Before** **During/2012** **Currently**				
43.	What was your position at this work?	Apprentice Worker Foreman Other (specify) _____	1 2 3 _____	1 2 3 _____	1 2 3 _____	
44.	How many months have you held this job?	[**Enter number of months**] Interviewer (Enter 00 for those who held the job for all their working life)				
45.	How many days do you work in this job per week?					
46.	How many hours do you work in this job per day?					
47.	Where did you carry out most of your work?	1=Farm 2=Home 3=Vehicle (taxi, delivery, etc.) 4=In the street, public space 5=Office, factory or shop 6=Construction site 7=Other (specify)_____	1 2 3 4 5 6 7 _____	1 2 3 4 5 6 7 _____	1 2 3 4 5 6 7 _____	
48.	What is the typical amount of money that you earn in this job **per month?** If you do not know or if the amount varies, please provide an estimate. [Enter amount in LE]		_____LE	_____LE	____LE	
49.	Besides salary, what benefits do you receive from this job?	0=no benefits 1= Social security 2= Health insurance 3= Subsides for training	0 1 1 1	0 1 1 1	0 1 1 1	

	[Select (circle) all that apply]	4= Year-end bonus 5= Holiday bonus 6=Accident insurance 7 =Health check 8= Other specify)_____	1 1 1 1 _____ _____	1 1 1 1 _____ _____	1 1 1 1 _____ _____	
50.	Do you have a contract for this job?	1=Yes, a written contract 2= Yes, an oral contract 3= No □ **GO** to **Q53**	1 2 3□Q53	1 2 3□Q53	1 2 3□Q53	
51.	Is this contract has a limited duration?	1= Yes 2=No				
52.	What are the terms of your contract?	1=Accident insurance 2 =Health check 3=Food aid for the family 4=An agreed fixed wage 5= Regular monitoring visits certificate at the end of the contract 6= Other specify)_____	1 2 1 2 1 2 1 2 1 2 _____ _____ __ |__|	1 2 1 2 1 2 1 2 1 2 _____ _____ __ |__|	1 2 1 2 1 2 1 2 1 2 _____ _____ ____ |__|	
53.	Did you experience any of the following because of your work? If Yes=1 No=2 **(Read each of the following options and mark "YES" or "NO" for all options)**	01= Superficial injuries or open wounds 02= Fractures 03= Dislocations, sprains or stains 04= Burns, corrosions, scalds or frostbite 05= Breathing problems 06= Eye problems 07= Skin problems… 08= Stomach problems / diarrhea … 09= Fever 10= Extreme fatigue 96= Other (specify) _____	1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 _____ _____ __ |__|	1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 _____ _____ __ |__|	1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 _____ _____ ____ |__|	
54.	Did you carry heavy loads at work?	1. Yes 2. No	1 2	1 2	1 2	
55.	What type of tools, equipment or machines did you use at work?	(Write down 2 mostly used) _____1 _____2	_____ 1 _____ 2 |__||__| |__||__|	_____ 1 _____ 2 |__||__| |__||__|	_____ 1 _____ 2 |__||__| |__||__|	

56.	Were you exposed to any of the following at work? If Yes=1 No=2 (**Read each of the following options and mark “YES” or “NO” for all options)**	01= Dust, fumes, 02= Fire, gas, flames 03= Loud noise or vibration 04= Extreme cold or heat 05= Dangerous tools (knives etc) 06= Work underground 07= Work at heights 08= Work in water/lake/pond/river 09= Workplace too dark or confined 10= Insufficient ventilation\bad smell. 11= Chemicals (pesticides, glues, etc.). 12= Explosives 13= getting extremely tired 14= Bending for a long time 15= no toilet in work place 96= Other things, processes or conditions bad for your health or safety (specify) _________	1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 ________ ________ __ |__|	1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 ________ ________ __ |__|	1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 _______ _______ ____ |__|	
57.	Did your work often involve exposure to the following? **(Multiple responses)**	**Chemicals:** 11= Dust (ex. Silica dust, saw dust, sanding dust) 12= Liquid (ex. oil, gasoline, mercury) 13= Mist/fumes/vapors/ (ex. paint/insecticide/pesticide spraying) 14= Gas (ex. oxygen, ammonia) 15= Others (specify)_________________ 16= Not exposed to chemicals **Physical environment:** 21= Noise 22= Temperature/Humidity 23= Pressure 24= Inadequate Illumination/Lighting 25= Slip/Trip/Fall Hazards 26= Insufficient exit for prompt escape 27= Congested lay-out 28= Radiation/ultraviolet/ Microwave 29= Others (specify)_________________ 20= Not exposed to physical elements) **Biological:** 31= Viral 32= Bacterial 33= Fungal 34 Parasitic (ex. drinking infected water with amoeba) 35= Others (specify)_________________ 36= Not exposed to biological organisms	1 2 1 2 1 2 1 2 ________ |__| 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 ________ |__| 1 2 1 2 1 2 1 2 1 2 _____ |__| 1 2	1 2 1 2 1 2 1 2 ________ |__| 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 ________ |__| 1 2 1 2 1 2 1 2 1 2 _____ |__| 1 2	1 2 1 2 1 2 1 2 _______ |__| 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 _______ |__| 1 2 1 2 1 2 1 2 1 2 ____ |__| 1 2	
58.	Have you ever experienced any injuries or	1 Yes 2 No **(GO TO Q64)**	1 2□Q64	1 2□Q64	1 2□Q64	

