- FINAL EVALUATION REPORT -

- ANNEX 2 -

IMPACT EVALUATION OF THE PROJECT *"MAKE IT IN THE GAMBIA: EMPLOYMENT AND EMPLOYABILITY THROUGH NEW TECHNOLOGIES AND RENEWABLE ENERGIES"*

Contract T05-EUTF-SAH-GM-03-01

For

THE EUROPEAN UNION, REPRESENTED BY THE EUROPEAN COMMISSION

CENTER FOR EVALUATION AND DEVELOPMENT (C4ED)

MANNHEIMER ZENTRUM FÜR EVALUATION UND ENTWICKLUNGS-FORSCHUNG (MZEEF)

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CENTRO PARA LA EVALUACIÓN Y EL DESARROLLO

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ABBREVIATIONS

ATR	Ability To Recover
ATT	Average Treatment Effect on the Treated
BD	Business Development
BRS	Brief Resilience Scale
C4ED	Center for Evaluation and Development
CAPI	Computer-Assisted Personal Interview
CATI	Computer-Assisted Telephone Interview
CEA	Cost-effectiveness Analysis
CEM	Coarsened Exact Matching
CepRass	Centre for Policy, Research and Strategic Studies
CIE	Counterfactual Impact Evaluation
DAC	Development Assistance Committee
EQ	Evaluation Question
EU	European Union
EUTF	European Union Emergency Trust Fund
GBA	Greater Banjul Area
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GMD	Gambian Dalasi
IDP	Internally Displaced Person
ILO	International Labour Organisation
IOM	International Migration Organisation
IGA	Income Generating Activity
IPWRA	Inverse Probability Weighted Regression Adjustment
JC	Judgement Criteria
JRC	Joint Research Centre
KII	Key Informant Interview
KPI	Key performance indicator
NAQAA	National Accreditation and Quality Assurance Authority
NEET	Not in Employment, Education or Training
POM	Potential Outcome Mean
PS	Propensity Score
R1	Result Area One
TOC	Theory of Change
TVET	Technical and Vocational Education and Training
UNCTAD	United Nations Conference on Trade and Development

EXECUTIVE SUMMARY

Introduction

In this final evaluation report, Center for Evaluation and Development (C4ED), contracted by EUTF, evaluates the impacts of the Tekki Fii project implemented by GIZ to offer tailored recommendations and inform the evaluation of the European Union Emergency Trust Fund (EUTF) portfolio (Result Area 2). The Tekki Fii project consisted of Technical and Vocational Education and Training (TVET) for all selected candidates and business development (BD) training for those who were interested in opening or developing an income-generating activity (IGA). C4ED investigates the project's effectiveness, impact, and relevance.

C4ED employed an embedded mixed-methods approach to conduct this evaluation. It collected quantitative data six and eighteen months after the end of the trainings, providing a sample of 1,329 observations covering project beneficiaries and a comparison group of rejected candidates. This sample served to measure impacts using a quasi-experimental design. In addition, C4ED collected qualitative data through ten Key Informant Interviews (KIIs) to explore the challenges of enrolling returnees and the project's potential impacts on returnees.

Country and sector background

The Gambian private sector is dominated by informal micro and small enterprises which cannot absorb the available labour force. The skills mismatch in the labour market, poor education quality, and lack of technical and soft skills further exacerbate underemployment issues. High youth unemployment rates have led many to attempt dangerous irregular migration to Europe.

In this context, the European Union (EU) has played a significant role, focusing on the promotion of employment opportunities and addressing migration-related challenges. Since the mid-2000s, the EU has supported vocational training projects in sectors such as agriculture, tourism, and IT, enabling young Gambians to gain relevant skills and access job opportunities. Since the 2016 political transition, the EU emphasised entrepreneurship development, providing aspiring entrepreneurs with finance, mentorship, and business training. The Tekki Fii project is in line with these initiatives and the impact evaluation presented in this document aims to inform further interventions.

Principal Findings

The Tekki Fii project trained 1,277 individuals, nearly reaching its target of 1,300. The project successfully enrolled participants within the targeted age group, education level, and English proficiency (Finding 1). The project exceeded its target for female participation, thanks to positive discrimination, KPIs, and investment in female-friendly trades with high market relevance (Finding 2). However, it did not meet the 30% target for returnee participation despite efforts like setting selection targets, KPIs, and sensitisation activities. Economic hardship, social stigma, competition from other projects, psychological challenges, and documentation issues were significant barriers (Finding 3).

The project had substantial positive impacts on employment, especially 18 months after training. Overall, beneficiaries were 20% more likely to have stable jobs, thanks to the TVET+BD component increasing stable employment by 31%, surpassing impacts reported in

vocational training studies in similar contexts (Finding 4). These positive impacts on employment mechanically increased the overall income of the beneficiaries (Finding 11). The impacts on employment are due to beneficiaries starting formal income-generating activities (IGAs) mainly in traditional trades that require low capital (Finding 5 and 6). Besides the formality of businesses, the project did not enhance other aspects of decent employment such as productivity, paid leave, or social support. Moreover, it unintentionally increased beneficiaries' exposure to occupational hazards, particularly for men in the manufacturing sector (Finding 21).

Both TVET and BD component significantly helped beneficiaries find jobs in the trades they were trained for, with a 52% increase in the probability of finding such jobs 18 months after training (Finding 8).

There is no clear impact on resilience. Beneficiaries did not show significant improvements in recovering from shocks or self-perceived resilience. However, income variability increased due to new jobs or businesses, suggesting positive income shocks rather than increased vulnerability (Finding 12).

The project had a larger positive impact on stable employment for females (+43%) than males (+13%), thereby reducing the gender employment gap. Both genders saw increased self-employment due to the project, demonstrating that the BD component successfully addressed financial barriers, particularly for females (Finding 19). Despite overall employment gains, males experienced better job conditions and income growth than females, who often ended up in lower-paying, informal apprentice roles or as own-account workers (Finding 20). This exacerbated the gender pay gap, with males earning significantly more post-training.

The specific impacts on returnees are unclear due to the sample size and gender dynamics. However, returnees experienced positive employment outcomes and income increases similar to non-returnees but faced challenges in formalising businesses due to documentation issues. The project's effects on job matching and productivity were similar for both groups (Finding 22).

Conclusions

Effectiveness: The Tekki Fii project was nearly successful in reaching its target of 1,300 beneficiaries and exceeded the female participation target. However, the participation of returnees was significantly below the target primarily due to returnees' lack of interest in the project, which did not meet their immediate income generation needs but was designed to fulfil longer-term training needs. Despite this, the project managed to maintain a low dropout rate, an uncommon achievement for similar projects in low- or middle-income countries. This success can be attributed to a robust selection process that anticipated and mitigated the risk of participants leaving the training, ensuring classes operated at nearly full capacity.

Impact: The project had substantial positive impacts on stable employment, particularly evident 18 months after the training, where stable job rates increased by 24%. This effect was more pronounced for participants who received both TVET and BD component, underscoring the importance of combining entrepreneurial skills with technical training in The Gambia. Employment impacts were evident both in the short term (14% increase six months post-training) and grew larger over time (24% increase 18 months post-training), likely due to the industrial placements and coaching that facilitated a smoother transition into the labour market. Most beneficiaries who found employment did so by starting IGAs in traditional trades, probably driven by the weakness of the existing private sector, unmet demand and the social

value of self-employment. The BD component played a critical role by providing financial support and guidance throughout six months to overcome barriers to entrepreneurship. However, the project's impact on decent employment varied by gender. While it helped females find employment, they often ended up in low-paid, vulnerable positions. In contrast, men secured more profitable but hazardous jobs. Both genders saw an increase in formal employment rates due to the project. Additionally, beneficiaries were significantly more likely to find jobs in the trades they trained for, benefiting from the project's reputation and the relevant skills gained. The project also enhanced beneficiaries' perceptions of their employability, especially among women, although it did not increase their job search proactiveness.

Relevance: Beneficiaries perceived the project positively, giving high ratings to various aspects such as teaching quality, training facilities, skill development, and industrial placements. This positive feedback indicates that the training was well-aligned with its intended purpose of promoting employment by developing relevant market-related skills. Although there is a possibility of biased feedback from beneficiaries wanting to reciprocate the support received, the alignment of skills learned with jobs found suggests that the project reduced skill mismatches and helped beneficiaries secure employment in their desired sectors. This coherence between the training provided and the employment outcomes in traditional trades further validates the project's design and implementation. However, further research is needed to answer the specific needs to promote employment in modern trades.

Recommendations

1. **Adjust target setting and implementation modalities to better respond to returnees' needs:** Set realistic targets based on comparable benchmarks and align them with returnees' specific needs. Implement shorter or part-time training and provide psychosocial and financial support to increase relevance and attractiveness.
2. **Adapt support to the trades' characteristics**: For trades likely to result in trainees starting IGAs, maintain current training methods. For other trades, evaluate the private sector's capacity to hire and develop strong partnerships to support employment.
3. **Strengthen support for female entrepreneurs:** Enhance access to financial resources, business networks, and mentorship to boost female entrepreneurs' income and business sustainability.
4. **Promote safety and health:** Include occupational safety and health training to mitigate risks in sectors like manufacturing.
5. **Enhance monitoring and response mechanisms for dropout prevention:** Implement a monitoring system to detect early disengagement and support at-risk beneficiaries, ensuring timely replacements for dropouts.
6. **Mitigate selection bias risks in impact evaluation and promote learning:** Plan impact evaluations during project design and use qualitative data alongside quantitative to capture beneficiaries' motivations and reduce bias.
7. **Measure Long-Term Impacts:** Collect data beyond 18 months post-training to fully understand the project's long-term effects on employment.
8. **Align financial reporting and needs for a cost-effectiveness analysis:** Ensure that the evaluator can isolate the specific costs of the project (or component) evaluated.

Lessons learnt

Project Impacts

- Combining vocational and business development (BD) training enhances job access and impact.
- Tailoring training to specific trades and forming strong private sector partnerships is crucial to promote employment of trainees.
- Addressing financial constraints and cultural barriers faced by female entrepreneurs can improve their income and business growth.
- Promoting employment in manufacturing requires health and safety considerations due to job-related risks.

Enrolment and Dropouts

- Setting realistic targets for returnees, considering their immediate income needs, and offering shorter, part-time training with psychosocial support will help reaching pre-defined targets.
- Increasing outreach through community participation and migrant networks can raise awareness and mobilisation.
- Recruiting returning migrants as staff can help tailor activities to their needs.
- Collaborating with organisations like IOM can prevent duplicated efforts and competition.
- Providing additional reintegration activities, including psychosocial support, can aid in economic and social reintegration, reducing dropouts.
- Reducing opportunity costs for participation (e.g., stipends, transportation, flexible training) can increase interest and participation.
- Streamlining communication about eligibility criteria can expand the pool of applicants.
- Using structured interviews to assess candidate motivation can limit dropouts.
- Maintaining a waiting list of eligible candidates can ensure classes remain full.

Project Evaluation

- Integrating the impact evaluation plan in the planning of the project implementation improves evaluation quality.
- Collecting comprehensive baseline data ensures robust impact evaluation.
- Using a centralised digital monitoring system with unique beneficiary identifiers aids in tracking participation.
- Collecting data beyond 18 months post-training captures the full impact of vocational training projects.

1. INTRODUCTION

The Center for Evaluation and Development (C4ED) has been contracted by the European Union Emergency Trust Fund (EUTF) to measure and understand the impacts of the Tekki Fii project implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). It aims to offer project-specific recommendations based on the findings from a rigorous impact evaluation and to inform the evaluation of the EUTF portfolio (Result Area 2). This final report aims to synthesise all findings from the evaluation activities undertaken since January 2021.

1.1. DESCRIPTION OF THE PROJECT

The Tekki Fii project ("Make it in The Gambia: employment and employability through new technologies and renewable energies" - T05-EUTF-SAH-GM-03-01) aimed to contribute to socio-economic development and to nurture positive prospects for local populations and returning migrants in the Gambia. To do so, it followed three specific objectives (SO):

- SO.1: To boost economic development with a focus on attractive employment and revenue generation in regions prone to migration.
- S0.2: To promote a conducive socio-economic environment for an effective and sustainable reintegration and to improve the attractiveness ofrural areas.
- S0.3: To promote the concept: 'tekki fii- Make it Here -Make it in The Gambia'.

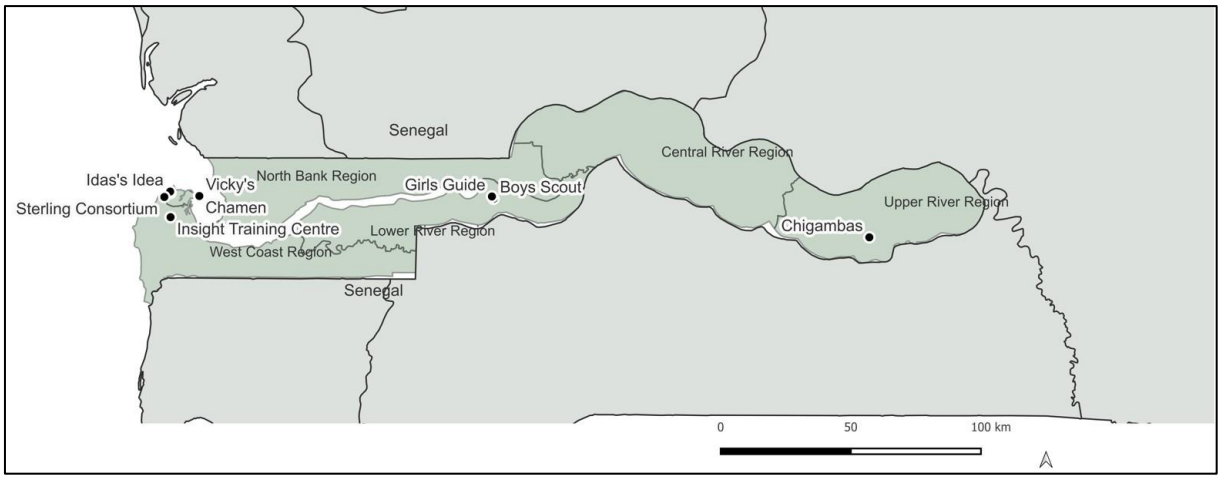
However, the contract evaluated by C4ED focuses on the activities organised by the GIZ[1], which focused mainly to the SO1, and indirectly to the S03. Hence, the contract was based on the following sub objectives and respective results to be achieved:

- *S0.1.1 Increase the employability of the Gambians*: to enhance the development of technical, vocational and entrepreneurial skills which can either lead to higher employability of the Gambian labour force and/or support their income generating activities/MSMEs creation in sectors with potential for growth. The improvement of technical, vocational and entrepreneurial skills must also include capacity development and improvement of the existing vocational training system.
    - GTTI and selected regional skills centres are enabled to provide market-oriented qualification and training courses, including new technologies and renewable energies, and related entrepreneurship qualification.
    - Employability in attractive professions in energy and adjacent sectors is improved.
- *S0.1.2 Enabling Business environment improvement*: to remove obstacles which hinder MSME creation and growth (physical /financial and virtual infrastructure, facilitate wider access to finance and small grants for start-ups, ensure transparent and up-to-date retail market information, wider and continuous access to energy, quality compliance of product and services etc ....) and boost growth and employment opportunities.
    - Renewable energy solutions are supporting local MSMEs in their employment creation opportunities: MSMEs and Youth associations have improved their production capacity, increased their revenue generation and employment creation based on renewable energy solutions for productive use and services.

[1] The other implementing partners identified for the action "Make it in The Gambia are: the Instituto Marques de Valle Flor (IMVF), ENABEL, International Trade Center (ITC), and GK Partners. C4ED does not evaluate their activities.

The project consisted of a training targeting youth not in employment, education, or training in The Gambia. More specifically, the project aimed at training individuals aged between 15 and 35 years old who had completed grade nine and possessed a foundational understanding of Mathematics and English, and at including at least 30% females and 30% returning migrants (or returnees), as per project targets. The strategy of Tekki Fii is based on two trainings as described in the Theory of Changed illustrated in Appendix 5.1: a Technical and Vocational Education and Training (TVET) and a Business Development (BD) training that took place in six training centres illustrated in Figure 1.

Figure 1: Location of training centres



Source: C4ED elaboration

- The TVET training aimed at enhancing the employability of trainees by developing market-relevant skills, soft skills, experience, and job searching capacities. To do so, it offered comprehensive skill development projects lasting six to nine months across nine trade areas, supplemented by an additional three months of industrial attachment. The selection of the trades is based on an in-depth assessment by the project team during the inception phase that identified trade areas with a high market demand. Moreover, the National Accreditation and Quality Assurance Authority (NAQAA) provided formal certifications to trainees after a final assessment to increase their attractiveness in the labour market. The implementing partners (IPs) and the respective trainings provided are listed in Table 4.
- The BD component aimed at developing business skills and facilitating business creation and development for approximately 28% of the trainees after completing the TVET training. The BD component offered a broad bouquet of packages, including entrepreneurship training with personalised business coaching during six months, grants and start-up kits, market linkages and different training programmes in agro-food processing and agropreneurship. It is worth noting that the supply of these packages depended on the IPs, resulting in varied forms of support received by BD component beneficiaries (Table 5). However, most beneficiaries received entrepreneurship training and either financial or material support.

The implementation timeline followed the scheduled plan, starting in November 2018 and running for three years until November 2021. However, it is to be noted that cycle one's training was heavily affected by the COVID-19 pandemic. Overall, GIZ reports that Tekki Fii trained 1,277 TVET individuals throughout three training cycles, among which approximately 356

received the BD component.[2] After all cycles finalised the trainings, the GIZ-The Gambia team was dissolved in November 2021. As further communications with the implementation team were expected to be challenging, C4ED requested all available monitoring information. In April 2022, C4ED received the final implementation reports from GIZ, which were used and cross-checked with the data collected independently by C4ED.

1.2. DESCRIPTION OF THE EVALUATION

The main objective of the evaluation is to measure the impacts of the Tekki Fii project implemented by GIZ (as described above) on employability, employment, and livelihood of the targeted population (see evaluation matrix in Appendix 5.5).[3] C4ED also assesses the effectiveness of the projects in enrolling the targeted populations. Given the difficulties to enrol returnees, the evaluation expanded its scope to understand the challenges faced in this area. With this evaluation, C4ED provides evidence on whether the project contributed to the promotion of employment opportunities (SO.1) and how future vocational and entrepreneurial trainings in similar settings can be improved. Together with the other C4ED evaluation reports (Result Area 1 and Result Area 2 – R1 and R2) and other monitoring and evaluation initiatives (at a project and regional level), this report contributes to producing clear, relevant and credible evidence for better decision-making. This report is relevant to various stakeholders. For the EU, it illustrates how an EU-funded project contributed to EUTF's strategic objectives and hence informs on its efficiency. It is also relevant in terms of accountability as it provides transparency on the use of public funds. For the GIZ and the IPs listed in Table 4 and Table 5, as well as the institutional partners listed in Table 6, it is useful in terms of capacity building and promotion of good practices. Finally, for beneficiaries, this evaluation demonstrates to what extent the project supported them and how future interventions should adapt to be most efficient. The report provides specific recommendations for the different stakeholders identified in section 4.2.

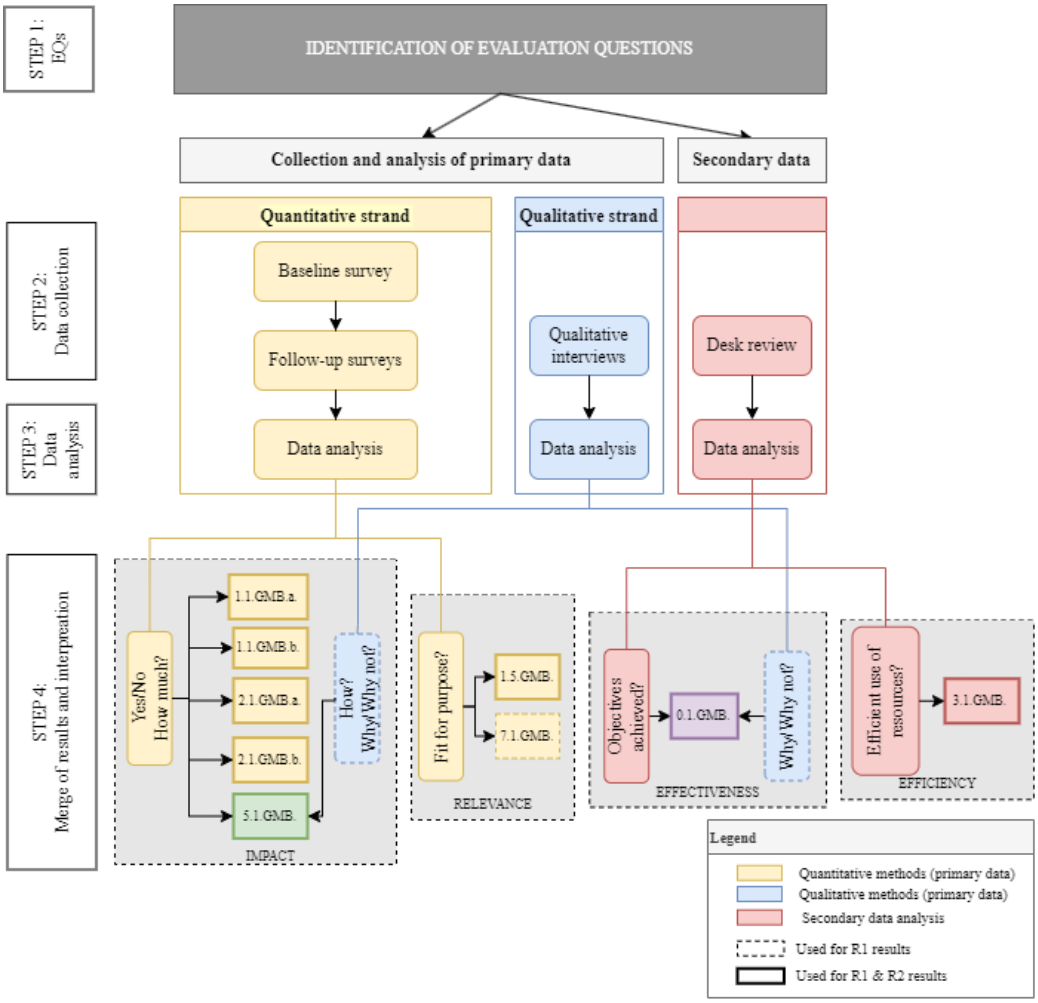
1.3. METHODOLOGY

The evaluation employs an embedded mixed-methods approach, with a strong reliance on a quasi-experimental design to measure the project's impacts. It also assesses its effectiveness, relevance, and efficiency. Figure 2 depicts how qualitative and quantitative tools are used to investigate the different Development Assistance Committee (DAC) criteria and EQs.

[2] Based on the final implementation reports, the number of individuals benefiting from the BD training is significantly higher than 360 individuals: 1,400 start-ups underwent entrepreneurship training and coaching, and 1,550 established micro and small enterprises benefited from business advisory services. However, C4ED understands that the selection process is independent of the TVET training and, therefore, does not enter into the scope of the impact evaluation.

[3] C4ED does not evaluate Tekki Fii activities implemented by the other implementing partners: the Instituto Marques de Valle Flor (IMVF), ENABEL, International Trade Center (ITC), and GK Partners.

Figure 2: Methodological approach for the respective EQs



Source: C4ED elaboration

1.3.1. Methods

To assess effectiveness, C4ED compares the indicators of interest at endline with the target levels (0.1GMB). For this purpose, C4ED uses primary data and information from the final implementation report. As preliminary findings informed on the few returnees enrolled, the evaluation also included a qualitative component with ten KIIs to better understand the challenges of attracting and training this specific population. The key informants on the project were selected via snowball and chain sampling. C4ED included a variety of perspectives and viewpoints in the sample by identifying and selecting key informants who a) know about the project and its different trainings (TVET and BD), b) have knowledge about the situation of returnees in The Gambia, c) have had frequent exposure to project beneficiaries, d) represent the project's target group, including returnees. C4ED identified key informants matching these criteria through contacts provided by project staff. The table below depicts the final sample of interviewed key informants.

Table 1: Sample of key informants

Respondent category	Organisation	Position	# of respondents
GIZ staff and consultants	GIZ	Team Leader Jr. Tech. Advisor TVET Jr. Tech. Advisor BD	3
IPs	Insight Training Centre Start-Up Incubator Gambia Sterling Consortium Chigamba	Head of Administration Project Coordinator Chief Executive Officer Senior Manager	4
Cooperation partners	International Migration Organisation (IOM)	Integration Officer	1
Beneficiary representatives	National Youth Council Returnee organisation	Regional Chairperson Founder of the organisation	2
Total			**10**

Source: C4ED elaboration

The analysis of primary qualitative data collected through KIIs was executed in stages. A preliminary analysis and comparison of the interview notes was conducted after each interview to identify evolving patterns and topics related to the EQs, which informed the design of subsequent interviews. In the second step, all interview notes were coded using the MAXQDA software according to a code structure developed based on the EQs and emerging patterns during the interviews. The code structure was iteratively revised and adjusted according to the information emerging from new data. This allowed C4ED to strike a balance between deductive and inductive approaches to research and to ensure that 'unexpected' data was featured in the analysis. In a third stage, we carried out a systematic content analysis of the coded data to identify patterns and trends, convergencies and divergencies in the relevant themes and stratified by categories of respondents. This allowed for the development of themes and broader categories to identify barriers and drivers for returnees to access and profit from the Tekki Fii Project. The process included cross-checking evidence from the different respondent categories to validate specific findings. The resulting descriptive data was integrated and triangulated with the quantitative results to ensure breadth and depth in the study report.

To assess the impacts (1.1.GMB.a, 1.1.GMB.b, 2.1.GMB.a, 2.1.GMB.b, 5.1GMB), C4ED measures the effects of benefitting from the Tekki Fii project overall (TVET beneficiaries – T1 – and TVET+BD beneficiaries – T2 – versus rejected candidates – C), the effects of only participating in the TVET training (TVET beneficiaries – T1 – versus rejected candidates – C), the joint effects of the TVET training followed by the BD component (TVET+BD beneficiaries – T2 – versus rejected candidates – C) and the marginal effects of the BD component (TVET+BD beneficiaries – T2– versus TVET beneficiaries – T1) (Table 2).

Table 2: Effects estimated and reference groups in econometric regressions

Effect estimated		Reference groups
Overall	Tekki Fii Project	T1 + T2 vs C (1a)
	TVET training	T1 vs C (2a)
	TVET + BD component	T2 vs C (3a)
	BD component	T2 vs T1 (4a)
Gender-specific	Tekki Fii Project among females	Females in T1+T2 vs females in C
	TVET training among females	Females in T1 vs females in C
	TVET + BD component among females	Females in T2 vs females in C
	BD component among females	Females in T2 vs females in T1
	Tekki Fii Project among males	Males in T1+T2 vs males in C
	TVET training among males	Males in T1 vs males in C
	TVET + BD component among males	Males in T2 vs males in C

	BD component	Males in T2 vs males in T1
Returnee status-specific	Tekki Fii Project among non-returnees	Non-returnees in T1 + T2 vs non-returnees in C (1b)
	TVET training among non-returnees	Non-returnees in T1 vs non-returnees in C (2b)
	TVET + BD component among non-returnees	Non-returnees in T2 vs non-returnees in C (3b)
	BD component among non-returnees	Non-returnees in T2 vs non-returnees in T1 (4b)
	Tekki Fii Project among returnees	Triangulation of findings in 1a and 1b
	TVET training among returnees	Triangulation of findings in 2a and 2b
	TVET + BD component among returnees	Triangulation of findings in 3a and 3b
	BD component among returnees	Triangulation of findings in 4a and 4b

Source: C4ED elaboration

To do so, C4ED applies a propensity score based on a weighting approach to address selection into the treatment and confounding. This approach creates a pseudo-population in which more weight is given to similar observations (i.e., similar in their probability of being selected for the project based on observed characteristics). Thanks to the weighting, impacts are measured by comparing the outcomes of interest among the treated observations to those of the most similar rejected applicants before the treatment within this pseudo-population. More information on this method and these robustness checks is available in Appendix 5.1. In addition to measuring the effects of the two treatment arms, C4ED also measures the effect across genders. Although initially planned, the conditions did not allow to measure the specific impacts on returnees (too few returnees in the sample – See section 1.5).

C4ED used primary data to measure impacts. The baseline sample was of 1,765 shortlisted applicants on the data shared by GIZ-The Gambia. C4ED then collected data on the baseline sample twice using the quantitative tool described in the next section. The final sample is of 1,325 observations (75% of the initial sample). Six per cent of the sample could not be reached, 18% of the sample refused to take part in the survey, and one per cent did not complete the survey. The most common reasons respondents could not be reached in the endline survey were outdated contact information, which hindered scheduling interviews, and respondents not being found at the residential addresses provided during baseline and midline.

To assess relevance (1.5.GMB, 7.1.GMB) explore the extent to which the intervention objectives and design respond to beneficiaries' needs in an adapted manner. C4ED uses the youth questionnaire to assess whether graduates exploit the skills developed during the training within their professional activity.

To assess efficiency C4ED uses GIZ's implementation reports (GIZ, 2020, 2022), as well as qualitative and quantitative primary data to assess elements of economic efficiency, operational efficiency, timeliness and connections with other DAC criteria (OECD, 2010). Note that the analysis cannot inform on the trade-off between the resources allocated to the different activities and the extent to which they led to minimise costs or maximise impacts.

1.3.2. Tools

Quantitative tools

C4ED developed the midline and the endline questionnaires with the support from GIZ-The Gambia. The questionnaires were designed in accordance with the EQs and key indicators to ensure harmonisation across all R1 CIEs. The endline questionnaire represented an extended version of the midline questionnaire; it contained the same modules from the midline and included additional modules on access to finance, financial literacy, self-efficacy, life satisfaction and ability to recover from shocks.

C4ED adapted the questionnaires to the local context in close collaboration with the in-country sub-contractor, the Centre for Policy, Research and Strategic Studies (CepRass). Further, C4ED conducted translation and back-translation of specific modules in the relevant local languages (Mandinka and Wolof). Based on the experience from the midline data collections, some modules were updated to enhance the data quality.

The questionnaires included relevant questions to compute the harmonised indicators drawn from key references.[4] In addition, specific modules were asked solely to Tekki Fii trainees. These modules allowed C4ED to gather information on attendance, reasons for absenteeism and feedback on the quality of trainings.

All weaknesses identified during the midline data collection that were more specifically related to the participation of trainees in the different components of the training, income and resilience modules were mitigated in the endline by making minor changes and adding more questions to the questionnaire.

The midline phone survey took place six months after the end of training using a project questionnaire on SurveyCTO.[5] The endline face to face survey took place 18 months after the end of training.[6]

Qualitative tools

The primary tool of qualitative research is the researcher. Qualitative approaches emphasise the role of the researcher and accept that all data gathering by researchers is more or less subjective and value-laden. KIIs for this study were conducted by an experienced C4ED qualitative researcher in a highly inductive way. The researcher led semi-structured interviews with mostly open-ended questions for each of the ten key informants with the support of a topic guide tailored to the role and experience of each respondent, informed by secondary data and information from previous KIIs. After each interview, topic guides were adjusted to acknowledge and further examine emerging patterns.

1.4. LIMITATIONS AND WEAKNESSES

Though the study relies on rigorous evaluation methods, there are a series of weaknesses that must be considered when interpreting the results. Key limitations are described in this section.

Selection bias: the candidates were selected based on a set of criteria (Table 16). This implies that both those who were selected and those against whom the treatment individuals are being compared possess different characteristics. For example, selected individuals are likely to be more motivated, have better English communication skills and a higher levels of formal

[4] The resources used to develop the questionnaires included but were not limited to International Labour Organisation Labour Force Surveys (Benes & Walsh, 2018a, 2018b; ILO, 2013) and additional relevant tools on TVET Graduate Follow-up Surveys (Field et al., 2019), Brief Resilience Scale (BRS) from Smith et al., (2008), resilience to shocks adapted from Garbero (2016), pelf-perceived employability module adapted from Rothwell et al. (2008), professional practice questions from McKenzie & Woodruff (2017).

[5] The average length of a completed interview was 28 minutes, with limited variation across cycles. Given the rule of thumb that phone surveys should not be longer than 30 minutes (Abay et al., 2021), the midline questionnaire was designed to be completed within this time frame. Therefore, the observed average length of interviews was not a concern for data quality.

[6] In this case, the average duration of completed interviews during the endline was 42 minutes.

education. These differences can significantly influence research outcomes, such as employment, potentially leading to an overestimation of the project's impacts.

To mitigate selection bias, C4ED uses the key criteria and the selection score to measure the similarity between treatment and comparison observations. However, some differences, such as unobservable traits, cannot be measured. This limitation means that the weighting approach cannot fully account for all existing differences between treatment and comparison observations. Consequently, interpretations of the results assume no significant unobservable differences exist.

Sensitivity to matching variables: the results can be sensitive to the variables chosen to assess the similarity between the observations. C4ED automated and optimised the selection of the matching variables to reduce the subjectivity of this task (see Appendix 5.1). In addition, C4ED tested numerous combinations of matching variables and the results confirm that the findings are robust to the specification of the propensity scores.

External validity: the sample used for this evaluation presents specific characteristics that differ from the general population. As a result, the conclusions drawn cannot be generalised to the Gambian population but are instead applicable to the target population for Tekki Fii. It is crucial to note that the findings apply specifically to this sample and similar populations in The Gambia, particularly urban youth with relatively higher levels of education.

Incapacity to measure impacts on returnees: the analysis faces two critical challenges. First, due to the small number of returnees in the sample, the estimations have limited power to detect impacts unless the sample size is sufficiently large. In fact, due to the limited number of returnees, the regression model used in this study faced collinearity issues, necessitating the removal of matching and explanatory variables, and estimations did not converge for all outcomes of interest. Second, as most returnees in the sample were male, it is difficult to disentangle whether the impacts are due to gender dynamics or to their returnee status. Hence, C4ED can only assess the impacts on non-returnees and vaguely explore the potential impacts on returnees by comparing overall impacts and impacts on non-returnees.

Potential longer term effects: the literature on TVET shows that projects such as the one evaluated in this report can have locked-in effects (Carranza & McKenzie, 2024). The locked-in effect implies that during the training, beneficiaries temporarily suspend their normal job search efforts to focus on project activities, often resulting in poorer outcomes immediately following the project. Systematic reviews indicate that projects show larger impacts when measured more than two years after the training period (Card et al., 2018). Although C4ED measures positive impacts six and 18 months after the end of the training, it is possible that the timeframe was too short for trainees to get back into the labour market and that this study does not capture the larger impacts materialising in the longer term.

Small sample of the qualitative component: the qualitative research component, which was added to this study to partially mitigate the limitations of the quantitative research in measuring the impacts on returnees, has its own limitations. The sample size was relatively small (ten KIIs) and focused predominantly on the experiences and views of project implementers. As such, the additional qualitative research can be considered exploratory. The results depicted in this report are indicative of potential barriers for returnees and will need to be tested and triangulated through further research to offer robust and conclusive results.

Quantitative indicators from the survey are self-reported and must considered as such. The enumerators insisted on the importance of providing truthful answers and the absence of incentives for participating in the survey to limit the risks of biased responses. However, several risks prevail:

- Measurement errors: This is the case for income-related indicators (indicators 1.1.5, 2.1.1, 2.1.4, 2.1.5) and number of hours worked (indicator 1.1.5) as they are difficult to accurately reported by the respondent in the setting of the interview.
- Biased assessment: indicators based on perceptions such as self-perceived employability (indicator 1.1.8), brief resilience scale (indicator 2.1.5), perceived trainee evaluation/feedback (indicator 1.5.1) must also be considered with caution as they represent the perception of the respondent. A respondent's answer might be influenced by various factors that may not directly relate to an objective assessment of the quality of the training, and can be biased by personal expectations, prior experiences or the omission of specific aspects that are relevant for other individuals. A respondent might also not be in the best position to judge the adequacy of the equipment or the opportunities in the labour market that affect their likelihood to find employment. C4ED tried, to the extent possible, to use subjective and objective measures to check for (in)consistencies. However, to assess whether the training facilities were fit for purpose (1.5.GMB), no objective measures were available.
- Internal consistency of composite indicators: some indicators such as self-perceived employability (indicator 1.1.8) and brief resilience scale (indicator 2.1.5) are built from several items that cover the different facets of the respective dimension. To test whether they cover the same dimension, C4ED calculates the correlation between the different items using the Cronbach Alpha. This test provides the internal consistency of the indicator and informs on whether the indicator is capturing other dimensions (Streiner et al., 2015). C4ED highlights in the findings when the indicator has low internal consistency, as well as in Appendix 5.2.3.
- Social desirability: self-reported measures always present the risk that the respondent answers questions in a manner that will be viewed favourably by others. Behaviour regarding job search (indicators 1.1.9, 1.1.0) and professional practices are relatively prone to this risk (indicators 2.1.1).

Unavailability of cost data for the assessment of efficiency. As specific costs incurred for implementing the activities under evaluation were unavailable to C4ED, it could not undertake the analysis following the planned methodology, as suggested by J-PAL (Dhaliwal et al., 2013). Instead, as mentioned above, C4ED used GIZ's implementation reports together with primary data.

Incapacity to disentangle impacts of the different services provided. As the impacts are measured by comparing groups of individuals, one can only assess the impact that differentiates them. In this case, C4ED can only assess the impacts from the bundle of services provided during the TVET, and the impacts of the bundle of services provided in the BD component. Note that C4ED cannot confirm the services provided by the BD component IPs. Hence, C4ED can neither measure the specific impacts of the provision of the NAQAA accreditation after the TVET nor the impacts of providing the start-up kits.

2. COUNTRY AND SECTOR BACKGROUND

2.1. CONTEXTUAL BACKGROUND

The Gambia is a small country in West Africa, bordered by Senegal and the Atlantic Ocean, with a population of 2.1 million. The country is one of the most densely populated countries in Africa, with 176 people per square kilometre, and is divided into five regions (Western, Lower River, North Bank, Central River and Upper River regions) and one city (Banjul).

When the project started, The Gambia had seen mixed economic performances. In 2019, Growth Domestic Product (GDP) grew by 6% and GDP per capita reached USD 751 in 2020, which in terms of purchasing power parity (PPP) amounts to USD 2,206 (World Bank, 2020). The Gambia's economy is predominantly service-and-agriculture-based and has a heavy reliance on the tourism industry and remittances from the diaspora (African Development Bank [AfDB], 2020). The country and its economy are highly vulnerable to weather conditions and the effects of climate change alongside external shocks, such as the Ebola outbreak and, more recently, the COVID-19 pandemic. The country was heavily affected by the emergence of COVID-19, when remittances fell across the African continent and the flow of tourists experienced a sharp reduction (African Development Bank (AfDB), 2020). Due to these challenges, the Gambian economy faced a generalised economic slow-down (IMF, 2020).

The private sector is dominated by micro-and-small enterprises (MSEs), which typically operate informally. It is also estimated that 63% of all employment in the non-agricultural sector is in informal work (AfDB & OECD, 2017). The informality of the private sector poses challenges to the economy, as informal firms are associated with lower productivity (La Porta & Shleifer, 2008) and lower fiscal participation (Joshi et al., 2014).

Underemployment is a major problem in The Gambia, as in many other Sub-Saharan African countries and is combined with a relatively young and vulnerable population – often referred to as a 'youth bulge'. The population composition is skewed towards a working-age population with a median age of just 19 years (United Nations, Department of Economic and Social Affairs, Population Division, 2017), placing the country among the youngest in the world. This demographic dividend, however, is not fully utilised as youth unemployment rate stands at 41.5% (GBoS, 2018).[7]

Additionally, the labour market in The Gambia is also strongly gendered (Benjamin et al., 2012). Despite ranking second in the African Development Bank's 2015 Gender Index[8] (African Development Bank - AfDB, 2015), a notably greater share of females, aged between 15-24, are neither employed, nor involved in further education or training (NEET), compared to males of the same age group (International Labour Organisation - ILO, 2020). Moreover, a higher percentage of women compared to men are involved in unpaid or vulnerable employment[9] (ILO, 2018).

Youth underemployment should concern policy makers in The Gambia not only due to its economic costs, but also because the effects of being out of work at a young age have serious long-term consequences, weakening individuals' position in the labour market (Cockx & Picchio, 2013), and affecting their psychological well-being (Fergusson et al., 2014; McKee-Ryan et al., 2005). In addition, recent evidence suggests that a large youth population is also associated with increased political violence and instability (Urdal, 2006) and therefore it is key for young people to have access to economic opportunities.

One consequence of high levels of youth unemployment and the lack of income opportunities is that large numbers of Gambian youth have decided to irregularly migrate to Europe (Lahire

[7] ILO uses a definition of youth from 15-24 years, however the definition of youth adopted by the government of The Gambia, in line with the African Union definition, is a person aged 15-35 years.

[8] The Africa Gender Equality Index measures gender equality across three separate dimensions: equality in economic opportunities, equality in human development and equality in law and institutions.

[9] Vulnerable employment is the percentage of contributing family workers and own account workers to the total employment. They are less likely to have formal work arrangements and are therefore more likely to lack decent working conditions, adequate social security and 'voice' through effective representation by trade unions and similar organizations. Vulnerable employment is often characterized by inadequate earnings, low productivity and difficult conditions of work that undermine workers' fundamental rights(International Labour Organization, 2013)

et al., 2011), particularly young men with low levels of education (Samuel Hall, 2018). These journeys, typically across the Sahara Desert and Mediterranean Sea, are highly dangerous, with over 20,000 deaths in the sea recorded from 2014 to 2019 (IOM, 2020). The journey is undertaken with expectations of success that are too often unmet (Bah & Batista, 2018). Despite a recent decline in the levels of irregular migration (Ebere, 2018), The Gambia is the African country with the highest rate of irregular migration to Europe, with approximately 3.9% of the population making the journey (FRONTEX, 2020).

On the supply side, a major constraint for youth in the labour market in The Gambia is a skills mismatch. The concept of a skills mismatch generally refers to friction in the labour market due to imbalances between skills and qualifications available on the labour market and those required in jobs. This mismatch in The Gambia is also a result of the poor education quality and the low technical skills of Gambian youth. One indicator of poor quality of education in the country is a low prevalence of students holding basic skills - only 60% of lower secondary level children can read and just 35% have sufficient numeracy skills to meet national targets (GBoS, 2018). According to the Human Capital Index (HCI), which accounts for education among other development indicators, The Gambia ranks lower for human capital than the Sub-Saharan African average (World Bank, 2020).[10]

Similarly, Technical Vocational Education & Training (TVET) graduates in The Gambia often lack practical and market-relevant technical skills. Despite the government's long-standing focus on TVET centres to equip young people with these skills, several barriers hinder access. These include prohibiting fees for students from low-income backgrounds and institutions focusing on male-dominated fields (ILO, 2019). Underfunding is an additional issue, as education expenditure in The Gambia predominantly targets primary education (World Bank, 2020).[11] This has resulted in low-quality teaching in TVET progrects. A recent tracer study of graduates from the Gambia Technical Training Institute, recognised as the country's premier TVET institution, found that technical skills acquired tended to be basic and unsatisfactory to employers, with only 39% of graduates finding regular employment (GTTI, 2018).

Finally, in addition to lacking basic and technical skills, there is also a shortage of soft skills in the labour market. Soft skills, such as communication, organisation, or self-esteem, are vital in labour market success (Heckman & Kautz, 2012). Indeed, in a survey of employers in The Gambia, the second most common skill gap identified by employers was a lack of verbal communication (NAQAA, 2018).

On the demand side, obstacles include low availability of jobs to absorb the new labour market entrants and employers' uncertainty about young workers' productivity. Despite quality assurance policies designed to ensure that TVET projects and institutions meet performance standards and external examination of students in The Gambia, formal TVET qualifications are still undervalued due to lack of skills recognition (International Trade Centre [ITC], 2018).

One further challenge to youths gaining employment relates to the effectiveness and cost of job searching. In The Gambia, job searches are predominantly conducted informally through close social networks. According to the latest Gambian Labour Force Survey , 69% of unemployed individuals reported in that their main method of job searching was through friends or relatives (GBoS, 2018). This reliance on social networks for job-searching in the absence of formal employment services may lead to poor or inaccurate labour market information and poor job-matching (Mortensen & Pissarides, 1999). Furthermore, attempts to expand the job search may

[10] HCI is a cross-country comparison of the level of human capital within a country, taking into account health and educational outcomes.
[11] Expenditure on education is already low as a proportion of GDP compared with West African neighbours.

also be inhibited by the associated cost, especially for youth in rural areas facing high transportation expenses to reach employment centres.

2.2. THE EUROPEAN UNION (EU) IN THE GAMBIA

The EU has maintained a significant presence in The Gambia, focusing on various areas such as development cooperation, governance, human rights, and security, but also on promoting employment opportunities and addressing migration-related challenges.