	illnesses while working?					
59.	How serious was/were the injury/ies or illness/es?	1 Not serious, continued working (**GO TO Q64)** 2 Stopped work temporarily 3 Stopped work permanently	1□Q64 2 3	1□Q64 2 3	1□Q64 2 3	
60.	Have you received treatment for this work-related injuries or illnesses?	1 Yes 2 No **(GO TO Q63)**	1 2□Q63	1 2□Q63	1 2□Q63	
61.	What type of treatment did you receive?	1 First-aid 2 Out-patient 3 Confinement	1 2 3	1 2 3	1 2 3	
62.	Who paid for the medication/treatment? **(Multiple responses)**	1 Employer 2 Parent 3 Self 4 Others, specify: _____ _____	1 2 3 4 _____ |__|__|	1 2 3 4 _____ |__|__|	1 2 3 4 _____ |__|__|	

63.	Have you used any safety device/equipment materials in your work?	1 Yes 2 No (GO TO Q68)	1 2□Q68	1 2□Q68	1 2□Q68	
64.	If Yes in B10, what was/were these safety device/ equipment materials? **(Multiple responses)**	01 Safety helmet/hair caps 02 Goggles/spectacles (02) 03 Gloves (03) 04 Earplugs and earmuffs 05 Safety shoes/ boots/ foot guards 06 Respirator 07 Face shield 08 Overall/Apron 09 Protective clothing (leather, asbestos, wool, rubberized fabrics) 10 Life vest 11 Others (Specify) _____	1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 _____ __ |__|	1 2 1 2 1 2 1 2 1 2 1 2 1 2 2 2 2 2 1 2 _____ ___ |__|	1 2 1 2 1 2 1 2 1 2 1 2 1 2 3 2 3 2 1 2 ___ ___ _ |__|	
65.	Who provided them?	1 Employer 2 Self 3 Others (Specify) _____	1 2 _____ |__|__|	1 2 _____ |__|__|	1 2 _____ |__|__|	

66.	How satisfied are (were) you with your job?	1=Very dissatisfied 2=Dissatisfied 3=Neutral 4=Satisfied 5=Very satisfied	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	

SECTION THREE: ASPIRATIONS, EMPOWERMENT AND PERCEPTIONS ((				
READ: I would like to discuss some aspects about your training, your aspiration for the future				
67.	Now, I would like to ask you on a scale 1 to 5, how important you think your apprenticeship program has been to improve your life quality. **Read options**	1= Very important 2= Important 3= Somehow important 4= Not important 5=I do not know	1 2 3 4 5	
68.	How much difference you think education can improve your social well-being and work quality? **Read options**	1= Huge difference 2=Difference 3= Little difference 4= No difference at all 5= I do not know	1 2 3 4 5	
69.	On a scale 1 to 5, how positive you are regarding having a better life in the next 5 coming years? **Read options**	1= Very positive 2= Positive 3= Somehow positive 4= Negative 5= I do not know	1 2 3 4 5	

70.	How confident do you think you currently are in terms of **Read options**	Very confident	Confident	Moderately confident	Little confident	DK
A	Making your personal life choices	1	2	3	4	5
B	Self confidence	1	2	3	4	5
C	Employability and skills	1	2	3	4	5
D	Ability to retain a job	1	2	3	4	5
E	Ability to work with a contract	1	2	3	4	5

71.	Would you like to start your own business someday?	1=Yes 2= No	1 2→Q78	
72.	Do you have an idea for a business you would like to start?	1=Yes 2= No	1 2→Q77	
73.	What is this idea?	---------- ---------- ---------- ---------- ----------		
74.	Have you started to tale any concrete steps towards your business idea?	1=Yes 2= No	1 2	
75.	What are the 3 main challenges that you perceive in having your own business	1---------- ---- 2---------- ---- 3---------- ----		

SECTION FOUR: HOUSEHOLD WELFARE
Now I want to ask you about your household and your dwelling.

			Before	During/ 2012	Currently	
76.	What was (is) your marital status?	1= Single→Q81 2=Married 3= Divorced/ Widow	1→Q81 2 3	1→Q81 2 3	1→Q81 2 3	
77.	How old were you when you got married?	|__||__|years				
78.	Do you still live with your parents?	1= yes 2=No	1 2			
79.	Number of the members of your household?		|__||__|	|__||__|	|__||__|	
80.	How many rooms are there for sleeping?	|__| rooms	|__|	|__|	|__|	
81.	Is this dwelling rented, subsidized, provided free to you, or owned by your household?	1=rented 2=bequested 3=for free 4= Family owned 5= Other (Specify) _____	1 2 3 4 _____ |__|	1 2 3 4 _____ |__|	1 2 3 4 _____ |__|	
82.	What type of material is used for the roof of the dwelling where you sleep? List all that apply	1= Cemented concrete columns 2= Asbestos panels 3= Panels of wood/tree branches 4= Metal/tin panels 5= Straw/hay/palm leaves/mud 6= Other (Specify) _____	1 2 3 4 5 _____	1 2 3 4 5 _____	1 2 3 4 5 _____	
83.	What is your household's main source of fuel or energy for lighting	1= Natural gas 2= Gas cylinder 3= Electricity 4= Kerosene (gas) 5= Other (Specify) _____	1 2 3 4 _____ |__|	1 2 3 4 _____ |__|	1 2 3 4 _____ |__|	
84.	What type of toilet facilities does your household currently use?	1= Modern toilet with flush 2= Modern toilet without flush 3= Traditional toilet with flush 4= Traditional toilet without flush 5= Latrine (hole) 6= Other (Specify) _____	1 2 3 4 5 _____ |__|	1 2 3 4 5 _____ |__|	1 2 3 4 5 _____ |__|	

<table>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="7">READ: Now I want to ask you about the items owned by you and your household. Remember, by household I mean the people who sleep there most nights and share the same pot as you. I want to remind you that we are simply a research organization and we do not provide assistance, so please respond fully and completely, as your answers will not affect whether you receive any benefits.</td></tr>
<tr><td>85.</td><td>I am going to read a list of items and you can tell me how much of each that you and your household own. These items must be in working condition. In addition, this does not include what your business owns - only what you and your household own for personal use.</td><td>1= Air condition
2= Air heat
3= Heater
4= Automobile…………
5= Tractor………..
6= Motor-bike…………
7= Toktok
8= Bicycle………………..
9= Animal drawn-cart…
10= Television…………..
11= Iron…………..
12= VCD/DVD player……
13= Washing machine
automatic
14= Washing machine……
15= Oven……
16= Dishwasher………….
17= Refrigerator…………
18= Computer/Laptop………
19= Sewing machine………
20= Satellite/Cable TV…….
21= Telephone (Land line)…
22= Mobile phone…………
23= Radio ……………</td><td>1 2
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<tr><td>86.</td><td>Does the household own any livestock?</td><td>1= Yes
2= No</td><td>1
2→Q91</td><td>1
2→Q91</td><td>1
2→Q91</td><td></td></tr>
<tr><td>87.</td><td>How many?</td><td>1= Camel
2= Horse/donkey
3= Cow/buffalo
4= Sheep
5= Goat
6= Poultry
96=(Specify)________</td><td>|__|__|__|
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<tr><td>88.</td><td>Does the household own any land?</td><td>1= Yes
2= No</td><td>1
2</td><td>1
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2</td><td></td></tr>
<tr><td>89.</td><td>Who is the head of your household?</td><td>1=My father
2=My mother
3=My brother
4=My sister
5=My spouse</td><td>1
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		6=Other relative 7=I am the head of household 8=Other (Specify) _____	6 7 _____ |__|	6 7 _____ |__|	6 7 _____ |__|	

Guidelines for the In-Depth Interviews

Within the qualitative data collection approach, the evaluation team also carried out in-depth interviews with company officials. These in-depth interviews addressed the following topics:

1. Introduction to the project: How was the company introduced to the project?
2. Recruitment in the project: What were the main attributes sought by the company in its recruitment process?
3. Content of the project: What were the main components of the project?
    a. Contract
    b. Training
    c. Safety training
    d. Food subsidies
4. Closure of the project: How did you know that the project ended?
5. Impact of the project on the beneficiaries as seen by the officials
6. Suggestions to improve project implementation

Guidelines for the Focus Group Discussions

The study implemented focus group discussions with parents of the beneficiaries in the context of its qualitative data collection approach. The guidelines set by the evaluation team for the focus group discussions included the following points:

1. Introduction to the project: How did the parents find out about the project?
2. Recruitment in the project: How were their children recruited in the project? What were the main attributes sought in the recruitment process?
3. Content of the project: What did they see as the main components of the project?
    a. Contract
    b. Training
    c. Safety training
    d. Food subsidies
4. Closure of the project: How did parents know that the project had ended?
5. Impact of the project: What did parents consider the impact on children to be?

Annex C: Tracking beneficiaries and identification of control groups

Below we present the tracking procedures used in identifying project beneficiaries to populate our treatment group, as well as the processes followed to identify members of the two control groups (non-beneficiaries in the same participating companies and non-beneficiaries in non-participating companies). This section also highlights challenges faced in terms of tracking the beneficiaries.

Tracking activities

Project staff included one dedicated team member who served as a coordinator of the tracking activities for the beneficiaries and the identification of control groups. The coordinator oversaw the implementation of a three-stage plan for tracking beneficiaries.