Since the mid-2000s, the EU has supported vocational training projects aimed at equipping young Gambians with skills relevant to local job markets. Through partnerships with local institutions, such as vocational training centres and industry associations, the EU facilitated training in sectors like agriculture, tourism, and information technology. The EU also invests in entrepreneurship development initiatives, particularly in the years following the 2016 political transition in The Gambia. One of the major recent projects is the Youth Empowerment Project, which addresses the root causes of irregular migration by enhancing job opportunities and income prospects for the youth.[12] Additionally, the EU has been involved in the "Jobs, Skills and Finance for Women and Youth in The Gambia" programme, which is co-funded with the International Trade Centre (ITC).[13] Together with the Tekki project, these initiatives demonstrate that the EU is actively seeking to promote skills and entrepreneurship to help create sustainable livelihoods and build a more robust and inclusive job market in The Gambia. This evaluation is therefore particularly useful to efficiently allocate resources in future interventions with similar goals.

3. FINDINGS

Each section of the findings addresses an EQ and its respective judgement criteria (JC). The findings are supported by evidence from the indicators specified in the evaluation matrix (Appendix 5.5). C4ED also uses secondary sources from similar studies to contextualise and provide further insights. More detailed findings per JC and detailed evidence per indicator are available in Appendix 5.4.

3.1. EQ0. DID THE TEKKI FII PROJECT REACH ITS TARGETS?

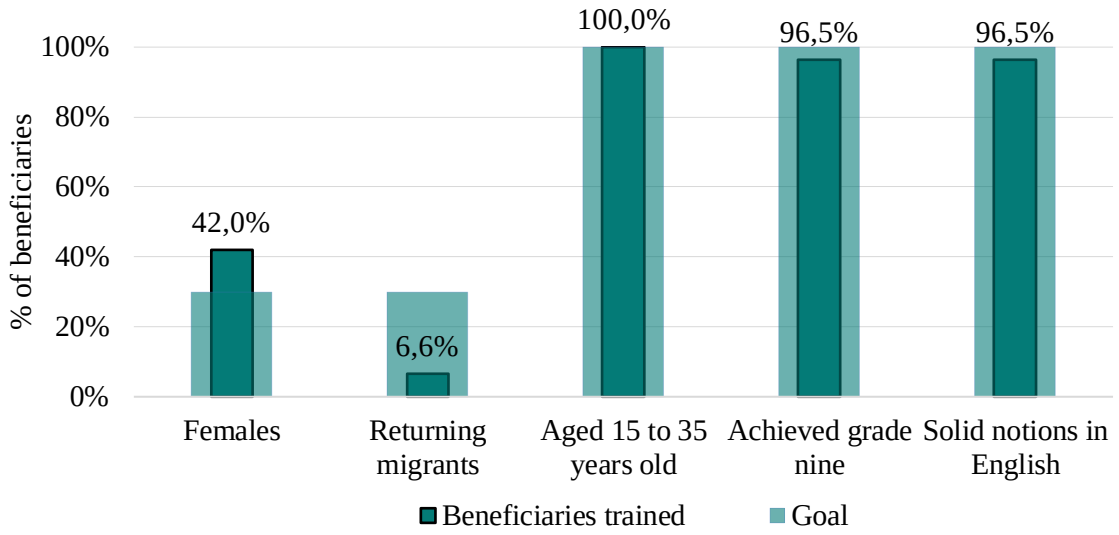
3.1.1. Did Tekki Fii train the intended number of individuals? (0.1.GMB.a)

The project aimed at training 1,300 individuals aged between 15 and 35 years old who completed grade nine, possessed solid notions of Mathematics and English. The trainings also aimed to have 30% females and 30% returnees.

Finding 1: The implementation report states that the project trained 1,277 beneficiaries (*indicator 0.1.1.)* (GIZ, 2022). Figure 3 illustrates the extent to which the goals were reached regarding the population targeted. The project was successful in enrolling and training participants within the targeted age range, education level, and English proficiency as initially planned.

[12] https://www.yep.gm/.
[13] https://intracen.org/our-work/projects/the-gambia-jobs-skills-and-finance-jsf-for-women-and-youth.

Figure 3: Goals and outputs of the project



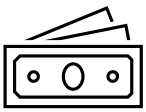
Note: [1]From the implementation report, [2] from baseline data
Source: C4ED and GIZ

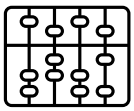
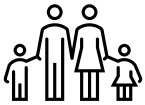
Finding 2: The share of female applicants (30%) exceeded the initial target by 12 percentage points (*indicator 0.1.2.)*. GIZ reports that this was achieved by three complementary strategies: positive discrimination in the selection process, setting key performance indicators (KPIs), and investing in "female-friendly" trades with high market relevance (GIZ, 2022).

Finding 3: On the other hand, the project did not reach the 30% returnee objective despite the efforts undertaken (*indicator 0.1.3.)*. GIZ supported a selection target for this subgroup and imposed KPIs for the different training centres. In addition, the project staff organised sensitisation activities at the district and village level through youth leaders and traditional authorities, cooperated with returnee associations, the IOM's referral mechanisms, as well as GIZ German-based networks, such as "returnee scouts" and the Ministry of Interior of Baden Württemberg (GIZ, 2022).

Qualitative interviews with GIZ, IOM, project IPs and returnee representatives shed light on barriers and drivers for the enrolment of returnees, which can help explain the underachievement of the 30% quota. Table 7 below categorises the most prominent barriers for returnees, the extent to which the project was responsive to those, and the effect this had on returnees' enrolment and retainment.

Table 3: Barriers to enrolment and retainment of returnees in Tekki Fii

Category	Barriers	Project responsiveness	Effect on project enrolment /retainment
 **Economic necessity**	○ Economic hardship and financial instability, making it difficult to cover basic living expenses or start businesses	- Lengthy training duration - Limited coverage of expenses during training - No offer of part-time training - No immediate financial support / pay-out	➢ Low project enrolment and high drop-out rate of returnees due to need/interest to pursue quick income-generation opportunities

 **Social support & re-integration**	○ Stigma and discrimination due to perceptions of failure ○ Weaker social networks, making it harder to navigate challenges and find support	- No additional community re-integration or support activities provided + Referral mechanism with IOM to raise awareness and specifically target returnees for the project + Some cooperation with returnee networks to raise awareness for the project	➢ Low project enrolment and high drop-out rate of returnees due to social/family pressure to pursue quick income generation ➢ Some returnees may be less aware of the existence of the Tekki Fii project ➢ Returnees may drop out of the training more quickly when facing adversity due to limited support networks
 **Other projects**	○ Prevalence of similar projects in the same area targeting the same catchment population ○ Existence of projects specialised in returnees ○ Returnees may have had bad prior experiences with other projects	+ Referral mechanism with IOM for coordination - No (strong) mechanisms to avoid duplication of services - Pressure by donors to prioritise returnees	➢ Project loses "competition" for returnees to others that offer quicker pay-outs ➢ Projects contribute to fostering a sense of entitlement and expectation for quick pay-out among returnees ➢ Bad experiences with other projects make some returnees mistrust the project
 **Psychological & emotional challenges**	○ Returnees may have mental health issues caused by traumatic events during migration ○ Limited support services available to respond to mental health needs ○ Perception of failure incentivises returnees to seek quick successes / pay-out	- No additional psychosocial support activities or referral mechanisms in place	➢ Mental health issues may make it harder for some returnees to enrol and remain in the project without further support ➢ Low project enrolment and drop-out of returnees due to perception of failure and pressure to succeed quickly
 **Documentation issues**	○ Returnees may not possess any identification documents ○ Process of acquiring legal documents is lengthy and costly	- Referral mostly of documented returnees through IOM - Some implementers do not accept applicants without ID - BD requires formalisation of business - No project support/ referral to help returnees acquire ID	➢ Project has mostly documented returnees enrolled ➢ Enrolled undocumented returnees cannot formalise their business
 **Other demographic variables**	• Higher age increases the need for quick income generation and decreases willingness to study/ train due to familial responsibilities and social norms • Returnees may have lower education and may have more challenges with the English language	- Returnees are exempt from the project's age limit ± Some implementers do not accept applicants below grade nine level while others do ± Some implementers/ trainings do not tailor courses to educational background and language capacities of trainees	➢ Older returnees may be less interested in attending a lengthy training project due to economic necessity and stigmatisation of "going back to school" ➢ Less educated returnees may not be accepted in the project or may struggle to keep up

Source: C4ED elaboration

3.2. EQ1. TO WHAT EXTENT DID THE TEKKI FII PROJECT CONTRIBUTE TO EMPLOYMENT, JOB CREATION, AND SKILLS?

3.2.1. What effects does the Tekki Fii project have on (decent) employment? (1.1.GMB.a)

Finding 4: Overall, the Tekki Fii project had large and positive impacts on employment six and 18 months after the end of the training, with the impacts being more pronounced in the longer term. These positive outcomes were primarily due to the combination of the BD component with the TVET. The results from the main regressions and robustness checks converge towards the same conclusions (see Appendix 5.4.2 for a detailed answer on the JC and Appendices 5.9.4 and 5.9.6 for the outputs from the regressions). On average, participating in the Tekki Fii project increases the likelihood of having a stable job by 20% (12 percentage points) eighteen months after the training, raising stable employment rates from 61% to 73% (*indicator 1.1.2*). This improvement is largely due to beneficiaries from the TVET+BD component, who are, on average, 31% more likely to have a stable job. This level of impact is larger than those reported in meta-studies on similar vocational training projects, which typically report average impacts between 2 and 6.6 percentage points (Agarwal & Mani, 2023; Card et al., 2018; McKenzie, 2017). Interestingly, impacts of this project are visible already in the short term, whereas most evaluated vocational training programmes tend to take longer before they materialise due to lock-in effects[14]. This suggests that the Tekki Fii project was well designed to help beneficiaries find work shortly after completing the trainings, although some participants required more time to find a stable job.

Finding 5: In most cases, the project helped beneficiaries to find a job by supporting the creation of IGAs. A Tekki Fii trainee is 63% more likely to be self-employed 18 months after the training than a non-beneficiary. Contrastingly, there are no significant differences for other employment statuses (*indicator 1.1.3)*. Again, the additional BD component has proven to be particularly useful. Benefitting from the TVET increases the likelihood of being self-employed by "only" 41%, with the BD component providing an additional 37% boost. Similar studies in West Africa suggest that becoming self-employed is the main path to entering the labour market (Benjamin et al., 2012; Hardy et al., 2019). The BD component is essential for launching an IGA, likely due to the provision of start-up kits that help beneficiaries overcome limited access to capital as suggested the literature (World Bank et al., 2023). Nevertheless, this specific study cannot confirm whether it is indeed due to the financial support specifically or the well-designed entrepreneurship trainings provided in BD component. Interestingly, the effectiveness of the component varies by trade. Training in traditional trades that do not rely heavily on high-tech capital and belong to newly emerging sectors,[15] seems particularly effective in promoting employment, as starting a business in these trades requires relatively low levels of capital. On the other hand, training on modern trades[16] has shown no visible impact, likely because these trades depend more heavily on the capacity of medium-to-large firms to hire the newly available labour force.

Finding 6: Beyond employment, C4ED also investigates whether the project contributed to decent employment. In this case, the results are more nuanced. The only positive (and large) impact is on the promotion of formal employment (*indicator 1.1.4*). Tekki Fii beneficiaries are 64% more likely to have a formal stable job 18 months after the training than their counterparts,

[14] Lock-in effect refers to the phenomenon where beneficiaries suspend their regular job search efforts and devote their time to programme activities, leading to worse outcomes in the immediate post-programme period.
[15] hairdressing and beauty therapy, welding and farm tools repair, block laying and concreting, tiling and plastering.
[16] satellite installation, solar technology, animal husbandry, small engine repairs.

with this share increasing from 14% to 23% thanks to the project. In summary, while the project promoted self-employment among all its beneficiaries, the additional BD component successfully highlighted the importance and advantages of registering their business.

Finding 7: However, the project has not improved other measured aspects of decent employment. Beneficiaries' hourly productivity has not increased thanks to the new skills acquired, suggesting that other factors, such as experience, are probably key to see improvements.[17] Unsurprisingly, Tekki Fii trainees are not more likely to have access to paid leave (sickness, holidays, parental leave) or to contribute to social support (medical coverage, pension) (*indicator 1.1.5)*, as these aspects typically correspond to formal wage employment, while most beneficiaries became self-employed. Furthermore, the project unintentionally increased the exposure of beneficiaries to occupational hazards, particularly among men entering the manufacturing sector, as also found by Blattman & Dercon (2016). Beneficiaries' probability of reporting an injury or work-related illness during any job increased by 26% compared to non-beneficiaries (*indicator 1.1.6)*.

3.2.2. Do graduates find work that matches the skills they learned during the training? (7.1.GMB)

Finding 8: In addition to increasing employment rates, the project helped beneficiaries find jobs within their chosen trade of interest where they had developed skills (*indicator 7.7.1.*). Eighteen months after the training, beneficiaries are also significantly more likely to find a job in the same trade they applied for (+57% - Figure 6). Similar positive results were observed six months after the training. These findings show that the training contributed to the development of sector-specific required skills (as reported by beneficiaries – see 1.5.GMB) and that the impacts on employment are not only due to the project's reputation.

3.2.3. What effects does the Tekki Fii project have on employability? (1.1.GMB.b)

Finding 9: It is unclear whether the project impacted the likelihood of unemployed individuals finding a job in the future, primarily due to challenges in measuring psychometric indicators, such as self-perceived employability (*indicator 1.1.7*)[18], and to the limited changes observed in job-search proactiveness (*indicators 1.1.8 and 1.1.9*). Despite challenges to measure self-perception of employability, results suggest that the TVET plays a key role in promoting confidence, likely technically competence requires the mastery of specific tools and methods. This said, this improvement in confidence has not translated into increased job-searching activity among beneficiaries. While the literature suggests that impacts may take longer than 18 months to materialise, there is no indication in this case that the remaining unemployed beneficiaries are more likely to find employment in the near future compared to non-beneficiaries.

3.2.4. To what extent are training facilities 'fit for purpose' in delivering skills training to Tekki Fii trainees? (1.5.GMB)

Finding 10: Answers from the beneficiaries indicate that the trainings were coherent with the project's goals. Indeed, a large share of the beneficiaries from the respective training

[17] Note, however, that all income-related outcomes are usually noisy and therefore impacts are usually more difficult to detect (see Section 1.4).
[18] Note that this indicator has a moderate reliability (see Section).

programmes gave highly positive ratings to the teaching quality, the quality of the training facilities, the adequacy of the trainings and the industrial placement to improve skills. It must be noted that this positive feedback on the trainings' quality may be biased, despite emphasis given by the enumerators to the independence of C4ED's evaluation. Nevertheless, this positive feedback is in line with the intended effects of the project.

3.3. EQ2. TO WHAT EXTENT DID THE TEKKI FII PROJECT CHANGE THE RESILIENCE AND LIVELIHOODS OF BENEFICIARIES?

3.3.1. What effects does the Tekki Fii project have on livelihood in terms of income? (2.1.GMB.a)

Finding 11: The project seems to have positively and significantly impacted income from employment. However, several elements must be considered when interpreting this finding. First, positive impacts are only visible in the long term (18 months after the training), which aligns with the understanding that it takes time for a business to become profitable (Rankin et al., 2015). Second, the positive impact is linked to beneficiaries opening a new business and mechanically generating a new income, and not due to beneficiaries finding better paying jobs or developing more profitable IGAs. Finally, these results must interpreted with caution, as income-related outcomes often suffer from measurement errors (see Section 1.4).

This said, based on the main regression, beneficiaries from the Tekki Fii project experienced an average monthly income increase of 23% 18 months after participating in the training (*indicator 2.1.2*). This corresponds to an increase of 745 GMD (around 10.11 €), moving their average monthly income from 3,196 GMD (around 43.38 €) to 3,941 GMD (around 53.49 €).[19] The project impacts exceed the average impacts found in meta-studies on entrepreneurial support (+12% in profits), suggesting that Tekki Fii corrected some key weaknesses in entrepreneurial support projects (McKenzie & Woodruff, 2023). These weaknesses include short-term trainings, typically lasting between several days and several weeks, that struggle to create automatism among its beneficiaries (ii), as well as trainings often being only classroom-based. Instead, the Tekki Fii project spanned nearly one year, allowing beneficiaries sufficient time to adopt (some of) the recommended practices. Moreover, the BD component was based on individualised coaching. The six months of the BD component appears to have contributed to beneficiaries being more likely to plan finances (*indicator 2.1.1*), even 18 months after the training. The coaching system also offered several interesting features that likely contributed to improving financial outcome. These include support tailored to the specific needs of the beneficiary (ii), beneficiaries being able to test the teacher's recommendations in a real setting (ii) and limiting the lock-in effect of long trainings (iii). However, individualised support projects tend to be more costly, which raises questions regarding the cost-effectiveness of such an approach.

3.3.2. What effects does the Tekki Fii project have on resilience? (2.1.GMB.b)

Finding 12: After investigating different measurements, the evaluation concludes that there is no clear impact on resilience. Regressions show no significant impacts on the ability to recover from shocks (*indicator 2.1.6*), self-perceived resilience (*indicator 2.1.5*) or the lowest monthly

[19] 1.00 € = 73.68 Gambian Dalasis (November 23rd, 2023).

income throughout the year (*indicator 2.1.4*).[20] The only observable impact is on the variation of income (*indicator 2.1.3*); beneficiaries experience less stable income from employment. While this could be considered a symptom of vulnerability, in this case, it results from positive income shocks from new jobs or recently established IGAs. It is expected that over the longer term, as beneficiaries transition into stable employment, income variations across the year will diminish.

3.4. EQ3. TO WHAT EXTENT WAS THE TEKKI FII PROJECT EFFICIENT?

3.4.1. Did the Tekki Fii project implement efficient practices? (3.1.GMB)

Finding 13: The process to develop the training curricula (in-depth labour market assessment, a tailored curriculum for each trade in line with international frameworks developed by ILO and validated by national experts) demonstrate a strong willingness from the project team to maximise the impacts with the available funds. To limit loss of information throughout time, the project prepared practical guidelines and handbooks for trainers as well as training of trainers. However, as impacts are not visible in modern trades, this suggests that the market assessment did not identify the specific challenges to start a business or get employed by a firm.

Finding 14: The relatively heavy selection process (pre-selection and selection round) likely contributed to limiting dropouts by identifying the most committed and suitable candidates. Also, according to GIZ, the project managed the few dropouts by enrolling candidates from the waiting list, thereby ensuring full capacity in the classes.

Finding 15: The personalised support provided by the Tekki Fii project has very likely contributed to its impacts. However, the costs of providing the start-up capital were carried by GIZ making the intervention costly in comparison to offering a loan with sustainable conditions or linking entrepreneurs with formal financial institutions. Then, as all individualised support services, they do not benefit from economies of scale, making them costly and difficult to scale up. Hence, more research is needed to test whether the personalised supports are more cost-effective than group-based approaches.

Finding 16: The project took steps to promote itself among returnees, but it did not offer services to overcome some of its ill-adapted features. These services, such as covering for transportation and accommodation costs or offering psychosocial support, would likely have been costly (see section 3.15.4.1). Therefore, there seems to be a potential trade-off between limiting the project costs achieving certain goals. It is unclear whether the solutions proposed to attract returnees would be cost-effective and more research is needed to identify the best measures.

Finding 17: The project team reports having anticipated the consequences of the state of public emergency (SoPE) due to the Covid-19 outbreak by training trainers to implement distance learning methodologies and by offering a hybrid form, combining distance learning for theory and support skills with in-person practical exercises at the training centres (*indicator 3.1.3*). These steps enabled the project to be implemented within the planned three years, thus avoiding additional payment for fixed costs over a larger period of time. Nevertheless, it remains unclear to C4ED how many resources were needed to set up these adaptation measures and whether they mitigated the consequences on the quality of the training. In addition, it is questionable

[20] Note that these indicators have a moderate reliability (see Section 1.4).

whether these implementation changes were efficient investments, given that the SoPE lasted less than six months, after which the project returned to the initial training protocols.

Finding 18: GIZ designed and used different tools to assess its relevance, effectiveness and efficiency.[21] It is difficult to evaluate to what extent feedback was considered and activities adapted accordingly. However, the early feedback and regular coordination took place in the early stages of the project, allowing the team to mitigate potential shortcomings. The later initiatives (the participatory mid-term review that took place during the SoPE, Lesson the Learning Tour, and the Final Job Survey, which took place during the last year of the project), however, could probably not be used to adapt project implementation. Finally, performing several surveys with a similar purpose appears to be inefficient, as it does not allow to benefit from economies of scale on the resources allocated to training of staff, data cleaning, data analysis and reporting.

3.5. EQ5. HOW DID THE TEKKI FII PROJECT INCLUDE AND PROMOTE DIFFERENT VULNERABLE GROUPS?[22]

3.5.1. What are the differentiated outcomes of the interventions across gender? (5.1.GMB.a)

In this section, C4ED presents the key different impacts across males and females. A detailed description of the main differences between the two differences that might explain gender-specific impacts as well as a more comprehensive narrative of the results are available in Appendix 5.4.5.

Finding 19: The project had positive impacts on stable employment (*indicator 1.1.2*) on both genders though impacts are larger among females (+43% on females versus 13% on males) and therefore contributed to reducing the differences in males' and females' employment rates among beneficiaries to seven percentage points difference, mainly thanks to the additional BD component in combination with the TVET. As demonstrated in other studies, larger impacts on females are often due to a convergence mechanism as males were more likely to have a job before the project (Card et al., 2018; Stöterau et al., 2022).

Finding 20: Interestingly, both females and males are more likely to be self-employed (+72% for females and +61% for males - *indicator 1.1.3*), again driven by the additional BD component. While females are particularly exposed to limited capital to open IGAs in the sub-Saharan context, it appears that the design of the BD was particularly effective in overcoming financial barriers. Note that females are also more likely to work as apprentices thanks to the project.

Finding 21: Despite the positive impacts on employment on both genders, the impacts on decent employment deserve to be nuanced. Males have reached better working conditions than females regarding employment stability and income. However, males are also more exposed to job hazards because of the project.

[21] Ongoing beneficiary surveys, feedback from IPs, trainees and coaches, Quarterly Implementing Partner Platform Sessions, Participatory mid-term review, Lesson Learning Tour and the Final Job Survey.

[22] "EQ 4. What other intended and unintended outcomes (e.g. mobility, migration, migration intentions, employment policies and reforms) did EUTF interventions contribute to?" is not applicable to this impact evalution.