Stage 1: Central Coordination

The team member contacted the project officer and coordinators at the ILO. ILO staff provided the coordinators with a complete list of names of all beneficiaries who had signed the apprenticeship contract as of 21 January 2014 in Assuit and 1 May 2014 in Souhag. These lists showed that there were a total of 1228 beneficiaries in Assiut and 420 beneficiaries in Souhag. Table A1 provides primary statistics obtained from this central coordination activity.

Table B.1: Statistics on project beneficiaries in the two governorates

Attributes	Assuit	Souhag	Total
No. of beneficiaries	1228	420	1648
No. of companies	64	35	99
No. of female	565	180	745
No. of males	663	240	903

In addition, the ILO provided the coordinator with the contacts of the main NGO in each governorate, Terre des Hommes in Assiut and the Community Development Association for Women and Child Improvement in Souhag.

Stage 2: NGO Coordination

Attempts to contact the NGO from Cairo had limited results, so the coordinator undertook field visits in the two governorates to coordinate directly with the NGO. During these field visits, the two NGOs indicated that the project had been carried out 3-4 years previously and, as such, it would be difficult to trace the beneficiaries since most of the girls would have been married and the majority of the boys would have left the participating companies or their whole village to secure work in more urban areas. In an attempt to facilitate the job of the coordinator, the NGO referred the coordinator to focal persons in the different provinces, who guided the identification of the both the beneficiaries and the control groups.

During the coordinating process, the ILO team recommended coordination with the MoMM in order to facilitate the coordination assignment with the MoMM offices in the two governorates. In a telephone call with the officials of the MoMM, the ministry's representative indicated the ministry's objection to the evaluation study, as they had not been engaged in the identification of beneficiaries, which had been carried out by the partnering NGOs. In addition, she indicated that there had been many administrative changes within the ministry's offices in these provinces and that current staff had not been involved in the project. As a result of this call, some of the focal persons who had been ready to collaborate in the identification of the beneficiaries and control groups declined. For example, the NGO contact person

in the province of Gerga in Souhag declined to cooperate, informing the fieldwork supervisor that he received orders from the head office at the MoMM not to cooperate with the project and that he did not want any troubles. As a result, no beneficiaries from Gerga province (130 beneficiaries, representing 30.9 per cent of the total number of beneficiaries in Souhag) were included in the evaluation study.

Despite these issues, the coordinator was able to work with focal persons to identify a number of beneficiaries (438) and individuals who met the requirements for the control groups. For CG1, they were able to identify 431 individuals and for CG2, they were able to identify 640 individuals. The final output of the coordination activities with the NGO before the data collection activities is included in Table B.2.

Table B.2: The potential number of beneficiaries and control groups for data collection

Governorate	Beneficiaries	Control 1	Control 2	Total
Assiut	168	216	241	625
Souhag	270	115	399	784
Total	438	431	640	1509

Stage 3: Coordination during the Fieldwork

Fieldwork started on 17 December 2017 in Assuit and on 18 December 2017 in Souhag. In both governorates, contact persons gathered identified children working in agricultural associations in one place for their interviews. For children working in other work places, including factories, stores and bakeries, the contact persons guided our interviewers to these places to hold the interviews. In performing this task, the interviewers found out that a large number of the participating companies had gone out of business (10 of the 64 companies in Assuit). In addition, some of the participating companies declared that all the beneficiaries who had enrolled in the project had left the company either for marriage (girls) or for other work (boys), with many of the boys having migrated. In one case in Souhag, the field supervisor found that 26 of the beneficiaries have moved to another company. She contacted officials at the new company officials and arranged to hold the interviews there.

To ensure the proper identification of the children brought together by the contact persons, the interviewers matched the names of the child to the list provided by the NGO for signed contracts using the child's identification card (or his/her parents' identification card).

Table A3 shows the final number of beneficiaries included in the final sample for the study. The table shows that the targeted sample was completed. The targeted sample accounted for 18.2 per cent of the total number of beneficiaries in the two governorates. Although it was difficult to track beneficiaries in Souhag, almost 30 per cent of the beneficiaries were tracked. For Assiut, the fieldwork was limited to two districts (Abu Tig and Abnoub); with 714 total beneficiaries, data collectors were able to interview 175, or 24.5 per cent.

Table B.3: Attrition of the beneficiaries by governorate

Attributes	Assiut	Souhag	Total
No. of beneficiaries	1228 (714)	420	1648
Completed interviews	175	125	301
per cent of beneficiaries	14.3 per cent (24.5 per cent)	29.7 per cent	18.2 per cent

*Parentheses show the number and beneficiaries within the selected districts in Assiut.

Concluding Remarks for Tracking and Identification Activities

Based on the above description of the tracking activities, we conclude the following:

- The recruitment of project participants was based on personal contacts of the NGOs' delegates in each village. The fact that some of those delegates were officials in the district's labour offices led to substantial complications in the tracking process. The conflict between the MoMM and NGOs regarding the project resulted in an oral instruction for the labour office officials not to cooperate in tracking the participants. As a consequence, a whole district was not included in the tracking process.
- As expected, many of the participants were hard to reach because. Many of the participants had left their villages, and parents generally were not willing to cooperate in tracking them. Many of the female participants had married; in Upper Egypt, tracking married women is culturally unacceptable. Surprisingly, some of the participating companies had gone out of business.
- In contrast, the fact that this project was distributing food subsidies to the families contributed to the interest of participant and non-participant families responding to the call from agricultural associations for participation in the survey. Many of these families came under the impression that the project would resume, and they were coming to register their children in the project.
- While our tracking and identification activities allowed for us to meet the minimal requirements in terms of numbers respondents needed for the analysis, it did not provide for large enough of a sample frame to randomly select our sample from identified treatment and control groups.

Annex D: Description of the study sample

Table D.1 compares this study's treatment group against the two control groups prior to matching under the PSM approach. It shows that there were significant differences in background characteristics among children in the three groups. As for current age (at time of survey), children in CG1 were slightly younger the other two groups. Regarding educational status, beneficiaries in the treatment group were more likely to be uneducated. Notably, with 24.9 per cent of them never having attended school or having dropped out before completing primary school compared to 17.3 per cent in CG1 and 16.2 per cent in CG2. In addition, while 21.3 per cent of the treatment group had completed preparatory school, more than 57 per cent of CG1 and 53 per cent of CG2 had attended preparatory school.

The proportion working for a wage (or self-employed) was significantly higher among the treatment group and CG1 (68.8 per cent and 73.6 per cent, respectively) than for CG2 (35.8 per cent). This is compensated by work at home: Children in CG2 were more likely to work at home than children in the treatment group or CG1.

Death of the father was significantly more prevalent among CG2 than to the other two groups, with 13 per cent of the former being paternal orphans compared to less than 7.6 per cent among the other two groups. Those having uneducated fathers were more likely to be observed among beneficiaries in the treatment group and children in CG1 (57.5 per cent and 50.1 per cent, respectively) than CG2 (46 per cent). There were no significant differences in father's work status.

Regarding maternal attributes, more than 95 per cent of the mothers of all groups were not working prior to the start of the project. However, mothers of beneficiaries and CG1 were slightly more likely not to work than CG2 mothers.

For all groups, the child's father headed the majority of the households (85 per cent), with mothers heading 8.2 per cent of households. The average number of siblings of the children was significantly higher among beneficiaries (5.2 children) than among CG1 and CG2 (4.9 children and 4.8 children respectively).

In terms of living conditions, Table D.1 shows that beneficiary households were characterized with poorer living conditions than control groups. This is reflected in a lower proportion with sturdy ceiling materials used in house construction, lower rates of use of appropriate cooking fuel (LPG cylinder), and lower rates of land ownership when compared to the two control groups. However, a higher proportion of the beneficiary households were found to own livestock than found in control groups. Overall, in comparing results from the wealth index, calculated using reported ownership of a list of consumer durable goods, there were no significant differences in wealth status among the three groups.

Table D.1 also examines the differences between the three groups by sex. The general pattern observed in the overall results, as described above, was maintained in gender-specific differences. For girls, the exceptions included an insignificant difference in current age, mothers' work status, and some household attributes (cooking fuel, toilet facility, and ownership of land or livestock). For boys, exceptions included insignificant differences in fathers' death, average number of siblings, cooking fuel, and ownership of land or livestock.

Table D.1: Comparison of background characteristics of unmatched treatment and control groups

Main socioeconomic attributes	Girls				Boys				Total			
	TG	CG1	CG2		TG	CG1	CG2		TG	CG1	CG2	
(n)	142	158	270		159	297	180		301	455	450	
Child attributes												
Age	18.4	18.0	18.6	ns	18.4	17.9	18.1	*	18.3	17.9	18.4	*
Educational attainment (before project)												
Never attended school or less than primary	64.8	26.0	21.1	*	52.8	12.8	8.9	*	58.5	17.3	16.2	*
Primary	7.0	25.3	24.4		7.6	20.9	27.2		7.3	22.4	25.6	
Preparatory	23.9	44.9	48.9		37.7	64.0	59.4		31.2	57.4	53.1	
Secondary (general or technical)	4.3	3.8	5.6		1.9	2.3	4.5		3.0	2.9	5.1	
Work status												
Work for wage (or self-employed)	55.6	51.9	12.6	*	80.5	85.2	70.6	*	68.8	73.6	35.8	*
Helping family	59.1	65.2	43.7	*	51.6	56.6	68.9	*	55.1	59.6	53.8	ns
Selling family products	4.2	9.5	7.4	ns	7.6	2.4	3.9	*	6.0	4.8	6.0	ns
Do house work	62.7	82.9	92.2	*	18.9	21.2	28.9	*	39.5	42.6	66.9	*
Looking for work	14.8	11.4	4.4	*	14.5	15.8	23.9	*	14.6	14.3	12.2	ns
Father attributes												
Father dead	6.3	5.7	14.1	*	8.8	7.1	11.1	ns	7.6	6.6	12.9	*
Education attainment												
No education	61.3	55.1	54.8	*	54.1	47.5	32.8	*	57.5	50.1	46.0	*
Read and write	5.6	15.2	4.1		8.2	3.7	10.0		7.0	7.7	6.5	
Primary	23.2	13.9	22.2		14.5	14.5	14.4		18.6	14.3	19.1	
Technical education	7.8	8.9	16.3		18.2	22.2	33.9		13.3	17.6	23.3	
Other	2.1	6.9	2.6		5.0	12.1	8.9		3.6	10.3	5.1	
Work status												
No work	16.9	20.2	20.7	ns	25.7	20.9	21.1	ns	21.6	20.7	20.9	ns
Agriculture-related activities	42.3	47.5	34.1		32.1	26.6	24.4		36.9	33.8	30.2	
Labourer	34.5	27.2	37.0		27.7	34.0	37.2		30.9	31.7	37.1	
Other	6.3	5.1	8.2		14.5	18.5	17.2		10.6	13.8	11.8	
Mother attributes												