The project has led to an increase in females becoming self-employed and apprentices. For those who opened an IGA, most of them are own-account workers (i.e. do not have employees) suggesting that they own smaller businesses than males. Eighteen months after the project, males are more likely to be at the head of well-anchored businesses with, on average, three times more workers than female-owned IGAs. For those in apprenticeship 18 months after the training, it is likely that they kept their position from the industrial placement, as found in a similar study in Côte d'Ivoire (Crépon & Premand, 2019). Females' new positions as apprentices are often considered vulnerable employment as they usually receive lower payments than other types of workers and are, in most cases, informal and limited working agreements.

Regarding income (*indicator 2.1.2*), positive impacts can only be confirmed among males who have seen an increase of 27%, thanks to the project (raising their income from 3,763 GMB to 4,851 GMB – from 51.1 € to 65.8 €). By improving income from employment for males only, the project has increased the gender pay gap as males earn almost twice as much (+98%) than females after benefitting from the trainings, whereas they earn "only" 55% more in the absence of the project. The absence of impacts among females implies that, although they are more likely to work, they do not necessarily generate more income for several reasons. For those who became apprentices, it is likely that their income is particularly small. This is also in line with the fact that females in employment work significantly less hours than males. Those who became entrepreneurs, despite the financial support from the project, probably have less investment capacity than their male counterparts. The returns on initial small investments (setting up the business, gaining market shares, etc.) probably need more time to materialise than larger investments.

In turn, the project has increased males' likelihood of facing occupational hazards by 25% (increasing the share from 49% to 61% - *indicator 1.1.7*). Among females, no impacts on job hazards can be detected; a gender difference is probably due to males being more likely to work in the manufacturing sector than females.

3.5.2. What are the differentiated outcomes of the interventions across returnee status? (5.1.GMB.)

Finding 22: This evaluation cannot provide clear findings on the specific impacts of the project on returnees. The first reason is due to the few returnees in the sample creating issues in the regressions (see Section 1.4). The second is due to returnees being in most cases males making it difficult to disentangle whether the impacts are due to gender dynamics or to their returnee status. Hence, the few relevant findings presented below must be considered more as an exploration of the potential effects on returnees and non-returnees. The results of the impact estimates on non-returnees are presented in Table 33 to Table 40.

Overall, results suggest that impacts have been positive on employment for both populations but have been particularly large among returnees (*indicator 1.1.2*). The project helped both populations to find jobs as apprentices and self-employed (*indicator 1.1.3*) though returnees appear to have faced more difficulties to formalise their business because of a lack of documentation (ID card) and access to formal financial services (bank account). Nevertheless, it seems that these challenges have not affected their capacity to increase their income from employment (*indicator 2.1.2*). Regarding job injury or illness (*indicator 1.1.7*), hourly productivity (*indicator 1.1.6*),[23] and job match with the trade applied for (*indicator 7.1.1*),

[23] Note that this indicator has a moderate reliability (see Section 1.4).

magnitudes and effect sizes are similar between the overall sample and the non-returnees suggesting that the project affected the returnees similarly.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1. CONCLUSIONS

The following conclusions are organised following the DAC criteria. They build on the findings detailed in Section 3 and in Appendix 5.4.

4.1.1. Effectiveness

C4ED assesses effectiveness using the final implementation report and the available data from the registration process. The project did not have a centralised monitoring database that C4ED could use for this purpose. However, it uses qualitative findings from KIIs to understand the difficulties of enrolling and train returnees.

Conclusion 1: The project almost reached its intended number of beneficiaries, though failed in enrolling returnees.

This conclusion is based on EQ0

The project almost reached its target of 1,300 beneficiaries, with 1,277 individuals participating in the TVET training, of whom approximately 356 have received the BD component, according to the implementation report (Finding 1). C4ED concludes that the adherence to the selection criteria contributed to the project's outputs and even contributed to overachieving the share of targeted females in the trainings (42% against a target of 30%) (Finding 2). However, **the share of returnees remained significantly below the target (6.6% against a target of 30%)** (Finding 3). Based on qualitative findings, the target was missed primarily because of returnees' lack of interest in the project, which did not address immediate income generation needs but was designed to match longer-term training needs.

4.1.2. Impact

The study measured the project's impacts six and 18 months after the training based on a quasi-experimental CIE design (IPWRA), using baseline, midline and endline data on a sample of 1,329 youths. The CIE design accounted for initial measurable differences between Tekki Fii beneficiaries and rejected applicants, allowing for a rigorous comparison of the different groups. However, as with all matching approaches, it cannot account for unobservable differences. In this case, the risk is that beneficiaries selected for the TVET or the TVET+BD component demonstrated intrinsic motivation that the study did not manage to capture entirely. Hence, there remains a risk that impacts attributed to the project may be related to unobserved differences. Another important aspect to consider when interpreting the conclusions is that the evaluation was not designed to disentangle the specific impacts of the different supports provided in the BD component such as the financial support and the different entrepreneur trainings. Instead, the BD component is investigated by the CIE as a bundle of support services though the literature and the employment trajectories of the beneficiaries (self-employment) stress the importance of the financial support.

Conclusion 2: The project had large and positive impacts on stable employment

This conclusion is based on EQ1

The Tekki Fii project increased by 20% the likelihood of beneficiaries' having a stable job 18 months after the training. As for most outcomes investigated in this study, the impacts are larger for the beneficiaries of the TVET+BD component, demonstrating the importance of the BD component and their complementarity with technical skills in the Gambian context. With an average impact on employment of 12 percentage points 18 months after the training, the overall impacts on employment are larger than the average effects measured in meta-studies on similar projects (Finding 4). This conclusion confirms that the project reached its objective of improving the employability of the Gambians (SO.1.1).

Conclusion 3: Employment often materialised by opening an IGA in traditional trades

This conclusion is based on EQ1

In most cases, beneficiaries who found employment, did it by opening an IGA in traditional trades, though females also found jobs as apprentices. As explained in other studies on vocational trainings, this may be attributed to the lack of opportunities in existing firms (i.e. weak private sector), because there is demand for goods and services that remain unmet, even in traditional trades, and the social value of self-employment. From this perspective, C4ED assumes that the BD component was particularly useful by providing financial support to set up an IGA, as it directly addressed the most common barrier to entrepreneurship (entrepreneurship skill and access to capital). This confirms that the project improved the business environment for its beneficiaries by removing obstacles to MSME creation and growth (SO.1.2)

The impacts of the modern trades' training appear to be more limited. C4ED assumes that this is because starting a business in these trades requires larger amounts of capital and the private sector is still too weak to absorb the newly available labour force (Finding 5). This stresses the limitations regarding the project's objective of promoting employment in the sector of renewable energies (SO.1.1 and SO.1.2).

Conclusion 4: The impacts of the project on decent employment are more nuanced and depend on the gender.

This conclusion is based on EQ1 and EQ5

The concept of decent employment is multifaced and the impacts of the project on the different dimensions depend on the gender (Finding 20, Finding 21):

a. **The project contributed to females' employment but they still have relatively vulnerable jobs even 18 months after the training**. Females found low-paid jobs principally as own-account workers or apprentices thanks to the project. Ultimately, despite promoting female employment, it did not improve their income, on average.
b. **The project contributed to male beneficiaries securing positions at the head of well-anchored and profitable businesses** and therefore increasing the gender pay gap. It is important to mention that the impacts on males' income is due to them finding employment and not because beneficiaries

already in employment before the project improved their income. However, as they found jobs in manufacturing trades, they are significantly more exposed to occupational hazards.

c. **For both genders the project has contributed to the registration of the newly created IGAs**. By promoting the formalisation of IGAs, it might improve access to financial and public services.

Conclusion 5: The project improved the perception of employability

This conclusion is based on EQ1

For those who did not find a stable job, the Tekki Fii project increased the beneficiaries' feeling of being more employable 18 months after the training, a positive impact driven by the improvement of the perception among females. Nevertheless, it does not seem to increase proactiveness in searching for a job (Finding 9).

4.1.3. Relevance

The study investigates relevance through two different channels. First, it uses descriptive statistics on the beneficiaries' feedback to assess whether the training received is fit for the purpose of developing relevant market-related skills. Second, C4ED uses the quasi-experimental approach to quantify whether the employment found after the training is related to the skills learned.

Conclusion 6: Beneficiaries perceive the project as fit-for-purpose

This conclusion is based on EQ1

Beneficiaries perceived the project positively, indicating that it was adequate for delivering training and aligned with its intended purpose. The positive ratings on various dimensions, including teaching quality, training centre facilities, skill development, and industrial placement, support the conclusion that the project was useful in promoting employment (Finding 10). Though this is in line with the positive impacts on employment, it is common that feedback on project implementation is positively biased as beneficiaries might want to reciprocate the support or services received.

Conclusion 7: The curricula was well designed to promote employment in traditional trades

This conclusion is based on EQ3

Probably thanks to the in-depth assessment to identify the trades in high market demand and their respective training needs (industrial practices, subject-specific support, soft skills, counselling…) by key experts ensured that the trainings provided reached the intended goal of promoting employment overall. This has led to the provision of hybrid learning formats including technical training, career guidance and counselling, motivational speakers, industrial placement with partner firms, and the NAQAA certifications. Similarly, the BD component seems to engage with beneficiaries to overcome the well-known barriers to entrepreneurship in the sub-Saharan context.

However, either the identification of the modern trades or the conception of the modern trades' trainings does not seem to have benefitted its beneficiaries suggesting that concrete needs for these trades require further investigation.

Conclusion 8: The project helped beneficiaries to work in their trade of interest

This conclusion is based on EQ1

A beneficiary is almost 52% more likely to find a job in the trade they applied for than a non-beneficiary 18 months after the training. C4ED assumes that beneficiaries benefitted from the reputation of the Tekki Fii project, and the development of relevant technical skills during the TVET to find a job in the same trade they applied for (Finding 8).

4.1.4. Efficiency

As no financial data were available to identify the costs incurred to implement the activities evaluated, C4ED cannot draw conclusions on the cost-efficiency and cost-effectiveness as initially planned. Instead, C4ED could only use GIZ's implementation reports and its own primary data to identify potential (in)efficient practices. As the primary data was not intended to investigate efficiency, the analysis assumes levels of efficiency by comparing activities undertaken with outputs and outcomes.

Conclusion 9: The project faced few dropouts

This conclusion is based on EQ0 and EQ3

The project faced few dropouts, according to GIZ staff, which is unusual for a vocational training in a low- or middle-income country (McKenzie & Woodruff, 2014). Though there is no concrete data to quantify dropouts in Tekki Fii, the project team confirmed that the selection process was designed to anticipate the risk of beneficiaries leaving the training. For the few that dropped out, the project team also mentioned that candidates from the waiting list were contacted. Hence, classes worked at (almost) full capacity (Finding 1).

Conclusion 10: Efficient use of resources only when invested in traditional trades

This conclusion is based on EQ1 and EQ3

Resources invested in traditional trades training contributed to promote employment. However, they have not contributed for trainees' employment in modern trades and the large impacts on beneficiaries probably came at large costs due to the provision of start-up capital and the individualised support (Finding 14, Finding 15).

Conclusion 11: The project demonstrated willingness to overcome shortcomings and adaptability

This conclusion is based on EQ3

The tools rolled out in the early stages of the project gave the possibility to adapt the project if needed, though C4ED cannot confirm whether steps were taken to improve the implementation (Finding 18). This said, the project team did adapt the training activities to ensure that training could take place despite the restrictions during the SoPE during the Covid-19 outbreak (Finding 19).

4.2. RECOMMENDATIONS

The following recommendations are tailored to address specific findings and conclusions from the evaluation, with a focus on promoting effectiveness, impact, inclusivity, and sustainability in future vocational trainings and entrepreneurial support projects as well as their evaluations in similar contexts. It must be noted that C4ED is not aware of all stakeholders' mandates, plans, and agendas therefore limiting its capacity to provide more actionable recommendations if the EQs do not cover stakeholder-specific challenges.

Recommendation 1: Adjust target setting and implementation modalities to be more realistic and responsive to returnees' needs	
Priority: High	
Linked to conclusion 1	
Relevant stakeholders	*Specific recommendations*
- TVET and BD component implementing partners[24] - Project managers working on migrant and returnee empowerment projects	Revisit the target-setting process. While aiming for a 30% participation rate may have seemed ambitious and was not informed by benchmarks from similar projects, the mismatch between the project's focus on longer-term training needs and returnees' immediate income generation requirements suggests a need for more realistic targets. Make the project more appealing to returnees by offering shorter or part-time training options and providing psychosocial support. Increase awareness and mobilisation among returning migrants by leveraging migrant networks, collaborating and engaging local authorities. This approach can particularly help in reaching unregistered migrants. Hire returning migrants as project staff, trainers, or facilitators to better understand and address the needs of returnees. Their involvement can encourage returnees to communicate openly about their challenges.

[24]See complete list in Table 1 and Table 2.

	Coordinate efforts with the IOM and other organisations targeting registered returning migrants to avoid duplicated efforts and competition, ensuring a more streamlined support system for returnees. Offer or link with additional activities that aid the reintegration of returnees, including psychosocial support and social integration initiatives. This can enhance their overall well-being and reduce dropout rates by addressing both economic and psychosocial needs. Lower opportunity costs for returnee participation by providing cash stipends, covering transportation and accommodation expenses, and offering flexible training schedules. Consider community-based training and linkages with immediate income generation opportunities like Cash for Work projects. Clearly communicate and streamline the suspension of certain eligibility criteria (e.g., age, education level) for vulnerable groups like returnees. Ensure project activities are adapted to match the diverse capacities of participants, promoting inclusive and meaningful participation.
Institutions in relation with returnees (IOM, returnee scouts, Ministry of Interior of Baden Württemberg)	Actively coordinate with projects seeking to empower returnees and provide advice on specific needs of the latter to ensure the relevance of the projects. Refer returnees to relevant projects.
The Regional Authorities	Actively coordinate with projects to increase awareness and mobilisation among returning migrants. This approach can particularly help in reaching unregistered returnees.

Recommendation 2: Adapt support to the trades' characteristics	
Priority: High	
Linked to conclusion 3	
Relevant stakeholders	*Specific recommendations*
- TVET and BD component implementing partners - Project managers working on employment promotion projects - Ministry of Higher Education, Research, Science and Technology (MOHERST) - NAQAA	The TVET+BD provided by Tekki Fii was particularly successful for beneficiaries trained in traditional trades (i.e. businesses which require limited capital and conventionally use *low-tech* tools). Future projects promoting skills in trades where the most likely outcome is to start an IGA should provide similar trainings. For trades where starting a business is less accessible, it is recommended to also assess the capacity of the private sector to hire the beneficiaries and develop a strong partnership. If the private sector of a specific trade is identified as having strong potential but still too weak to hire newly trained staff, consider complementary

- Ministry of Basic and Secondary Education (MOBSE)	interventions to help firms overcome the challenges to innovate and grow.

Recommendation 3: Strengthen support for female entrepreneurs	
Priority: High	
Linked to conclusion 4	
Relevant stakeholders	*Specific recommendations*
- TVET and BD component implementing partners - Project managers working on gender equality, women empowerment and employment promotion projects - Ministry of Higher Education, Research, Science and Technology (MOHERST) - NAQAA - Ministry of Basic and Secondary Education (MOBSE) - Ministry of Women, Children and Social Welfare	Despite contributing to female employment, the project's impact on their income remains limited. To address this, prioritise support measures tailored to the specific needs and challenges faced by female entrepreneurs. Explore initiatives to enhance access to financial resources, business networks, and mentorship opportunities, thereby fostering the growth and sustainability of female-led businesses. Supplementary social behaviour change communication aimed to challenge underlying cultural norms and practices, could trigger gender transformative change in other contexts, which is often a prerequisite to increase female labour participation.

Recommendation 4: Promote safety and health	
Priority: Medium	
Linked to conclusion 4	
Relevant stakeholders	*Specific recommendations*
- TVET and BD component implementing partners - Project managers working on gender equality, women empowerment and employment promotion projects - Ministry of Higher Education, Research, Science and Technology (MOHERST) - NAQAA - Ministry of Basic and Secondary Education (MOBSE)	Promoting male employment in the manufacturing sector increased their exposure to job injuries and sickness. Future training projects should include occupational safety and health promotion modules to promote the well-being of participants and prevent potential health risks.

Recommendation 5: Monitor and develop response mechanisms for dropout prevention	
Priority: High	
Linked to conclusion 1	
Relevant stakeholders	*Specific recommendations*
- TVET and BD component implementing partners - Project managers working on TVET - Ministry of Higher Education, Research, Science and Technology (MOHERST) - NAQAA - Ministry of Basic and Secondary Education (MOBSE)	The project experienced few dropouts and used proactive measures to deal with those who left the trainings by engaging candidates from the waiting list and ensuring timely replacements for any dropouts. However, it is recommended to set up a centralised monitoring system to promptly detect signs of disengagement and implement responsive interventions to support beneficiaries at risk of dropping out. Introducing formal beneficiary feedback and response mechanisms can further help to connect with project participants and learn from their experience. This way activities can be adjusted in a timely manner throughout the project implementation and when needed.

4.3. LESSONS LEARNT

The lessons outlined below are derived from the quantitative and qualitative findings and the evaluation itself. They are organised under broad thematic areas that should be considered in the future programmatic decision-making of active labour market projects. Additionally, some lessons learned are not accompanied by any recommendation if they are positive and useful for future project design and implementation.

4.3.1. Designing and implementing successful TVET projects

The following lesson can be drawn for the design and implementation of TVET projects based on the evaluation of Tekki Fii:

- **Provision of a multitude of interlinking services can lead to positive employment outcomes for beneficiaries.** Considering the positive outcomes on new jobs Tekki Fii with its bundle of services (provision of technical skills, career guidance and counselling, motivational speakers, industrial placement with partner firms, and the NAQAA certifications) can be considered a good practice model whose design is worth to consider for replication in similar contexts. When combining such services with the entrepreneurial support provided by Tekki Fii (in-classroom training, six months coaching and provision of start-up kits) is likely to increase the impact.
- **Adapting support to trade matters.** As the evaluation findings show, traditional trades benefited significantly from the TVET+BD model, highlighting the importance of tailored training. However, Tekki Fii also demonstrated its limits for the project's financial support of certain trades. For trades requiring higher capital investment, economic empowerment projects should consider the private sector's capacity to hire beneficiaries and forming strong partnerships is crucial.
- While Tekki Fii successfully promoted female employment, the impact on their income was limited. This suggests that the project was not able to **tailor activities to the needs**

and capacities of females, in the same way it did for men, or that activities were not sufficient for women to **overcome environmental barriers**. Identifying gender-specific needs is a crucial first step in project planning, so that projects can address specific challenges faced by female entrepreneurs, e.g. by enhancing access to financial resources, business networks, and mentorship, is essential for their business growth and sustainability. In addition, supplementary project activities may be necessary that target social behaviour change with respect to gendered norms and practices in the project catchment areas in order to promote equal opportunities and equitable project impacts. Findings from Tekki Fii demonstrate that **by increasing employment, TVET projects may inadvertently contribute to increasing project beneficiaries' exposure to occupational hazards.** To avoid "doing harm" TVET projects should explore the risk of such unintended negative effects during project planning and include mitigation measures such as providing mandatory trainings for occupational safety and security for specific sectors, and conducting advocacy activities towards the government and the private sector to hold them accountable for ensuring the safety and security of their own population / employees.

4.3.2. Tailoring vocational training projects to returnees' needs

The project demonstrated good practices for enrolling training participants with different needs and capacities of females and males. However, it could not reach its targets for enrolment of returnees. Qualitative interviews indicated that project activities did not always respond to the needs and capacities of returnees. Economic empowerment projects that aim to be inclusive of returnees should consider the following:

- **Setting ambitious targets for returnees without considering their immediate needs can lead to underachievement.** Future projects should set realistic targets based on comparable benchmarks. and diverse beneficiary needs. Additionally, a number of steps can be taken to better target returnees and tailor activities to their needs.
- **Increasing outreach and community participation during project planning and implementation** (including tapping into migrant networks and collaborating more with training centres and local authorities) may increase awareness and mobilisation among returning migrants (especially unregistered migrants) in the project's catchment area.
- **Recruiting returning migrants as project staff** and trainers/facilitators can help identify the needs of returnees and better tailor activities to match those needs. It may also help returnees open up and speak out on challenges encountered within the project.
- **Increasing coordination and collaboration efforts with IOM** and other organisations that target (registered) returning migrants may avoid duplicating efforts and competition among organisations to serve returning migrants simultaneously.
- **Providing or linking with additional activities that support the reintegration of returning migrants** may help to respond comprehensively to their needs. Psychosocial support and social integration play a major role in the successful reintegration of returnees, and a lack of support in those fields can undermine efforts of economic reintegration. Providing psychosocial support (e.g., via project social workers) or improving resilience and emotional well-being (e.g., via life skills training) can potentially reduce the number of dropouts and help returnees and other project participants improve their successful and adaptive functioning in various aspects of life. Investing in community-level interventions for individual reintegration may further reduce sociocultural pressures on returnees towards quick income generation and help prevent conflict between returnees and host communities.

- **Adapting project activities to reduce (opportunity) costs for participation** can help raise the interest and, ultimately, participation of returnees in the project. Options to consider can include paying out (higher) cash stipends, covering the cost of transportation and accommodation, or conducting outreach via community-based training. Furthermore, providing flexible training schedules, part-time training options, and linkages with other immediate income generation opportunities (e.g., Cash for Work projects or paid apprenticeship programmes) that enable returnees to combine long-term training and immediate IGAs could also encourage participation.
- **Streamlining and clearly communicating with project partners priority enrolment for vulnerable groups**, such as returnees, can help increase the number of eligible project applicants. However, in case returnees can bypass certain eligibility criteria project implementers must carefully review and adapt activities to match the different capacities (e.g. education and language) and ensure meaningful participation of various project participants.

4.3.3. Beneficiary retention and managing dropouts

The project also seemed to perform well in retaining project participants, although robust evidence to confirm high retention rates could not be obtained due to lack of monitoring. Future TVET projects may consider the following to increase beneficiary retention and manage dropouts efficiently.

- **Setting up structured interviews to assess the motivation and capacity of the candidates** to undertake the training can limit dropouts and, therefore, reduce inefficiencies during the training.
- **Building a waiting list of eligible candidates** to replace dropouts in the early stage of the training can improve the likelihood that classes function at full capacity. It must be noted, however, that this practice should be done in close collaboration with the evaluation team, as the waitlisted candidates might be used for the evaluation activities (i.e. used as a comparison group for the impact evaluation).