Education attainment											
No education	82.4	70.9	78.9	*	71.1	73.1	70.6	*	76.4	72.3	75.6	*
Technical education	7.0	4.4	5.6		8.8	8.1	12.2		8.0	6.8	8.2	
Work status(no work)	99.3	96.8	97.4	ns	95.0	97.0	92.2	*	97.0	96.9	95.3	*
Household attributes												
Head of the household												
Father	88.0	89.2	84.1	ns	90.6	91.6	86.7	ns	89.4	90.8	85.1	ns
Mother	8.5	5.1	8.5		5.7	2.7	7.2		7.0	3.5	8.0	
Number siblings	5.6	5.6	4.9	*	4.8	4.5	4.6	ns	5.2	4.9	4.8	*
Living conditions												
Ceiling material												
Concrete	52.8	59.5	73.0	*	55.3	72.1	80.6	*	54.2	67.7	76.0	*
Wood plank	41.6	35.4	17.0		38.4	23.6	11.1		39.9	27.7	14.7	
Cooking fuel (LPG cylinder)	93.0	95.6	95.6	ns	96.9	98.3	97.8	ns	95.0	97.4	96.4	*
Toilet facility (traditional)	90.9	96.3	83.7	*	88.7	91.3	83.3	*	89.7	93.0	83.6	*
Ownership of land	27.5	34.8	36.7	ns	43.4	50.5	50.6	ns	35.9	45.1	42.2	*
Ownership of livestock	74.7	68.4	64.4	ns	72.3	74.8	66.1	ns	73.4	72.5	65.1	*
Household wealth												
Poorest tertile	53.5	46.8	54.8	ns	50.3	58.3	61.1	ns	51.8	54.3	57.3	ns
Middle tertile	28.2	39.2	28.5		31.5	31.6	27.2		29.9	34.3	28.0	
Wealthiest tertile	18.3	13.9	16.7		18.2	10.1	11.7		18.3	11.4	14.7	

Annex E: Assessing robustness of results

This annex presents different tests to assess the robustness of results obtained within propensity score matching results. In Section E.1 below, we review results when comparing full treatment and control groups while controlling for differences in children's background characteristics. In Section E.2, we compare results of the propensity score matching for a restricted sample of the treatment group including only those who reported taking up at least one project component.

E.1. Project impact for treatment group

Table E.1 below shows regression coefficients and odd ratios for the two control groups on different outcomes using the treatment group as the reference category and controlling for the background attributes of the children. Comparing the treated to CG1, Table E.1 shows that treated children were more likely than children in CG1 to be employed, and they were more likely to have transitioned from trainee to worker. They are also more likely to have been injured on the job or to be exposed to violence at work, although they are less likely to report facing risks at work. In terms of work opportunities, the treatment group is more likely to report feeling confident in their ability to secure work with a contract, have an appreciation for technical training, and feel optimism.

In comparing the treatment group to CG2, the data show that children in the treatment group were significantly more likely to be employed, but they were less likely to report having fringe benefits and more likely to work seven days per week and eight hours per day. Treated beneficiaries were more likely to be exposed to violence and risks at work, as well as being injured at work. Overall, treated youth were less likely to feel satisfied with current work than CG2. While treated youth were less likely to voice appreciation for education, but appreciated technical training more. Treated youth were more likely to feel able to secure work with a contract and to make their personal choices, as well as to feel optimism.

Gender-specific impacts follow similar patterns for girls and boys in some regards. Table E.1 shows that treated boys and girls were more likely to be employed than both control groups. Similarly, both treated boys and girls were more likely to be exposed to violence than individuals in CG1 and CG2. Both genders had higher confidence in their ability to secure work with a contract than peers in the control. In comparison with peers in CG2, both treated boys and girls demonstrated stronger confidence in making personal choices and overall optimism.