4.3.4. Monitoring and evaluating project performance

Based on the experience of this evaluation, the following lessons can be draft for the monitoring and evaluation of similar future projects:

- **Planning the impact evaluation of the project before the project activities start** will improve the quality of the evaluations' results, especially when evaluations plan to employ (quasi-) experimental methods. In this study, the comparison group represents a group of candidates that have not been selected for specific reasons and, therefore, are inherently different from the selected candidates, raising challenges for assessing impacts. If efficiency is supposed to be assessed through calculating cost-benefit ratios, there is a need to align financial reporting for the donor to the needs of the evaluators and ensure it is available to the latter. The feasibility of this approach should be assessed during the evaluation's inception and, if deemed unfeasible, alternative approaches to measure efficiency (e.g. Multi-Attribute-Decision-Making, Comparative Ratings) should be explored and budgeted.
- **Collecting comprehensive baseline data on future beneficiaries and non-beneficiaries** allows for a more robust impact evaluation design. The data collected by the project was essential to the evaluation. However, the extent to which it could be used in the weighting procedure and estimations of the project's impacts was limited.

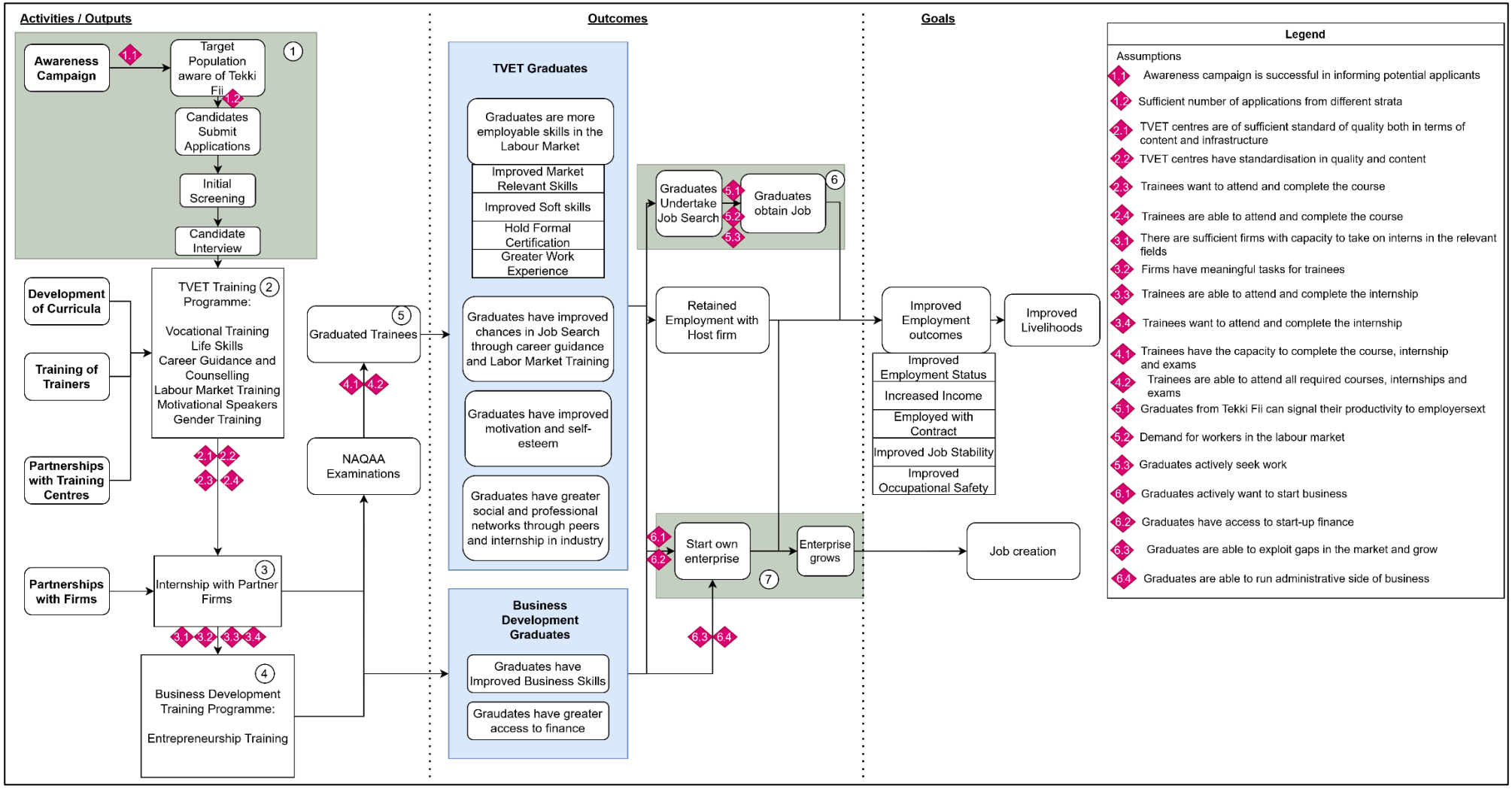
- **Adopting a centralised digital monitoring system, with unique identification numbers for each beneficiary** is useful to monitor project activities and attendance of trainings. Based on the information available on the beneficiary applications, introducing and consistently maintaining a unique beneficiary identifier in different processes and associated documents will provide a clearer picture of project participation.
- **Employing a mixed-method evaluation design** that allows for the collection and analysis of qualitative data can ensure that evidence is generated beyond the confirmation and quantification of project impacts. Lessons learned on "how" and "why" change occurs are particularly relevant when (quasi-) experimental findings show that intended effects and impacts have not materialised. Qualitative evaluation methods should be considered particularly in complex environments where multiple factors interact in intricate ways (e.g. factors influencing migration behaviour) and where it is unreasonable to assume that change can be attributed to project activities alone.
- **Employment impacts take time to materialise, often beyond immediate post-training periods**. Collecting data at least 18 months post-training can capture the full impacts of vocational training projects, providing a more comprehensive understanding of their impacts and whether it can be sustained.

5. APPENDICES

5.1. INTERVENTION LOGIC

C4ED developed for the project with the support of GIZ HQ and GIZ-The Gambia country office during the initial scoping mission. By outlining the causal pathway, the evaluation moved away from a 'black box' strategy (i.e. simply whether the inputs have led to an impact on the desired outcomes) and was in a better position to test how and whether the project could reach its goals (White, 2009).

Figure 4: Theory of Change



Source: C4ED elaboration

Table 4: Trades and IPs

TVET IPs (training centres)	Trades								
	Garment making	Hairdressing and beauty therapy	Satellite installation	Solar technology	Small engine repairs	Welding and farm tools repair	Block laying and concreting	Tiling and plastering	Animal husbandry
Insigh Training Centre	✓		✓	✓			✓	✓	
Gambia Telecommunication and Multimedia Institute			✓	✓					
Vicky's Skills Training Centre		✓							
Ida's Idea Fashion & Design Institute	✓								
Chamen Training Institute			✓	✓					
Sterling Consortium			✓	✓					
Chigambas	✓					✓			
Girls Guides		✓							✓
Boys Scouts	✓				✓		✓		

Note: The evaluation does not cover beneficiaries from the IP "President International Award".
Source: GIZ (2022)

Table 5: BD component IPs and packages offered

BD component IPs	Packages offered
GCCI	• Entrepreneurship training • Market-Linkage (Trade Fair) • Start-up kits
GIEPA	• Entrepreneurship training • Business advisory services • Start-up kits
Tostan	• Agropreneurship training

	• Business advisory services • Start-up kits
NEDI	• Agropreneurship training • Business advisory services • Apprenticeship Scheme • Start-up kits
Kura's Garden	• Apprenticeship Scheme • Start-up kits
TAD	• Apprenticeship Scheme • Start-up kits
SIG	• Entrepreneurship training • Business advisory services • Start-up kits
GYCC	• Youth business and Tourim expo
GYIN	• Business advisory services • Outgrowers' scheme
NACCUG	• Mini grants • Solar grants
National Youth Council	• Support to community farms • Solar centre

Source: GIZ (2022)

Table 6: Institutional partners and respective roles

Institution	Role
Ministry of Finance and Economic Affairs (MoFEA)	Oversight and coordination role as Chair of the Tekki Fii Program's Steering Committee
Ministry of Higher Education, Research, Science and Technology (MOHERST)	The Project actively participated in the National TVET Coordination Committee and the Entrepreneurship Core Team spearheaded by this Ministry and ensured full alignment with and ongoing contribution to the TVET Roadmap elaborated by MoHERST with support from ITC as well as to the newly developed TVET Policy 2021-2030
National Accreditation and Quality Assurance Authority (NAQAA)	The Authority played a significant role in the development and accreditation of the TVET and apprenticeship curricula developed by the Project, besides ensuring the assessment and certification of all the TVET beneficiaries;

Ministry of Basic and Secondary Education (MOBSE)	The TVET component engaged MoBSE as a partner for the delivery, examination and certification of the Literacy and Numeracy component of the Apprenticeship training. The GIZ Tekki Fii Project also supported the Ministry to develop a mainstreaming strategy for TVET in primary, secondary and open-schooling education;
Ministry of Trade, Industry, Regional Integration and Employment (MOTIE)	The Project was aligned to and actively participated in the Private Sector Development Platform coordinated by the Trade Ministry:
Ministry of Youth and Sports	The Ministry played a pivotal role through its National Youth Council (NYC) in spearheading Project outreach missions, sensitizations programs, identification and selection of beneficiaries for the various Project interventions. the Regional offices in LRR and URR played key roles in disseminating information about the Project.
Ministry of Agriculture	The Project cooperated intensely with the Agribusiness and Agro-Engineering Departments of the Ministry in relation to its agroprocessing units and its outgrowers' scheme, also with a view to ensuring continuous technical support to the beneficiaries of these two interventions beyond the Project duration.
Ministry of Women, Children and Social Welfare	The Project embarked on cross-cutting gender trainings both in favor of all its TVET trainers and trainees, as well as all its IP managers. the training modules were designed and conducted in close cooperation with a Ministry representative who also trained focal persons in each training center.
The Regional Authorities in LRR and URR	The Project benefited considerably from the Governor's Offices, the Area Councils and the Youth Councils in these two regions in terms of general guidance and coordination amongst development stakeholders, as well as in supporting the Project to sensitize the youth to the various interventions, to select community farms and to set up the activities, besides ensuring a smooth implementation. In URR, moreover, the regional authorities played a significant role in setting up the Solar Center (see below), and in LRR they joined the Board of Directors linked to the Soma Boy Scouts and Girl Guides Training Centers to ensure ongoing oversight and support.
IOM, returnee scouts, Ministry of Interior of Baden Württemberg	Support access to returnee referral platform

Source: GIZ (2022)

5.2. EVALUATION METHODOLOGY

5.2.1. Explanation of the methodology

The quantitative methodology of the evaluation did not change significantly since the design phase. The measurement of the impacts is based on a weighting approach that we describe below.

The weighting approach and key assumptions

The weighting approach follows a similar idea to matching. Instead of explicitly matching beneficiaries to non-beneficiaries, weighting consists of allocating more weight to observations that are similar to each other in observable characteristics to measure the effects of an intervention. In this case, C4ED compares Tekki Fii beneficiaries to non-selected or different beneficiaries to measure the effects of the project on the outcomes of interest detailed in the evaluation matrix (Appendix 5.5).

Intuitively, two observations, one from the beneficiary group and one from the comparison group, with exactly the same characteristics would be compared. However, as the selection of the project and the outcomes of interest depend on many factors, finding an exact match can be challenging. Hence, instead, the approach uses each observation's probability of being selected, referred to as propensity scores. These scores range from zero to one and are calculated for each observation using variables that are expected to both influence the selection into the project and the outcomes of interest. Then, when using IPWRA, the weighting makes use of the estimated propensity scores and consists of assigning more weight to comparison youths more likely to have received the intervention, and less weight to those less likely to have received the project. When comparing treatment and comparison observations in the weighted sample, one has to assume that the selection into the project is random, and therefore, any difference in the outcomes of interest can be attributed to the participation in the Tekki Fii project.

As for any matching procedure, the weighting approach relies on two key assumptions:

- **Conditional independence**: The first assumption relates to the ability to account for all variables that determine the probability of being a beneficiary of the project and that are also associated with the outcomes of interest. It means that, conditional on these variables, the probability of being a beneficiary of the project is not correlated with the potential outcomes. In practice, including all the determining variables may be impractical. It is important to note that the plausibility that this assumption holds is limited by the knowledge of the selection process, and the factors that are observed and used in the estimation of the propensity scores. This CIE takes advantage of clear selection criteria, reflected by the interview scores, to overcome this limitation.
- **Common support** refers to the extent of overlap in the distributions of matching variables between the treatment and comparison group. If individuals from a group are too different from each other, then there is no valid comparison group. Matching or weighting approaches then risk estimating biased results as they would compare observations deemed too different from each other and hence, differences in the outcomes of interest would not be attributable to the project. To meet this assumption, this CIE analysed the extent of this overlap and dropped observations lying outside of the common support.

Empirical estimation

C4ED followed a two-step procedure to estimate the Average Treatment effects on the Treated (ATT), which refers to the average difference in the outcome of interest if everyone in the treated group received treatment (observable) compared with their potential outcome, that is the outcome they would have obtained in the absence of the project, on the different outcomes. First, C4ED estimated the propensity scores to obtain the inverse probability weights and then the ATT by estimating the outcome model incorporating the weights.

The likelihood of being treated is a summary of all measured pre-treatment characteristics that could affect the selection into the project and the outcome of interest. Treatment and comparison individuals with similar propensity scores have, on average, similar or comparable pre-treatment observable characteristics. To estimate the propensity scores, C4ED used baseline data from the application phase and data collected retrospectively during the follow-up surveys.

The choice of relevant pre-treatment characteristics was driven by the project's selection criteria. However, when accounting for higher-order terms of the covariates and interaction terms, finding the "best" specification (i.e., the one that leads to the best balance between the distributions of covariates in the treatment and comparison groups) can become a complex and time-consuming exercise. Rather than manually going back and forth between (i) the propensity score specification, and (ii) balance tests, C4ED followed the automated procedure developed by Imbens & Rubins (2015). This procedure tests the balancing properties of a preselected set of variables but also their second-order interactions. Nevertheless, this method, although automated, becomes more cumbersome as the number of variables increases since it tests all possible interactions. To circumvent the complexity of this step, C4ED integrated some preliminary steps:

1. Identified the core matching variables: variables that we know are important for the selection into the treatment and the outcomes of interest. These variables were automatically selected to be part of the propensity score model. The latter include:
    - Age
    - Gender
    - Returnee status
    - Level of education
    - Level of English
2. Identified secondary matching variables: variables that are potentially correlated to the treatment and the outcomes of interest. Given the high number of variables, the variables were first divided into:
    - Household characteristics:
        - Marital status
        - Location of residence (i.e., residence in GBA)
        - Number of adults in the household
        - Number of children in the household
        - Whether the candidate was the main source of income of his/her household at baseline
    - Training characteristics:
        - Training cycle
        - Trade area
        - Location of training centre
3. Then, based on each list, C4ED carried out a Multiple Component Analysis (MCA). This analysis allows for the establishment of a series of factorial axes that objectively,

efficiently, and hierarchically synthesise the multidimensional relationships between the variables describing the observations. For the matching, C4ED used the coordinates of the observations on the selected axes as synthetic variables. In total, 4 factorial axes (variables) were retained: two indices summarising the household characteristics and two indices summarising the training characteristics.

4. Finally, the PSs are estimated with the core matching variables and four "candidate" indexes following the automated procedure developed by Imbens and Rubin (2015). The algorithm identifies the "best" propensity score model by selecting covariates that lead to the greatest gains in the logit log-likelihood function.

The propensity scores were then estimated using a binary probit choice model:

$$T_i = \alpha + M_i'\delta + \mu_i$$

In this equation, T_i represents the treatment dummy which takes the value one if the candidate i was selected and 0 otherwise, α is a constant representing the average probability of treatment in the comparison group, δ is a set of coefficients capturing the correlation of matching variables M_i with the probability of treatment, and μ_i is an error term. The predicted probability of treatment is illustrated by the equation below, where *p(m)* represents the propensity scores.

$$\Pr(T = 1|M = m) = p(m)$$

Once the propensity scores were estimated, C4ED removed the observations outside the common support and estimated the ATT. When using inverse probability weights, the ATT is defined as follows:

$$ATT = \frac{1}{N}\sum_{i=1}^{N}\left[T_i * Y_i - \frac{(1 - T_i) * Y_i * p(m)_i}{1 - p(m)_i}\right]$$

Where Y_i represents the outcome of interest of an individual i. The outcome of non-beneficiaries is weighted by their probability of treatment divided by one minus this probability.

Different estimation models of the ATT were used depending on the nature of the outcome variables. For continuous outcomes, C4ED estimated ordinary least squares regressions. For binary outcomes, C4ED estimated probit regressions. For skewed variables such as income from employment and coefficient of variation of income, C4ED estimated Poisson regressions.

A key strength of IPWRA is that this method is doubly robust. This approach only requires that either the propensity scores specification (the first step) or the estimation of the ATT (second step) is well specified (Wooldridge, 2010).

This approach allows for the inclusion of covariates in the estimation of the outcomes of interest, aiming at both improving the identification of the impacts of the project and their precision. C4ED selected an identical set of covariates for all regressions. These variables include age, gender, returnee status, place of birth, marital status, level of education, level of English, entrepreneurial spirit and baseline household composition.

Robustness checks

C4ED assessed the sensitivity of the results to the decisions made above in three ways:

(i) By weighting candidates based on their interview scores;
(ii) By excluding observations with extreme values of propensity scores;
(iii) By following an alternative approach, specifically Coarsened Exact Matching (CEM).

First robustness check: Weighting based on interview scores

C4ED tested the robustness of the results to the choice of matching variables by taking advantage of the availability of interview scores for cycle two and cycle three candidates. Candidates were selected for the training based on their interview scores, aiming at capturing the candidates' hard and soft skills, as well as their level of vulnerability. As a result, interview scores appear as an evident choice of matching variable. A key limitation is that these scores are only available for cycle two and cycle three candidates, affecting the number of observations that can be used to measure the project's impacts. This negatively affects the statistical power of the impact estimations, meaning the ability to detect small impacts of the project with confidence. Nevertheless, C4ED followed the two-step procedure mentioned previously based on cycle two and cycle three candidates. Instead of the set of matching variables used for the whole sample, C4ED retained the candidate's scores for each of the scoring grid criteria, the training trade, location and cycle. The set of explanatory variables used for the estimation of the ATT remained unchanged.

It is to be noted that cycle one presents various weaknesses. In addition to missing information on interview scores, this cycle faced challenges in undertaking the training. As such, this robustness check allows to assess the sensitivity of the results to the exclusion of this more peculiar setting.

Second robustness check: Excluding observations with extreme values of propensity scores

Weighting techniques relying on inverse propensity scores, such as IPWRA, are sensitive to propensity scores whose values are close to zero or close to one. Indeed, extreme values of propensity scores induce higher variance in the estimates. C4ED tested the robustness of the results to the exclusion of observations with propensity scores below 0.1 and above 0.9 (Frölich & Sperlich, 2019). This test led to the exclusion of zero observations and suggests that the study is not exposed to the bias from observations with extreme PS.

Third robustness check: CEM

Alternative weighting or matching methods, such as CEM, do not rely on the estimation of propensity scores. Instead, they consist in directly matching observations based on observable characteristics. One strength of these alternatives is their lower model dependence, allowing to test the sensitivity of the results to the propensity scores specification. However, by imposing more restrictive matches, these methods may lead to greater sample losses due to a lack of common support between the treatment and comparison groups. As such, these approaches may be suboptimal when a large number of matching variables is required to achieve balance (Ripollone et al., 2020).

CEM consists of reducing a list of pre-treatment characteristics to a small number of categories. As for IPWRA, these characteristics are all variables that would affect selection into the project and the outcomes of interest. Once categories are created, observations within the same categories are directly matched instead of matching based on propensity scores. The ATT are then estimated based on the new sample of matched observations, as the average difference in the outcome of interest of beneficiaries with that of matched non-beneficiaries.

C4ED conducted CEM on the following categories: being a male, being a returnee, being married at baseline, the candidate's education level at baseline (i.e., no education, junior education, secondary education, tertiary education or vocational training), being born in GBA, having a good level of English at midline, being the main source of household income at baseline, the trade the candidate applied for and the training cycle. This led to a successful match of 814 observations between T and C, 588 observations between T1 and C, 386 between

T2 and C and 396 observations between T2 and T1. These samples were used in the CEM estimates. Once matching is performed, ATT is estimated using the same set of explanatory variables as the one used in the IPWRA estimates.

5.2.2. Difficulties encountered

The table below summarises the difficulties encountered during the evaluation and how C4ED attempted to overcome them.

Table 7: Difficulties encountered and mitigation strategies

Area	Challenge / Risk	Year of identification	Mitigation Strategy	Output of the mitigation strategy
Project implementation	The implementation team has been dissolved	2021	C4ED has requested available monitoring data relevant to the CIE before the final dissolution of the implementation team. Instead of data, GIZ shared the final implementation reports.	Mitigated
	Contamination in the comparison group (i.e. rejected applicants have been trained)	2022	C4ED identified false comparison observations and reassigned them to the treatment groups.	Solved
Evaluation methodology (timing, design, sampling)	No baseline data on interview scores for individuals from cohort one	2021	C4ED did not use the interview scores per se in the main specification but rather proxies of dimensions captured in the interview scores (such as age, gender, returnee status, level of English, and level of education). This allowed to mobilize the whole dataset. C4ED performed a robustness check using the interview scores	Solved
	A limited number of observations in the treatment two group	2022	Reduced power to identify the impacts of TVET and BD.	N/A
	Insufficient returnees	2022	Triangulation of quantitative results on the overall sample and on non-returnees to determine potential impacts on returnees. Integration of a small qualitative component	Mitigated

Source: C4ED elaboration

5.2.3. Limitations

All limitations of the study are detailed in Section 1.4.

5.3. DESCRIPTION OF THE SAMPLE

The description focuses on the principal sociodemographic characteristics of the final sample (see Table 8).[25] C4ED uses data collected at baseline and retrospective data collected in the follow-up surveys to provide insights on the sample compared to Gambian youth before the treatment. This assessment helps to determine how much the results can be extrapolated to the Gambian population. Then, the differences between treatment and comparison support the argument that a weighting approach is needed to control for pre-treatment differences between these groups. Balance tests are available in Table 13, Table 14, Table 15 and Table 15. As expected, individuals are young, with an average age of 25. Females represent half of the sample, with a relatively uniform distribution across the groups. This pattern is encouraging for the investigation of gender-specific effects. However, the share of returnees is low and below the 30% target and is discussed further in the following section. The share of married respondents in the sample (15%) is also low compared to the adult Gambian population (63% for females and 39% for males), probably due to their relatively young age (GBoS, 2021).

Table 8: Principal baseline characteristics of the sample

	(1) Full sample	(2) Control	(3) Treatment One	(4) Treatment Two
Principal sociodemographic characteristics				
Age	25.0	24.8	25.0	25.4
	(4.4)	(4.2)	(4.8)	(4.3)
Female	0.49	0.50	0.46	0.53
	(0.50)	(0.50)	(0.50)	(0.50)
Returnee	0.11	0.08	0.12	0.14
	(0.31)	(0.28)	(0.33)	(0.35)
Not married	0.85	0.86	0.85	0.84
	(0.36)	(0.35)	(0.36)	(0.37)
Education				
Primary or lower	0.07	0.06	0.08	0.07
	(0.25)	(0.23)	(0.27)	(0.25)
Junior Secondary	0.20	0.18	0.24	0.17
	(0.40)	(0.38)	(0.43)	(0.37)
Senior Secondary	0.48	0.47	0.46	0.53
	(0.50)	(0.50)	(0.50)	(0.50)
Tertiary/vocational	0.24	0.26	0.22	0.22
training	(0.43)	(0.44)	(0.41)	(0.42)
Higher level	0.02	0.03	0.01	0.01
	(0.14)	(0.17)	(0.08)	(0.11)
Region of birth and residence				
Born in GBA	0.56	0.62	0.52	0.50
	(0.50)	(0.49)	(0.50)	(0.50)
Residence in GBA	0.67	0.79	0.57	0.57
	(0.47)	(0.41)	(0.50)	(0.50)

[25]The midline and endline sample present very similar distributions across key descriptive variables. Hence, C4ED assumes that there is no differential attrition between the two data collection rounds or between treatment and comparison groups.

Other characteristics				
Parents' income	4,721	4,791	4,812	4,483
	(5,695)	(5,666)	(5,105)	(6,440)
# of adults in HH	5.1	5,.1	5.1	5.4
	(3.6)	(3.3)	(3.8)	(3.8)
# of children in HH	5.1	4.8	5.3	5.6
	(4.6)	(4.5)	(4.5)	(4.7)
Interview score				
Average interview score	15.4	14.6	15.5	16.3
	(2.6)	(3.0)	(2.4)	(2.2)
Observations	1,325	586	420	319

Note: Sample means (proportions when % is shown in the variable name or in the table) of selected variables for the full sample (first column) and by group. Standard deviations in parentheses.
Source: C4ED elaboration

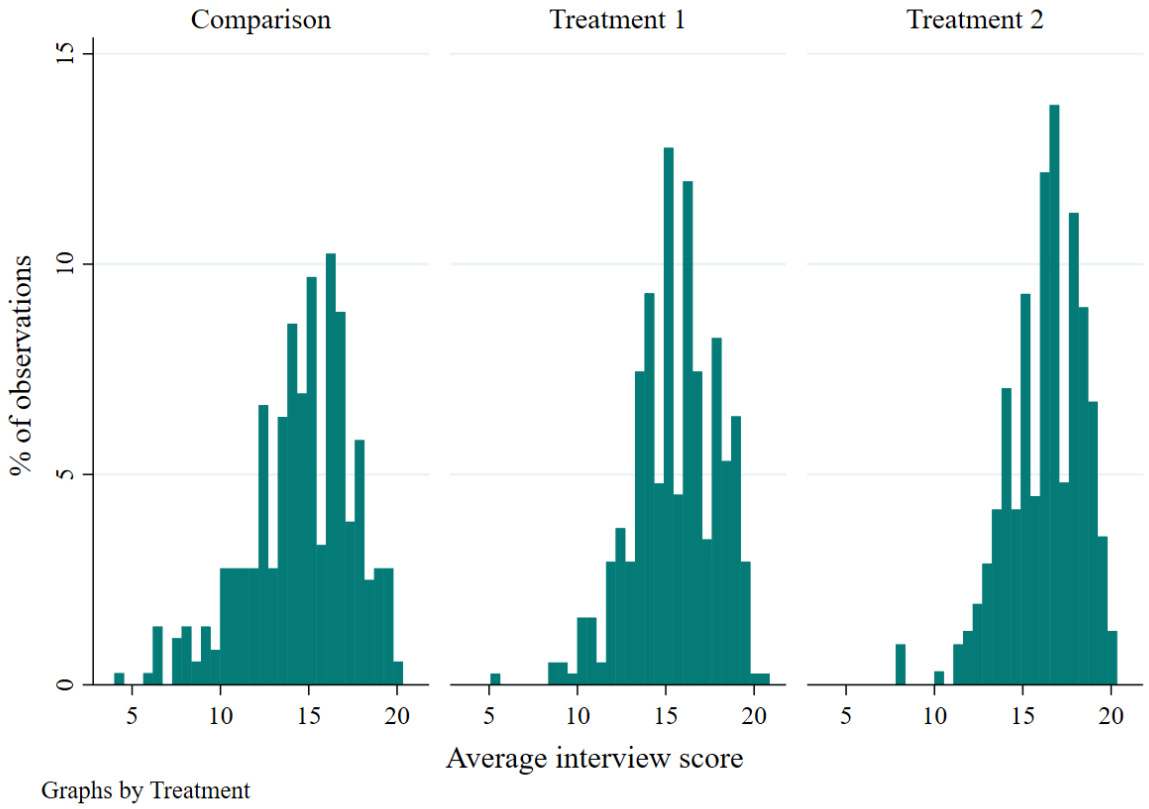
Regarding education, the sample presents significantly higher levels than the national average. In the study sample, 97% completed junior secondary level or higher, whereas the ratio is approximately 50% for Gambian youth between 20 and 35 years old (GBoS, 2021). This is probably due to the selection criteria (only those with a basic education are eligible for Tekki Fii), self-selection and the relatively young age of the urban applicants. The sample is heavily concentrated in the Greater Banjul Area (GBA). This is unsurprising as most training centres are located in the same area. The average household size reported by respondents is relatively high (5.1 adults and five children per household) in comparison to the average household size of the country (6.9 persons), especially given the concentration of the sample in an urban area (GBoS, 2021). On average, respondents' parents earned 4,721 dalasis per month at baseline. However, the income distribution among respondents is skewed to the right. In other words, there is a large share of individuals whose parents have low-income levels and a smaller share of individuals whose parents have relatively high levels of income. Comparing the income with other sources of information is challenging because it remains unclear what specific data the Joint Research Centre (JRC) collected, and the latest labour force survey did not include income data (GBoS, 2018).

Across treatment and comparison groups, the distributions in most variables are similar, increasing the likelihood of having common support. It is important to note, however, that the weighting approach will be useful to account for individual differences. The treatment and comparison groups present similarities in terms of household characteristics, with similar parental income and number of adults and children in the household, as well as region of birth and residence.

Finally, it is important to consider the candidates' interview scores when estimating the impacts of the trainings, as they determined the selection and are likely related to outcomes of interest as well. The scores, ranging from zero to 20 points, are calculated based on nine selection criteria: motivation, expectations versus responsibilities, prior trade knowledge, technical skills, commitment, life coping skills, communication in English, level of education and vulnerability (a more detailed description is available in Appendix 5.9.2). Overall, the average score is 15.4 points: 14.6 for the comparison group, 15.5 for treatment one and 16.3 for treatment two (Table 8). As the selection was based on this score, it is not surprising to see that the difference is significant, and the distribution is more skewed in the treatment groups. On the one hand, there is an overlap of scores across the two groups suggesting that, based on the score, some individuals are comparable (see Figure 5). This is because the selection was done within each training centre and for the respective trades. Therefore, it is important to include the trade that the candidate applied for in the weighting procedure. On the other hand, it also suggests that individuals in the comparison group at the bottom of the distribution (i.e., low scores) are inherently different from accepted applicants, including those who were accepted with relatively low scores. To avoid biased results, C4ED conducts a sensitivity analysis by using

weighting strategies in the estimations to reduce the influence of the most different scores and increase the influence of the most similar scores. As scores are not available for cycle one, this sensitivity analysis is conducted based on observations from cycles two and three.

Figure 5: Distribution of interview scores across comparison and treatment groups



Source: C4ED elaboration

5.4. DETAILED ANSWER BY JC

5.4.1. EQ0. Did the Tekki Fii project reach its targets?

Did Tekki Fii train the intended number of individuals? (0.1.GMB.a.)

C4ED initially sought to investigate this JC by using monitoring data from GIZ. However, the datasets shared by GIZ cannot confirm whether the selected candidates participated in the training. Therefore, C4ED used project documentation, including the final implementation report, and triangulated the information retrieved with quantitative data collected at baseline by JRC and GIZ (1) and at midline by C4ED (2) to assess whether the project goals were achieved and why (not). Qualitative interviews with key informants conducted at midline shed further light on drivers and barriers to reaching returnees.

Overall participation

The project aimed at training 1,300 individuals aged between 15 and 35 years old who completed grade nine, possessed solid notions of Mathematics and English and included 30% females and 30% returnees. The implementation report states that the project trained 1,277 beneficiaries (*indicator 0.1.1.*). From discussions with GIZ, the relatively heavy selection

process contributed to selecting the most suited candidates and had limited dropouts and no-shows. For the few that dropped out, GIZ replaced them with initially rejected applicants. While this has implications for the CIE (i.e., contamination of the treatment group), it contributed to almost reaching the goal of training 1,300 beneficiaries. The project was successful in enrolling and training the age category, the level of education and the level of English initially planned (Figure 3).

Participation of females

The share of female applicants (30%) exceeded the initial target by 12 percentage points (*indicator 0.1.2.)*. GIZ reports that this was achieved by three complementary strategies: positive discrimination in the selection process, setting key performance indicators (KPIs), and investing in "female-friendly" trades with high market relevance.

Participation of returning migrants

On the other hand, the project did not reach the 30% returnee objective despite the efforts undertaken (*indicator 0.1.3.)*. GIZ supported a selection target for this subgroup and imposed KPIs for the different training centres. In addition, the project staff organised sensitisation activities at the district and village level through youth leaders and traditional authorities, cooperated with returnee associations, the IOM's referral mechanisms, as well as GIZ German-based networks, such as "returnee scouts" and the Ministry of Interior of Baden Württemberg.

Qualitative interviews with GIZ, IOM, project IPs and returnee representatives shed light on barriers and drivers for the enrolment of returnees, which can help explain the underachievement of the 30% quota (*indicator 0.1.4*). C4ED categorises the most prominent barriers for returnees, the extent to which the project was responsive to those, and the effect this had on returnees' enrolment and retainment.[26]

The main reason identified by key informants for the underachievement of the quota was the returnees' lack of interest in the project, which reportedly resulted from a combination of economic necessity, socio-cultural pressure, and the availability of other projects.

The economic hardship of returnees was identified as one of the main reasons why returnees would not want to enrol in the project. GIZ, implementers, and beneficiary representatives stressed that returnees tended to feel high pressure to generate income quickly, as the emigration journey led to migrants depleting their savings, selling assets, and accruing debt. According to key informants, this translated into a lack of interest from returnees to participate in the project. As the project's training lasted relatively long [six to nine months], and Tekki Fii provided limited support to cover (opportunity) training costs (e.g., stipends for hospitality, transportation, and accommodation), the project did not respond well to the needs of those returnees.

The need to generate income quickly also had socio-cultural and psychological causes. Most interviewed experts stressed that the stigma of returning due to perceptions of failure had relatives of returnees themselves put pressure on them to generate income quickly. As one beneficiary representative explained:

> *We [returnees] have this state of mind. When people are migrating, there are a lot of expenditures […] You see families selling their lands, their animals, going into serious debt sometimes. So, when you move, when you travel, you want to be able to change*

[26] Agreement among a majority of respondents is considered strong evidence for a barrier's effect on enrolment, whereas barriers mentioned by a minority of respondents and barriers where respondents have conflicting opinions and experience are considered weak evidence, which would require further testing and triangulation.

> *that dynamic because sometimes your family is struggling. […] But if you come back, it is a big stigma because you went purposely to be able to support your family, and you could not do that. You feel that guilt in you. […] And you don't want to depend again on people. So, there are those who do not like to go [for training] for nine months because they think it's too time-consuming. They don't want to when they also could earn money. And then there are people who have high self-esteem who are willing to take up that torch and go for the training and try to pick it up from there. It's all based on the belief and, you know, having this mindset.* (Beneficiary representative)

Another prominent factor mentioned by many respondents was the competition with other projects for returnees.[27] While opinions diverged on whether there were too many projects and whether demand was saturated, most key informants agreed that alignment and coordination between organisations could be improved to avoid duplication of services. Several key informants also underlined that other projects, mainly provided by IOM, were more specialised or provided quicker payouts and were therefore preferred by returnees.

> *In our province, we have these 'migrant assessment centres'. For a majority of migrants in the Gambia IOM already has a project with similar training, so, returnees prefer IOM, because they bring them in, they give them more, like psychological support, and returnees already have the relationship with IOM.* (Beneficiary representative)

> *We had one or two [returnees] that dropped out. […] I think mostly, it has to do with the way the project is structured. From our end it's actually six months. So, they have to go through an application interview, selection process, and they have to undergo six months of structured training project. And within the project they will also undergo mentoring and coaching […] and then certification. Then after the certification, that is when they will get […] start-up kits for them to get started in their various businesses. So, for them the process was taking too long, and they felt they would just drop out and then go start doing another project.* (IP staff)

Two respondents believed that the focus on returnees by an abundance of support projects created a sense of entitlement and a hand-out mentality that the project could not match:

> *I quite agree that it [30% target] was not very realistic considering that most of the returnees that came in were already beneficiaries of IOM. […] Everyone was looking out for them [returnees], so it was a bit saturated. We even have returnees who were actually supported as double beneficiaries, even though they have already been beneficiaries in other places. Every project is looking for returnees. And as a result, even if at a point in time you know that this one was supported by IOM […] you give it to them because you are in need of reports of returnees to meet your target. So, they are used to having this free food on the table.* (GIZ staff)

> *When we look at returnees, most of them leave the country in search of a greener pasture. So, when they come back, they would think that now the project here is supposed to give them enough money for them to be able to turn their lives around so that they can be motivated to stay in the country, to be productive, and also to be able to support their families. […] When you look at their expectations, their expectations are much higher than what we have for them at the project level. So that could be one*

[27] C4ED identified the following projects, some of which are also financed by EUTF: "Strengthening the management and governance of migration and the sustainable reintegration of returning migrants in The Gambia", „Youth Empowerment Project", „The Joint Initiative for Migrant Protection and Reintegration in the Sahel and Lake Chad".

> *of the reasons why some of them, even if they start the project, find it difficult to complete the project.* (GIZ staff)

Occasionally, the returnees' lack of interest was also linked to prior negative experiences with other support projects. One project implementer explained that some returnees had been disappointed by false promises during reintegration, which reportedly made them mistrust the Tekki Fii project. Another beneficiary representative recounted an incident where a potential beneficiary refused to enrol because he was convinced he would not benefit from the project based on his bad experience with another TVET project.

Apart from the lack of interest, qualitative interviews also explored other factors that could explain the underachievement of the target set for the participation of returnees. Mental health issues were identified as a challenge that could affect returnees more than other project participants. Respondents acknowledged that returnees may suffer from having experienced traumatic events during their migration journey. One IP could recount a specific instance where this negatively affected a Tekki Fii participant:

> *Based on my interaction with returnees, I think, the challenge is that some returnees need psychosocial support before they can really get into income-generation activities […]. I remember for our final cohort of the project, there was this one participant. I noticed that not everything was right with him. At some point, I remember I asked him. He stood up instead of answering my question. He was like: 'bro, I lost my brother, and he was buried right in front of me in the desert.' And this was somebody who was really well into the project […]. So, at that point, I knew that person needed psychosocial support because the reality is they are not going to come to you directly and tell you. […] I remember I discussed this case back then with some of my colleagues - project partners - and they were going to take care of that. But at some point, I think he even had to drop out of the project. And I totally attribute that to the fact that he needed that support, and it was not provided.* (IP staff)

Lack of documentation was a factor in the participation of returnees in the project, but the extent to which this affected participation could not be established through the KIIs. While some respondents believed that most returnees possessed documentation, others believed that many or most did not. Opinions were also split on the consequences of missing documentation on project participation. While some respondents stated that undocumented returnees could not enrol in the project at all, others said they could participate without problems. In some instances, those who enrolled dropped out because they could not register their business without proper documentation. As one respondent explained:

> *We have a few of them [undocumented returnees] who, even when they got back, they could not get documentation. So, considering the situation and the long protocols they were not able to get some of these things. If they were not able to get the documentation from their parents, it became so difficult for them to meet the KPIs that we have for business development. You have to register your business. Some of them could not register their businesses because they didn't even have ID cards. So, it was actually a challenge for some of them because of the bureaucracy involved.* (IP staff)

Qualitative interviews also found some evidence that lower educational background at times had a negative effect on the enrolment, retainment, and success of returnees in the project. Several key informants confirmed that returnees tended to have lower educational backgrounds and that people with lower educational backgrounds struggled more with the English language. Respondents also confirmed that initially, beneficiaries had to complete at least grade nine to be eligible for the project and that IOM only transferred returnees who matched those criteria.

On the other hand, implementers reported that they either did not adhere to this eligibility criterion or initially adhered to it but eventually dismissed it. Implementers also seemed to respond differently to the language barriers of their trainees. This indicates that depending on the level of education and the IP, a lower educational background can harm enrolment and retention.

> *Our programs are delivered in English and in any other local language, depending on the group of participants that we are training. So, when you connect after the selection, when we do our needs assessment, that needs assessment will help us to [understand] what kind of participants we have. […] They will get to choose what kind of language is most suitable for them doing the training. And we will tailor our training project to the language they understand. So, language and education were not much of a barrier in the project.* (IP staff)

> *There are various linguistic communities in the Gambia. […]. I think, in general, Gambians are kind of used to this. […] So, I wouldn't say this is a difficulty. I mean, English definitely also is a problem because you have, for example, returnees who do not master English. So, for the formal training, where we had roughly 1,200 beneficiaries, that was a prerequisite because of all the theoretical training that you have to undergo. So, a certain level of English was actually required, so that also could have been a barrier. But what we did in those cases, we would refer them to the business development activities where no level of English was required.* (GIZ staff)

> *I know most of them [returnees] are school dropouts. Sometimes the basic requirement was a grade nine level to be able to enrol in this training. Some of them did not have it, even though there were ways and means of waiving those things. […] They will have a problem because they don't have the basic requirements needed to be able to go through this training. Some of these trainings were purely administered in English. […] They cannot speak English, or their English is not sufficient enough to be able to take them through the training. So, this is actually also one of the reasons why maybe some of them at a point in time we are not able to put up.* (IP staff)

Opinions diverged on whether returnees may have less awareness about the project's existence, which could be a reason for low enrolment. Some respondents believed that returnees did not have less awareness as returnee projects and referral mechanisms made an effort to target returnees specifically. Others explained that, because of the stigma of return, many returnees did not return to their places of origin, which could lead to weaker social networks and potentially less knowledge about community awareness-raising activities for the project.

The evaluation also tried to ascertain whether project admission procedures would present a driver or a barrier for the enrolment of returnees. Qualitative research tried to discover whether acts of positive discrimination (e.g., increasing the age limit and adding a vulnerability score point for returnees) would balance out vulnerabilities and disadvantages for returnees during admission (such as lower educational background, lack of documentation, etc.). Findings provided strong indications that admissions procedures did not affect enrolment, as implementers tended to disregard admissions criteria in favour of the enrolment of returnees and because key informants could not recall instances where applications of returnees were rejected. Accordingly, it can be concluded that the project's admissions procedures did not present a barrier to the enrolment of returnees as long as those procedures were not adhered to.

> *Implementing partners were very much sensitized to the fact that every time they came across a returnee, they should just open all the doors, you know, regardless of the statistics and whatever.* (GIZ staff)

> *When I think back to the selection process, I think we tried to select all the returnees. It's not like we said 'You cannot come because you are not qualifying' or anything. It's more the matter that they were not coming.* (IP staff)
>
> *If somebody identified as a returnee, they would go on top of the list.* (Beneficiary representative)

Finally, C4ED explored whether 30% was a feasible target for returnees among project participants or whether the project was 'set up to fail' from the start by aiming for an unrealistic target. Again, judgments from interviewed GIZ and implementing staff deviated. Several respondents (including senior GIZ project staff) considered the target unrealistic in light of a limited prevalence of returnees in the project's catchment area, saturation through multiple projects, and returnees' preference for shorter projects with quicker payouts. One respondent believed the target was realistic considering the sufficient prevalence of returnees in the project's catchment area in his region. The evaluation could confirm that the target was set up arbitrarily and not calculated based on evidence or prior experience (e.g., through baseline data collection). Those findings indicate that the project was designed with an overly ambitious target.

5.4.2. EQ1. To what extent did the Tekki Fii project contribute to employment, job creation, and skills?

C4ED displays estimations of the impacts of participating in Tekki Fii 18 months after the training. Impacts six months after the end of the training are also discussed to understand whether they need time to materialise or, on the contrary, fade out throughout time. However, this document does not illustrate short-term impacts but these are available upon request. Key results are illustrated in figures and expressed in percentage changes to ease interpretation. Box 1 provides information on the presentation of the results and their interpretation. Full estimates on a larger number of variables are available in tables in Appendix 5.9.4. Overall, the results presented below are robust to alternative specifications.[28]

[28]Appendix 5.9.6 also contains the sensitivity analysis results, including interview scores as matching variables and another approach based on coarsened exact matching as alternative specifications to the main weighting procedure (IPWRA).

Box 1: Interpretation of the project's impact

Quantitative results on the project's impacts are illustrated in charts representing the magnitude of the estimated impacts of the project, expressed in percentage change, and their confidence level. The percentage changes are obtained by dividing the coefficients of the project's impact by the potential outcome mean (POM), i.e., the level of outcome that would have been obtained in the absence of the project.