In terms of differences in the pattern of outcomes, treated girls were less likely to be injured than girls in CG1 and CG2, while treated boys were more likely to be injured. Against CG1, treated girls were more likely to report being exposed to risks at work than control girls, while treated boys were less likely. Both treated boys and girls were more likely to work eight hours a day than their peers in CG2, but treated girls were more likely than control girls to work seven days a week. Treated boys were less likely than CG2 boys to be satisfied with jobs. Treated girls were more likely than girls in CG2 to perceive their employability or their ability to secure work with a contract to have improved. Treated girls also had improved aspirations for life than girls in CG2.

Table E.1: Effects of the project on the treatment group compared to control groups (Regression results)

Variables	model	Girls				Boys				Girls and Boys			
		CG1		CG2		CG1		CG2		CG1		CG2	
Working for wage (or self-employed)	1	0.442	**	0.100	***	0.443	†	0.361	*	0.298	***	0.158	***
Formality of work													
Having a contract	0	-1.565		-0.995		-0.565	*	-1.061		0.034		0.019	
Having fringe benefits in current work	0	0.013		-0.076		-0.043		-0.058	†	-0.024		-0.069	**
Promoted from trainee to full worker	1	1.240		0.944		3.060	*	0.976		2.440	*	0.939	
Working conditions													
working 7 days per week	1	1.259		1.726	*	0.935		1.466		1.081		1.617	**
working 8 hours per day	1	1.294		1.729	*	0.505	**	0.363	***	1.094		1.039	
working 7 days per week and 8 hours per day	1	1.707		2.278	*	0.768		0.825		1.718		2.585	**
Exposure to bad working context													
Exposure to violence at work	0	0.397	***	0.462	***	0.034		0.376	***	0.191	**	0.419	***
injury at work	0	-0.156	**	-0.134	**	-0.023		-0.040		0.624	**	0.623	**
exposure to risks	0	0.634	*	-0.203		-1.000	***	0.270		-0.389	*	-0.029	
Satisfaction with current job	0	-0.052		0.104		-0.165		-0.391	***	-0.074		-0.118	†
Improved work opportunities													
Improved employability	0	0.198		0.252	*	-0.030		-0.025		0.055		0.108	
Ability to retain a job	0	0.059		0.155		-0.019		-0.175		-0.004		-0.017	
Ability to work with a contract	0	0.183	†	0.345	***	0.233	*	-0.049		0.217	**	0.154	*
Personal aspirations													
Ability to make personal choices	0	0.115		0.300	**	0.041		0.277	**	0.067		0.277	***

Having self confidence	0	0.013		-0.130		0.009		-0.051		-0.013		-0.053	
Higher aspiration in life	0	0.569		0.922	*	0.233		0.079		0.322		0.469	ŧ
feeling optimistic	0	0.142		-0.281	**	-0.136		-0.234	*	-0.139	*	-0.261	***
Appreciating the importance of education	0	-0.180		-0.262	*	0.122		-0.101		-0.008		-0.180	*
Appreciating the importance of technical training	0	0.190		0.254		0.180	ŧ	0.128		0.221	**	0.208	*

*** significant at α<0.001 ** significant at α<0.01 * significant at α<0.05 ŧ significant at α<0.1

Model: 0=linear regression (regression coefficient) 1=logit regression (odds ratio)

E.2. Impact for treatment group receiving one or more project components

The following section reviews results from a PSM analysis comparing a more restricted treatment group, those respondents reporting the take-up of at least one project component. The project components included an apprenticeship contract, a skills scorecard, a certificate upon completion, and/or the incentivizing food ration. The results are more in alignment with our core findings from the PSM-based comparison of matched groups than our regression analysis, but a compressed statistical power resulting from the restricted sample limits statistical significance in many areas.

Table E.2 shows the results of the propensity score matching for the restricted sample of the treatment group who reported up taking up at least one project component against the matched CG1. It shows that for this restricted group, the significant project impact on the treatment group became restricted to only two outcomes. These were 1) satisfaction with current work and 2) perceived ability to work with a contract. The analysis shows positive impacts in both regards, when compared to the matched CG1.

The main differences between the restricted sample and the general sample were observed in the gender-specific results. For girls in the treatment group, in addition to an increased magnitude of results observed for the whole sample, the restricted sample showed a (marginally) significant increase in the having a contract and receiving fringe benefits at work, but a significant decrease in feeling optimistic.

For boys in the treatment group, additional impact of the project was insignificance of the negative impact of moving up the work status ladder from trainee to full worker and significant increase in exposure to violence at work, decrease in exposure to injuries at work, perceived ability to secure work with a contract and feeling self-confident.

For the comparison between the restricted sample and the CG2, Table E.3 shows that some of the observed impact on the treatment group lost their significance. These include the negative impact of working for seven days, the positive impact of satisfaction with current work, ability to make personal choices and appreciating the importance of technical training. In contrast, there were significant increase in transitioning from trainee to full worker and decrease in the perceived ability to secure work with a contract.

For girls in the treatment group, two outcomes lost significance, namely having a contract and working for seven days per week. In contrast, they were significant decreases in working seven days per week and eight hours per day and significant increase in ability to make personal choices, feeling self-confident and appreciating education.

Table E.2: Effects of the Project on the Treatment Group Compared to CG1 (Restricted PSM)

Variables	Girls			Boys			Girls and Boys		
	Coef.	**Std. Err.**		**Coef.**	**Std. Err.**		**Coef.**	**Std. Err.**	
Working for wage (or self-employed)	0.221	0.089	*	-0.051	0.070		0.107	0.078	
Formality of work									
Having a contract	0.095	0.051	†	-0.022	0.081		0.060	0.049	
Having fringe benefits in current work	-0.102	0.045	*	0.057	0.075		0.001	0.038	
Promoted from trainee to full worker	0.014	0.032		-0.020	0.061		-0.021	0.031	
Working conditions									
working 7 days per week	0.025	0.075		0.103	0.109		0.061	0.079	
working 8 hours per day	-0.038	0.065		0.169	0.107		0.065	0.080	
working 7 days per week and 8 hours per day	-0.060	0.045		0.140	0.087		0.005	0.053	
Exposure to bad working context									
Exposure to violence at work	-0.628	0.120	***	0.371	0.219	†	-0.212	0.140	
Injury at work	0.177	0.078	*	-0.239	0.106	*	0.001	0.080	
Exposure to risks	-0.685	0.456		1.749	0.783	*	0.390	0.467	
Satisfaction with current job	0.231	0.140	†	0.252	0.186		0.278	0.130	*
Improved work opportunities									
Improved employability	0.144	0.191		-0.102	0.229		-0.047	0.182	
Ability to retain a job	0.165	0.214		-0.222	0.239		-0.018	0.190	
Ability to work with a contract	0.423	0.152		0.557	0.208	**	0.486	0.137	***
Personal aspirations									
Ability to make personal choices	-0.136	0.165		-0.214	0.180		-0.213	0.142	
Having self confidence	-0.014	0.177		-0.257	0.121	*	-0.128	0.135	
Feeling optimistic	0.373	0.177	*	-0.044	0.183		0.161	0.139	

Higher aspiration in life	-0.883	0.665		-0.705	0.679		-0.762	0.607	
Appreciating the importance of education	0.447	0.189	*	0.143	0.212		0.137	0.140	
Appreciating the importance of technical training	-0.389	0.119	***	0.012	0.216		-0.159	0.143	

*** significant at α<0.001 ** significant at α<0.01 * significant at α<0.05 Ŧ significant at α<0.1

Table E.3: Effects of the Project on the Treatment Group compared to CG2 (Restricted PSM)

Variables	Girls			Boys			Girls and boys		
	Coef.	**Std. Err.**		**Coef.**	**Std. Err.**		**Coef.**	**Std. Err.**	
Working for wage (or self-employed)	0.495	0.092	***	0.016	0.086		0.264	0.081	***
Formality of work									
Having a contract	-0.020	0.024		0.058	0.111		-0.012	0.041	
Having fringe benefits in current work	-0.041	0.041		0.061	0.081		0.008	0.039	
Promoted from trainee to full worker	0.495	0.092	***	0.016	0.086		0.264	0.081	***
Working conditions									
Working 7 days per week	-0.090	0.095		-0.141	0.157		-0.117	0.079	
Working 8 hours per day	-0.090	0.089		0.222	0.142		0.013	0.086	
Working 7 days per week and 8 hours per day	-0.106	0.053	*	0.009	0.147		-0.077	0.065	
Exposure to bad working context									
Exposure to violence at work	-0.675	0.165	***	0.016	0.289		-0.461	0.140	***
Injury at work	0.053	0.091		-0.330	0.108	**	-0.051	0.073	
Exposure to risks	0.209	0.491		-0.052	1.032		0.164	0.514	
Satisfaction with current job	-0.112	0.144		0.743	0.271	**	0.170	0.134	
Improved work opportunities									
Improved employability	0.194	0.197		-0.280	0.238		0.079	0.157	
Ability to retain a job	0.223	0.224		-0.549	0.248	*	0.092	0.167	
Ability to work with a contract	0.461	0.171	**	-0.264	0.252		0.367	0.130	**
Personal aspirations									
Ability to make personal choices	-0.337	0.183	†	-0.258	0.156	†	-0.220	0.137	
Having self confidence	0.381	0.202	†	-0.084	0.176		0.155	0.126	

Higher aspiration in life	-0.834	0.724		0.752	0.693		-0.604	0.524	
Feeling optimistic	0.214	0.221		-0.005	0.257		0.177	0.156	
Appreciating the importance of education	0.499	0.216	*	0.589	0.295	*	0.474	0.172	**
Appreciating the importance of technical training	-0.444	0.167	**	-0.388	0.405		-0.293	0.139	

*** significant at α<0.001 ** significant at α<0.01 * significant at α<0.05 Ŧ significant at α<0.1

For boys in the restricted treatment group, they lost the significance for the negative impact of working 7 days per week and for having higher aspiration in life, but gained significant impact of decreasing injuries at work and ability to make personal choices.