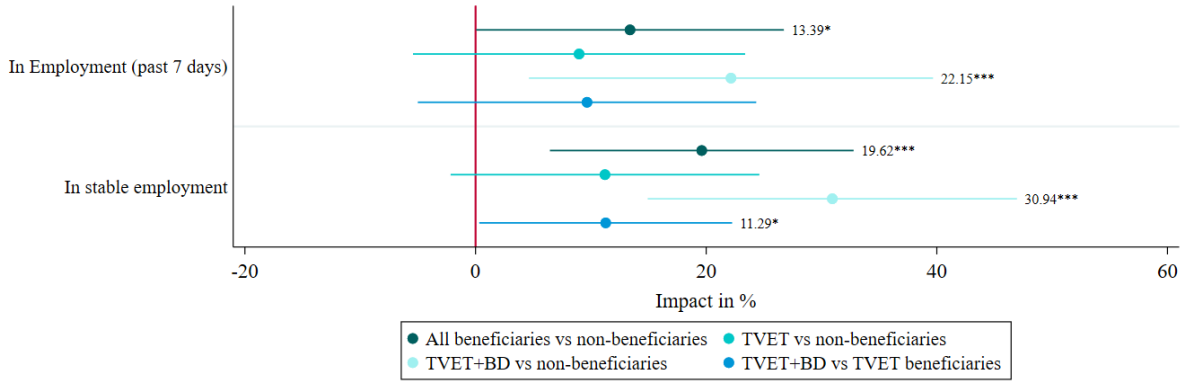
*The horizontal axis refers to the size of the impact, while the vertical axis lists the indicators of interest. Each bar and respective numbers result from separate estimations of the impact. The number associated with each bar indicates the size of the project's impact in percentage. A bar corresponds to the confidence interval of the estimated impact. When the impact size is followed by stars (*), the impact can be considered significant (at * 10% level, ** 5% level, and *** 1% level). The lower the significance level, the more confident C4ED is in claiming the existence of an impact.*
In the absence of stars, the impact is not statistically significant: C4ED cannot reject the assumption that the project did not affect this indicator (at the 10% level).

Source: C4ED elaboration

What effects does the Tekki Fii project have on (decent) employment? (1.1.GMB.a.)

Key results of C4ED's impact estimates on employment indicators using IPWRA are displayed in Figure 6. Results on all outcomes of interest are available in Table 17 and Table 18. Overall, C4ED's results suggest that the Tekki Fii had positive impacts on decent employment, mainly through the combination of BD component with the TVET.

Figure 6: Key impacts on employment



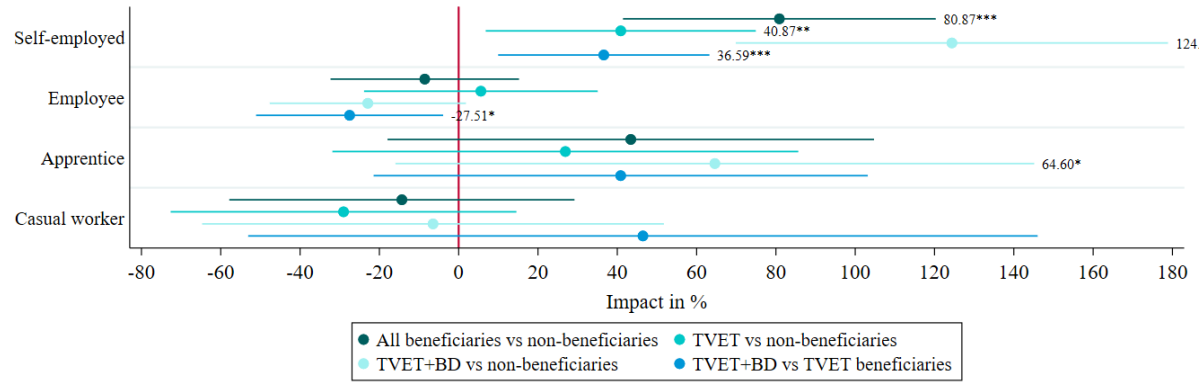
Source: C4ED elaboration

C4ED's results indicate that Tekki Fii beneficiaries are, on average, 13% more likely to have had a job in the seven days preceding the survey 18 months after participation in the training. This positive impact appears to be triggered by the positive effects of following both the TVET and the BD components (+22%). The TVET alone does not have measurable positive impacts on employment. As a result, 60% of Tekki Fii beneficiaries reported having worked in the past seven days, while this would have been the case for 53% of them in the absence of the project. Beneficiaries' employment rate is similar to the 2018 national employment rate of 15-35-year-olds, 59% (GBoS, 2018).

C4ED finds similar results when looking at stable employment (having a job for more than one month). The TVET+BD seems to help find stable employment, by 31%. Overall, benefitting from both Tekki Fii project increases the likelihood of having a stable job by 20%, increasing the stable employment rates from 61% to 73%.

The impacts on overall employment are due to the creation and development of IGAs, yet with different levels of impacts based on the training followed. Overall, a Tekki Fii trainee is 81% more likely to be self-employed 18 months after the training than a non-beneficiary. Again, these results are specifically triggered by the high impacts among TVET+BD component beneficiaries, who are 1.2 times more likely to be self-employed than non-beneficiaries. Benefitting from the TVET increases the likelihood of being self-employed by "only" 41%. The marginal impact of the BD component (+37%) suggests that the BD component is essential for promoting self-employment.

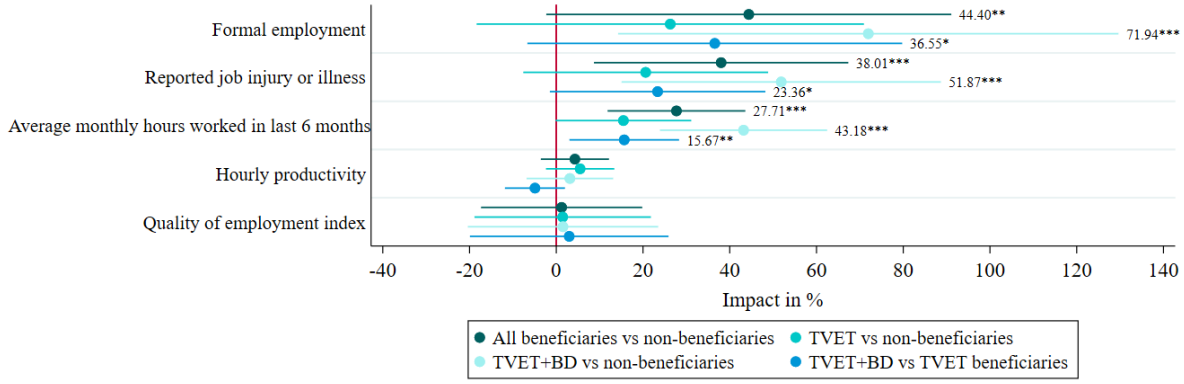
Figure 7: Impacts on employment status



Source: C4ED elaboration

Tekki Fii led to a significant increase in formal employment, again with larger impacts among the beneficiaries of both components. Overall, Tekki Fii beneficiaries are 44% more likely to have a formal stable job (i.e., have a written employment contract or have a registered business) 18 months after the training than their counterparts (Table 17), this share moving from 17% to 24% thanks to the project. C4ED also investigated also whether Tekki Fii beneficiaries in employment occupy better jobs than non-beneficiaries in employment. To do so, C4ED investigated the impacts of Tekki Fii on individuals in stable employment. Among individuals in stable employment, Tekki Fii beneficiaries are more likely to be self-employed (+34%) and to have a formal job (+36%), mainly thanks to the combination of the TVET+BD component. This finding suggests that the project promoted self-employment among all its beneficiaries, but that the additional BD component successfully highlighted the importance and advantages of registering their business among beneficiaries.

Figure 8: Impacts on decent employment



Source: C4ED elaboration

Despite improved access to (formal) employment, Tekki Fii beneficiaries in employment are more likely to face occupational hazards due to the training. Beneficiaries' probability of reporting an injury or work-related illness during any job increased by 38% compared to non-beneficiaries (Table 17), this rate moving from 45% to 59% due to the project. This result can be partly explained by the fact that beneficiaries are more concentrated in the manufacturing sector (19%) than the comparison group (13%).

C4ED neither detect a statistically significant impact of the Tekki Fii project on job productivity (measured by the average hourly income over the last six months)[29] nor on the composite indicator of quality of employment[30] (Table 18) pointing out to some limitations regarding he improvement of decent employment conditions.

When contrasting impacts six months and 18 months after the training, C4ED observes similar results: significant and positive impacts of the project on (decent) employment overall driven by the TVET+BD components (Table 17 and Table 18). It is worth noting that, at midline, only the combination of TVET+BD component greatly impacts employment. Hence, this suggests that beneficiaries of the TVET need more than six months to find a stable job and that the overall impacts of the project are long-lasting.

C4ED also explores potential differences across trades to test the assumption that some trades might be saturated. To do so, it differentiates the traditional trades on the one hand (Hairdressing and beauty therapy, Welding and farm tools repair, block laying, Block laying and concreting and Tiling and plastering) and modern trades on the other hand (Satellite installation, Solar technology, Animal husbandry and Small engine repairs).[31] This distinction is based on their emergence in the labour market (i), their dependence of the trade to new technologies (ii) and larger capital (iii). The results suggest that the overall impacts are due to the training in traditional trades. C4ED does not detect impacts on individuals who were trained in modern trade. An explanation could be the small sample size, but the sizes of the coefficients suggest that there is no specific trend emanating from these trainings. As finding employment usually implies opening an IGA, C4ED assumes that training in traditional trades is more

[29] Note that this indicator has a moderate reliability (see Section 1.4).
[30] The index ranges from zero to five and is the sum of the different items incldluing „contributes to social security", „has paid annual leave", „has paid sick leave", „contributes to pension schemes", „iscovered by medical insurance".
[31] The aggregation of trades is essential to reach sufficient observations in the sub-samples an obtain sufficient power in the estimations. Note also that the sub-sample analysis implied removing the interaction terms used for the matching to allow the convergence of the estimations. Results of the estimations are available upon request.

effective because they require a relatively low initial investment whereas modern trades usually required larger capital. In fact, trainees from modern trades would probably depend on a strong private sector, this large firms capable to hire them. Hence, C4ED concludes that, although the project created connexions with the private sector through the industrial placements, the firms could not absorb the newly available labour force.

Do graduates find work that matches the skills they learned during the training?(7.1.GMB.)

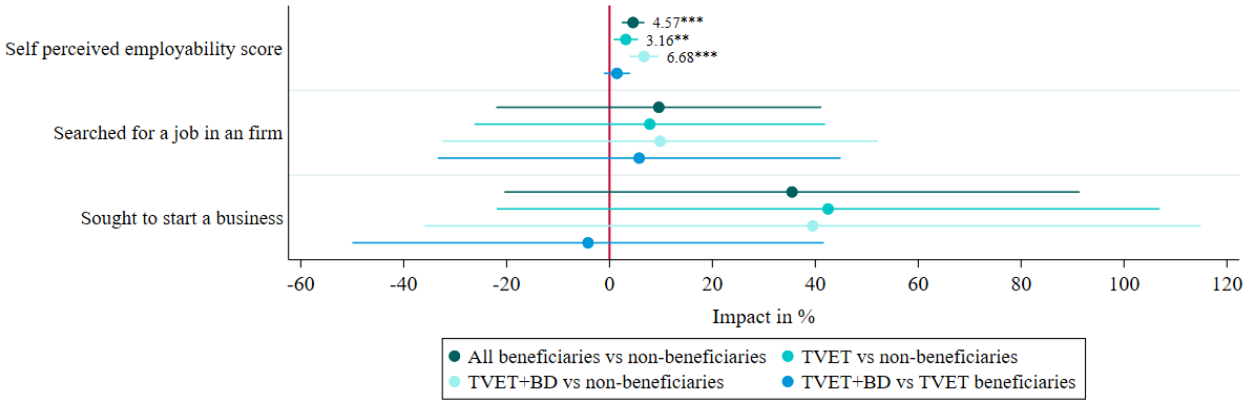
In addition to whether the project contributed to employment, C4ED explores whether it helped beneficiaries find jobs in the sector where they developed skills. Eighteen months after the training, C4ED finds that, beyond being more likely to be employed, beneficiaries are, on average, also significantly more likely to find a job in the same trade they applied to 18 months after the training (+57% - Table 17). This finding is consistent with the impacts found six months after the training (see Table 18). Unlike other outcomes related to employment, following only the TVET or the marginal impact of the BD component had positive impacts, even though the combination of both trainings appears to have larger impacts.

These findings point out that the training contributed to the development of sector-specific required skills (as reported by beneficiaries – see 1.5.GMB) and that the impacts on employment are not only due to the project's reputation. From the beneficiaries' perspective, the findings suggest that it contributed to finding employment in the sector of interest.

What effects does the Tekki Fii project have on employability? (1.1.GMB.b.)

While access to employment could be limited by labour demand, the Tekki Fii project was expected to increase beneficiaries' employability. To explore this dimension, C4ED investigates whether the project impacted how likely individuals without a job are to find one in the future. Hence, C4ED focuses only on individuals not in employment at the time of the survey. C4ED investigates self-perception of employability, employment search and the means to look for a job. Key results are displayed in Figure 9.

Figure 9: Key impacts on employability



Source: C4ED elaboration

Overall, the impact on employability is concentrated on the respondents' perceived employability (Figure 9 - *indicator 1.1.7*).[32] Eighteen months after the training, youths who are not in employment perceive themselves as slightly, though significantly, more employable than comparable non-beneficiaries, as measured by the self-perceived employability scale.[33] Specifically, C4ED observes an average increase of 4.6%, raising the scale from 3.65 to 3.81. More specifically, since there is no significant difference between TVET+BD and TVET beneficiaries, one can assume that the TVET is at the root of the positive impacts on self-perceived employability. When disaggregating the indicator, the impact appears to be triggered by the beneficiaries' belief that they have a solid educational background and a competitive advantage regarding technical skills to find a job in the desired trade (Table 19). It did not increase the belief that there are sufficient professional opportunities in the area, and there is no clear impact on beneficiaries' proactivity in searching for employment (*indicators 1.1.8 and 1.1.9)*. Consequently, it is not surprising not to observe changes in the means used to search for employment (*indicators 1.1.10 and 1.1.11*.)

Results also indicate that impacts did not yet materialise six months after the training. Hence, self-perceived employability only increased in the long term. It must be noted that C4ED considers that the items that compose the self-perceived employability scale might not be sufficiently correlated and that the indicator could capture other dimensions.[34] Therefore, it remains unclear whether the limited impacts could be due to the difficulty of measuring this psychometric indicator.

To what extent are training facilities 'fit-for-purpose' in delivering skills training to Tekki Fii trainees? (1.5.GMB.)

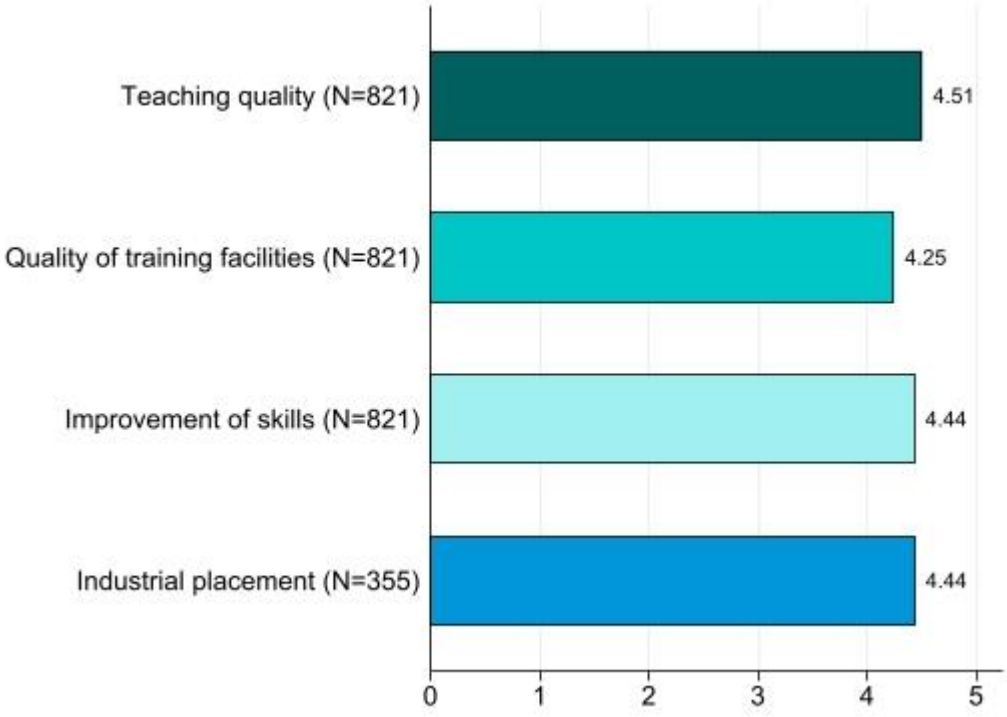
To assess whether the project was adequate for delivering the training and was adapted to its purpose, C4ED collected information on the beneficiaries' perceptions of the support received. Those for which C4ED confirmed participation in the project positively rated the quality of the teaching, the training centre, the project's usefulness in developing skills, and the industrial placement (Figure 10). For all dimensions of the project, most beneficiaries considered them as "good" or "excellent", with limited variation. This positive feedback is in line with the intended effects of the project.

[32] The first two robustness checks confirm these results. However, results from the CEM regressions are inconsistent as they suggest significant impacts on the different dimensions of employability. Also, this indicator has a moderate reliability (see Section 1.4). Caution is therefore required when interpreting these results.

[33] Perceived employability is measured as the average score ranging from one for strongly disagreeing to five for strongly agreeing with ten statements related to the respondent's employability. These statements include "1. My training/education is an asset to me in job seeking", "2. Employers target individuals with my educational background", "3. There is a lot of competition for places on training courses", "4. People in my career are in high demand in the labour market", "5. My educational background leads to highly desirable jobs", "6. There are plenty of job vacancies in my geographical area", "7. I can easily find out about opportunities in my chosen field", "8. My skills are what employers are looking for", "9. I'm confident of success in job Interviews and selection", "10. I feel I could get any job as long as I have relevant skills".

[34] To be considered with an acceptable internal consistency, a Cronbach's alpha must range between 0.70 and 0.90 (Streiner et al., 2015). In this case, the Cronbach's alpha is 0.63 at midline and 0.68 at endline.

Figure 10: Beneficiaries' assessment of the project



Note: All variables are (composite) measures ranging from one (Very Bad) to five (Excellent). Teaching quality is the average of three variables: teachers' teaching methods, ability to handle training equipment, and ability to engage students. Quality of TVET facilities is not a composite variable. Improvement of skills is the average of four variables: usefulness of training to develop technical skills, teamwork skills, independent working skills and expression skills.
Source: C4ED elaboration

5.4.3. EQ2. To what extent did the Tekki Fii project change resilience and livelihoods for beneficiaries?

What effects does the Tekki Fii project have on livelihood in terms of income? (2.1.GMB.a.)

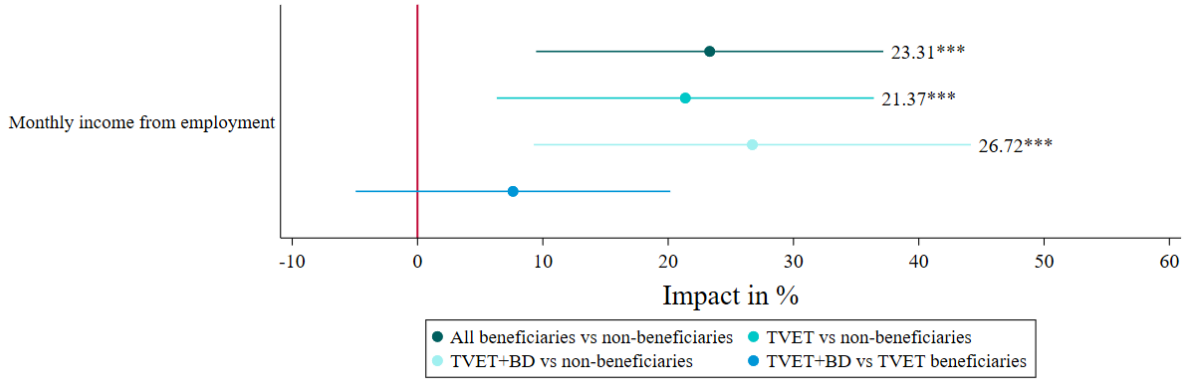
To investigate the impacts on income, C4ED produced two indicators: average monthly income from stable employment and annualised average monthly income from employment (*indicator 2.1.2.*). Both indicators contain overlapping information, but the first indicator focuses on average income from stable jobs in the last six months and is collected in a relatively detailed manner. However, it does not account for income variation across the year or income from jobs other than stable jobs.[35] Therefore, annualised monthly income from employment provides a broader perspective on the respondent's income. After checking the reliability of the two

[35] Consider that income data is often difficult to retrieve due to various factors such as remote data collection, lack of bookkeeping, high variation, and confidentiality concerns. These challenges are not specific to this survey, and C4ED is continuously implementing adjustments to optimise data quality. The income of individuals not in stable employment is replaced by zero.

indicators,[36] C4ED decided to present and discuss results based on annualised monthly income from employment. However, the results of both indicators are available in Table 21

As depicted in Figure 11, results suggest that the project positively and significantly impacted income from employment. On average, beneficiaries from the Tekki Fii project saw their average monthly income increase by 23% eighteen months after participating in the training. This corresponds to an increase of 745 GMD (around 10.11 €), moving their average monthly income from 3,196 GMD (around 43.38 €) to 3,941 GMD (around 53.49 €) thanks to their participation in the project.[37] Similar to employment outcomes, the impact on income materialised six months after the training (Appendix 5.9.4), mainly triggered by participation in the BD component and its combination with the TVET (Table 22).

Figure 11: Key impacts on income



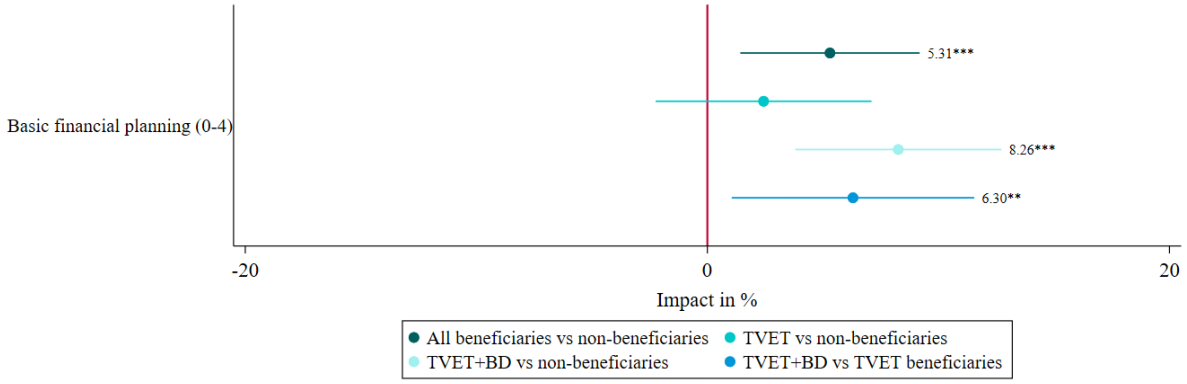
Source: C4ED elaboration

C4ED tested whether this increase is due to beneficiaries being more likely to be in employment or whether it is (also) due to beneficiaries finding better-paid jobs. To do so, C4ED investigated the project's impacts only on those with a stable job at the time of the survey. Results suggest that impacts are not significant, meaning that (i) the project increased the beneficiaries' income by increasing the number of individuals in employment and (ii) that the project did not improve the income for those who have a stable job.

In addition to income, C4ED also explored the adoption of financial practices to understand whether the increase in income can be linked to changes in how individuals work. To do so C4ED built a composite indicator capturing financial practices (*indicator 2.1.1*).[38] Figure 12 illustrates that the 18 months after the end of the training, the BD component surely contributed to beneficiaries being more likely to plan finances, even 18 months after the training. As one could expect, the TVET beneficiaries do not present significantly higher scores than the non-beneficiaries. The results are similar at midline suggesting the positive impacts are relatively long lasting.

[36] Reliability checks implied comparing levels at midline and endline, the shape of the distribution, comparisons to national levels, and considering challenges reported during data collection. The decision is also supported by the literature, which suggests that asking for overall income over a period of time is less noisy than asking respondents for more detailed financial reports (de Mel et al., 2009).
[37] 1.00 € = 73.68 Gambian Dalasis (November 23rd, 2023).
[38] The indicator is an index ranging from 0 to 4 and represents the sum of the following practices adopted: "Keeps written financial records (simple or detailed notes)", "Has a concrete goal for next year", "Anticipates investments of the coming year", "Check whether targets have been achieved regularly".

Figure 12: Key impacts on financial practices



Source: C4ED elaboration

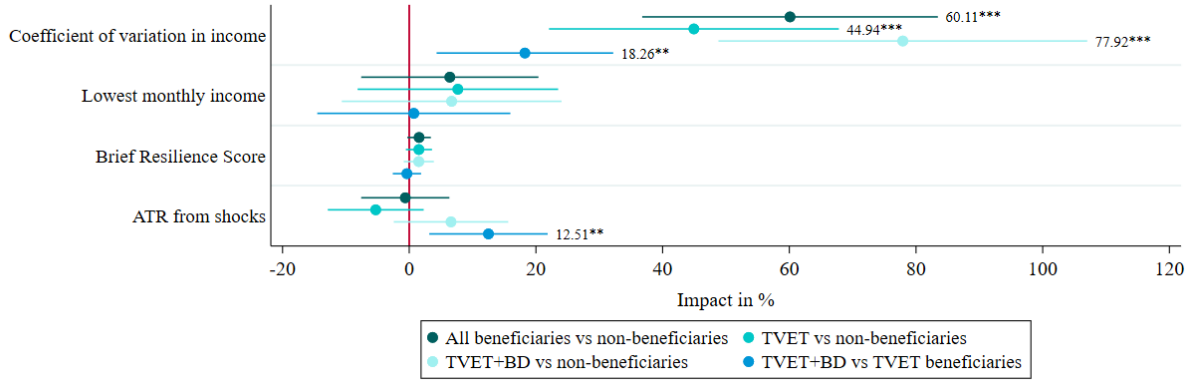
What effects does the Tekki Fii project have on resilience? (2.1.GMB.b.)

C4ED focused on the following measures of resilience: the lowest income level in the year preceding the survey (*indicator 2.1.3*), annual income variation (*indicator 2.1.4*), self-perceived resilience (*indicator 2.1.5*), and the ability to recover from shocks (*indicator 2.1.6*). Key results of C4ED's impact estimates on these indicators are displayed in Table 23 and Figure 13.

C4ED estimated income variance by asking respondents about their (i) lowest monthly income, (ii) highest monthly income, (iii) and what they consider their normal monthly income over the past twelve months. Each of these income categories was compared to the annualised monthly income. Specifically, C4ED computed squared differences, weighted by the number of months during which the respondents received each of these income categories. Annual income variation is a coefficient of variation, corresponding to the ratio between the standard deviation of the annualised income (i.e., the square root of income variance) and the annualised income itself. A higher income variation can come from a higher income in the best months or a lower income in the worst months. Income variation is null for youths not in stable employment or whose income remained the same throughout the year.

Overall, beneficiaries' income varies more than the comparison group, with a 60% increase in the coefficient of income variation because they participated in the training. A variation is often considered a symptom of vulnerability. Nevertheless, this variation in income seems beneficial, as it appears to come from higher income during good months, as beneficiaries are more likely to be in employment. Indeed, the lowest income from beneficiaries does not decrease significantly. These results indicate an improvement in beneficiaries' economic resilience 18 months after their participation in the training.

Figure 13: Key impacts on resilience



Source: C4ED elaboration

Turning to a non-monetary definition of resilience, C4ED's results point to a lack of statistically significant impact of the project on self-perceived resilience 18 months after the training. The BRS, developed by Smith et al. (2008) and widely used in the academic field (Fung, 2020), is calculated as the average of six items.[39] As with each of its items, the BRS is ranked on a scale from one to five.[40] On average, an individual has a BRS of 3.36, suggesting a "normal" level of resilience. However, with a Cronbach alpha of 0.31, the module items are not sufficiently correlated, and the indicator might be measuring other dimensions (Streiner et al., 2015). Therefore, it remains unclear whether the absence of a finding of impact is due to the actual lack of an impact or to the difficulty of measuring perceived resilience.

Finally, C4ED also measured the ability to recover (ATR) from shocks. The index typically evaluates the capacity of an individual or household to withstand and recover from adverse events. The types of shocks used to calculate this index can vary depending on the context. In this case, as for other R1 projects, C4ED considered natural disasters,[41] agricultural shocks,[42] social shocks,[43] family or personal shocks,[44] demand shocks,[45] and supply shocks (see more details in Annex 10).[46] In this case, C4ED also observes trends illustrating a positive correlation between the BD component and the ATR. However, it is only significant when comparing the TVET+BD component beneficiaries to the TVET beneficiaries in the main regression (Figure 13). The robustness checks show that the TVET+BD beneficiaries versus non-beneficiaries present improved ATR indexes, though not always significant at conventional levels. These

[39] The BRS is measured as the average score ranging from one for strongly disagreeing to five for strongly agreeing with six statements related to the respondent's resilience. These statements include "1. I tend to bounce back quickly after hard times", "2. I have a hard time making it through stressful events", "3. It does not take me long to recover from a stressful event", "4. It is hard for me to react positively when something bad happens", "5. I usually come through difficult times with little trouble", and "6. I tend to take a long time to get over set-backs in my life".

[40] A BRS between 1 and 2.99 is considered "low resilience", 3.00 to 4.30 as "normal resilience", and 4.31 to 5 as "high resilience".

[41] Such as earthquakes, floods, unusually heavy rainfall, landslides, droughts, fire, and hail/lightning.

[42] Such as pests and plant diseases, post-harvest loss, livestock loss, loss of land, and an increase in the price of inputs or a fall in the price of outputs.

[43] Such as a wave of unemployment, high rates of migration, forced displacement, riots/blockage, ethnic or religious tensions, and a pandemic/spread of a disease.

[44] Such as the death of a relative, relatives/friends stopped sending money, diseases or injury of family member, or involuntary loss of a regular job of a household member.

[45] Such as unexpected higher prices, withdrawal of government assistance, increase in price of major food items consumed, or an increase of interest rates on loans or theft.

[46] Such as fuel shortage or power cut or rationing, telephone or Internet coverage shutdown.

results suggest that providing BD component tends to improve resilience to shocks but cannot confirm it.

5.4.4. EQ3. To what extent was the Tekki Fii project efficient?

Did the project implement efficient practices? (3.1.GMB.)

To assess the efficiency of the Tekki Fii project, C4ED initially planned to use cost data, outputs and the estimated impacts to inform on the average costs incurred to train one individual and the cost to increase the employment rate by 10%, following the JPAL guidelines (Dhaliwal et al., 2013). However, the project's financial reporting towards EUTF was not aligned with the needs of the agreed-upon evaluation methodology, as it was not possible to isolate the specific costs of the activities under evaluation. Alternatively, C4ED uses GIZ's implementation reports (GIZ, 2020, 2022) as well as qualitative and quantitative primary data to assess elements of economic efficiency, operational efficiency, timeliness and connexions with other DAC criteria (OECD, 2010). It is important to mention that the following statements cannot inform on the trade-off between the resources allocated to the different activities and the extent to which they led to minimise costs or maximise impacts.

Economic efficiency

C4ED first assesses the absence of waste and the conversion of inputs into results in the most cost-efficient way possible. This also includes the extent to which appropriate choices were made and trade-offs addressed in the design stage and during implementation.

As project planning and reporting documents show, the curricula were developed in a multiple-step process with the goal of maximising the employability of Gambian youths (GIZ, 2022) (*indicator 3.1.1*). The project team first performed an in-depth assessment during the inception phase to identify trade areas with a high market demand and the specific training needs (industrial practices, subject-specific support, soft skills, counselling…). Then experts for the different industries designed the curricula using the standards of the Gambia Skills Qualification Framework and previous experiences from the ILO and United Nations Conference on Trade and Development (UNCTAD). Finally, the curricula were validated by a panel of 16 experts and accredited by NAQAA. The curricula were coupled with practical guidelines, handbooks for trainers as well as specific training of trainers for a smooth administration of the curricula and limit the loss of information throughout time and staff turnover. Impacts of the project are only visible for those who were trained in traditional trades. Though it demonstrates that there are returns on investing in traditional trades, it raises questions on the funds allocated to the modern trades and the market assessment who did not identify the difficulties to start a business or get employed by a firm.

The project used a relatively heavy selection process including a pre-selection during which information was collected using the "Applicant Questionnaire" and a selection round based on a "Selection Criteria and Scoring System for TVET Applicant Interview" (*indicator 3.1.2*). This selection process may have led to enrol the most committed and suitable candidates, contributing to high retention rates. According to the project team, the few selected applicants that dropped out from the training were quickly replaced by individuals in the waiting lists. As contact information was collected during the application process and given the few dropouts, the replacement protocol was deemed simple by the GIZ team. In addition, this implies that the

resources for the trainings were used efficiently for the planned number of beneficiaries (i.e. classes were working at full capacity).

C4ED deems that the project considered the main challenges faced by other evaluated vocational and entrepreneurship trainings: limitation of lock-in effects by offering a smooth transition into the labour market with industrial placement, promote uptake of recommended practices with a six-month personalised coaching and facilitate the opening of an IGA by providing start-up capital. Regarding the financial support, the literature as well as this study strongly suggest it is effective. However, as it was provided by the project, GIZ carried the entire financial burden. If the capital provision would take the form of a loan with bearable conditions for the beneficiary and the IGA created is financial sustainable, the approach could be more cost-effective. Another possibility could be to link the private sector in need of capital and the formal financial institutions, removing all GIZ's financial burden from this supporting activity, however, with no certitude that the beneficiary would receive the required funds. Regarding the personalised support provided in the project (BD coaching, career guidance, industrial placement), it is very likely an important factor for the relatively large impacts in comparison to other studied projects seeking to promote employment (*indicator 3.1.5*). Nevertheless, it is unclear whether these additional features to the conventional vocational trainings are cost-effective. These services do not benefit of economies of scale as they can only be absorbed by one trainee at the time unlike when a teacher shares knowledge to trainees in a classroom. Hence, more research is needed to test whether the personalised supports are more cost-effective than group-based approaches.

As mentioned above, the project struggled in attracting returnees. It took initiatives to promote the project among this specific population, but it did not offer services to overcome the ill-adapted features (see section 5.4.1), some of which would probably would have been costly such as covering for transportation and accommodation costs or offering psychosocial support. This suggests that there is probably a trade of between limiting the costs of the project and the attainment of certain goals. It is unclear whether the solutions proposed to attract returnees would be cost-effective and more research is needed to identify the best measures.

Operational efficiency and timeliness

C4ED now assesses how well resources were used during implementation mainly through the project's adaption to the Covid-19 pandemic and the monitoring activities.

The SoPE due to the Covid-19 outbreak was proclaimed from March until October 2020, during the TVET training of the first cycle. The project team reports having anticipated the consequences it would have on the TVET and adapted the delivery of the trainings (*indicator 3.1.3*). To do so, the project rolled out a training of trainers to promote distance learning methodologies. Then, the trainings took a hybrid form with distance learning for theory and support skills such as technical English and Mathematics whereas practical exercises were performed in the training centres. For the latter, the implementation reports states that "*The project engaged in ensuring that all IPs adhered to WHO Covid-19 guidelines and prevention measures*" (GIZ, 2022, p. 9). The BD component was not heavily affected given that it is mainly based on an individualised coaching. These steps suggest a high level or reactivity to pursue the activities within the stipulated three years, and therefore avoiding having to pay for fixed costs over a larger period of time (such as salaries, rents…). Nevertheless, it remains unclear for C4ED how many resources were needed to set up these adaptation measures and whether they mitigated the consequences on the quality of the training (C4ED cannot test whether the Covid-19 affected the impacts of the training due to a low sample size). In addition, it is

questionable whether these changes in implementation changes were efficient investments given that the SoPE lasted less than six months and thereafter coming back to the initial training protocols.

GIZ set up mechanisms to track the project's relevance, effectiveness and efficiency (*indicator 3.1.4*) which could be useful to identify pitfalls and, if possible, adapt the activities. To do so, GIZ performed the following:

i. Used ongoing beneficiary surveys to monitor the implementation of the planned training activities.
ii. Collected feedback from IPs, trainees and coaches to promote convergence of the BD activities in early stage of the project.
iii. Organised quarterly IP Platform Sessions to identify and overcome shortcomings.
iv. Organised a Participatory mid-term review in May 2020 to collects views from beneficiaries, training providers, industry representative and government institutions.
v. Organised Lesson Learning Tour with Key Stakeholder in August 2021 with the main institutional partners
vi. Undertook a Final Job Survey to assess the employment rates of a sample of beneficiaries.

C4ED discusses the extent to which these initiatives are relevant and hence whether they helped reducing costs or increasing impacts. For all exercises undertaken, it is difficult to assess to what extent feedback was considered and activities adapted accordingly. However, the early feedback and regular coordination meetings (i, ii and iii) took place in a timely manner to allow the project to improve shortcomings. Regarding the later initiatives, C4ED questions their usefulness for improving the efficiency of the Tekki Fii project, though they might have been useful to assess effectiveness or foster partnerships and institutional learning. The Participatory mid-term review (iv) took place during the SoPE, making it difficult for the project team to react in a timely manner before the country came back to a "regular" state. As the project closed in November 2021, the results from the Lesson Learning Tour (v) and the Final Job Survey (vi) probably could not be used to adapt its activities. Finally, performing several surveys with a similar purpose appears to be inefficient as it does not allow to benefit from economies of scale on the resources allocated (training of staff, data cleaning, data analysis, reporting…).

5.4.5. EQ5. How did the Tekki Fii project include and promote different vulnerable groups?

What are the differentiated outcomes of the interventions across gender? (5.1.GMB)

The impacts of Tekki Fii may differ for female and male beneficiaries because of existing differences between these two groups. As a result, it is useful to assess how female and male participants may have differed before the project. Female participants are, on average, 1.6 years younger than male participants and less likely to be returnees, with only 1% of female beneficiaries being returnees compared to 25% of males (Table 9). A larger share of females was born in GBA, which is the case for 57%, compared with 44% of males. Female participants are, on average, more educated, with only 4% having achieved primary education or a lower level, against 10% of males. Female participants had, on average, fewer children (around one child less) at baseline than male participants, and their parents' income was, on average, higher than that of males. Finally, female beneficiaries display higher interview scores than males by two points, on average. As females were given three additional points to foster their

participation in the project, this difference suggests that they scored lower in other categories, on average.

Table 9: Baseline beneficiaries' characteristics by gender

	(1) Full sample	(2) Female beneficiaries	(3) Male beneficiaries	(4) (2)-(3) (p-value)
Principal sociodemographic characteristics				
Age	25.9	25.1	26.7	-1.6***
	(4.5)	(3.8)	(5.0)	(0.00)
Returnee	0.13	0.01	0.25	-0.25***
	(0.34)	(0.07)	(0.43)	(0.00)
Not married	0.84	0.84	0.84	0.00
	(0.36)	(0.36)	(0.37)	(0.91)
Education				
Primary or lower	0.07	0.04	0.10	-0.06***
	(0.26)	(0.20)	(0.30)	(0.00)
Junior Secondary	0.21	0.21	0.20	0.01
	(0.41)	(0.41)	(0.40)	(0.66)
Senior Secondary	0.49	0.51	0.47	0.04
	(0.50)	(0.50)	(0.50)	(0.34)
Tertiary/vocational	0.22	0.22	0.22	0.00
training	(0.41)	(0.42)	(0.41)	(0.97)
Higher level	0.01	0.01	0.01	0.01
	(0.10)	(0.11)	(0.08)	(0.44)
Region of birth and residence				
Born in the GBA	0.51	0.57	0.44	0.13***
	(0.50)	(0.50)	(0.50)	(0.00)
Residence in the GBA	0.57	0.62	0.52	0.11***
	(0.50)	(0.48)	(0.50)	(0.00)
Other characteristics				
Parents' income	4,668	5,167	4,184	983*
	(5,723)	(7,113)	(3,895)	(0.10)
# of adults in HH	5.2	5.0	5.4	-0.4
	(3.8)	(3.5)	(4.2)	(0.21)
# of children in HH	5.4	5.1	5.7	-0.6*
	(4.6)	(4.6)	(4.6)	(0.08)
Interview score				
Average interview score	15.9	16.9	14.8	2.1***
	(2.3)	(2.0)	(2.2)	(0.00)
Observations	742	364	377	

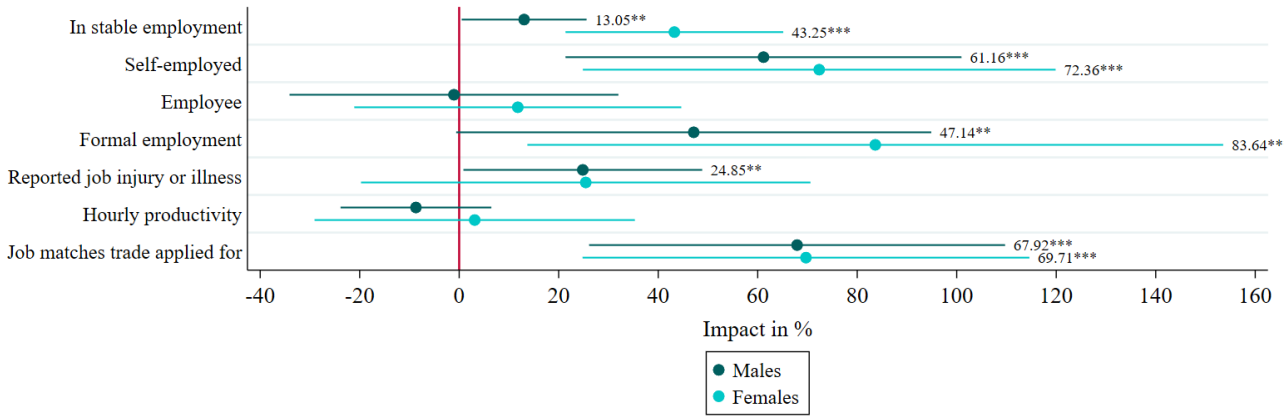
Note: Columns (1), (2) and (3) present the sample means (proportions when % is shown in the variable name or in the table) of selected variables for the full sample, the treatment group, and the control group, respectively. Standard deviations in parentheses. Column (4) presents the mean difference between female and male beneficiaries. P-value of the corresponding t-test in parentheses. Significance stars: * $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$.
Source: C4ED elaboration

There are notable differences in the trades to which female and male beneficiaries applied. Half of the females applied for hairdressing and beauty therapy (51%), followed by garment making (30%), while the dominant trades among males were satellite installation (35%) and solar installation (26%). The results of the impact estimates by gender (Table 25 to Table 32) support a positive effect of Tekki Fii on both female and male youths' employment and livelihoods, with interesting nuances.

Impacts on employment

Female's likelihood of having a stable job increased by 43% eighteen months after the training, whereas the impact among males is only 13% (Figure 14). Without their participation in the project, only 49% of females would have been employed, instead of the rate of 70%. Based on these estimations, the impact has contributed to reducing the differences in males' and females' employment rates among beneficiaries to seven percentage points difference, mainly thanks to the additional BD component in combination with the TVET. Among non-participants, a difference of 20 percentage points remains (68% for males vs 49% for females). It is common to observe larger impacts of TVET projects on females (Card et al., 2018; Stöterau et al., 2022). This is likely due to a convergence mechanism as males were more likely to have a job before the project.

Figure 14: Overall impacts on employment by gender



Source: C4ED elaboration

Interestingly, females and males are more likely to be self-employed (+72% for females and +61% for males), again driven by the additional BD component. For females, this increase is due to a higher likelihood of becoming own-account workers (i.e., without employees) and of becoming an employer. While 9% of females would have worked as an employer in the absence of the project, this rate reaches 16% thanks the training, which suggests that they are more likely to be at the head of well-anchored businesses because of the training. Female beneficiaries are also 121% more likely to be apprentices, increasing the rate from 5% to 10%. Turning to males, the impacts on self-employed are also due to an increased likelihood of becoming own-account workers or employers. After the project, 25% of males are employers thanks to the project. C4ED does not observe other significant impacts on other employment statuses, suggesting that, among males, the project principally promoted the creation and development of IGAs. Hence, despite promoting self-employment among both genders, gender differences lie in two key elements: the project helped females to find jobs as apprentices (whereas it did not for males) and to start new businesses (i) and males are more likely to be at the head of well-anchored businesses than females after participating in the project (ii). Indeed, male beneficiaries own businesses that are almost three times larger (in terms of number of employees) than their female counterparts, and they earn 60% more from stable employment.

The project also positively impacted formal employment for both genders as beneficiaries who opened a new business were also more likely to register it. Eighteen months after the training, males are more likely to have a formal job (+47%). For females, the impact is of +83%. This large impact among females has contributed to eliminating the four percentage points gender

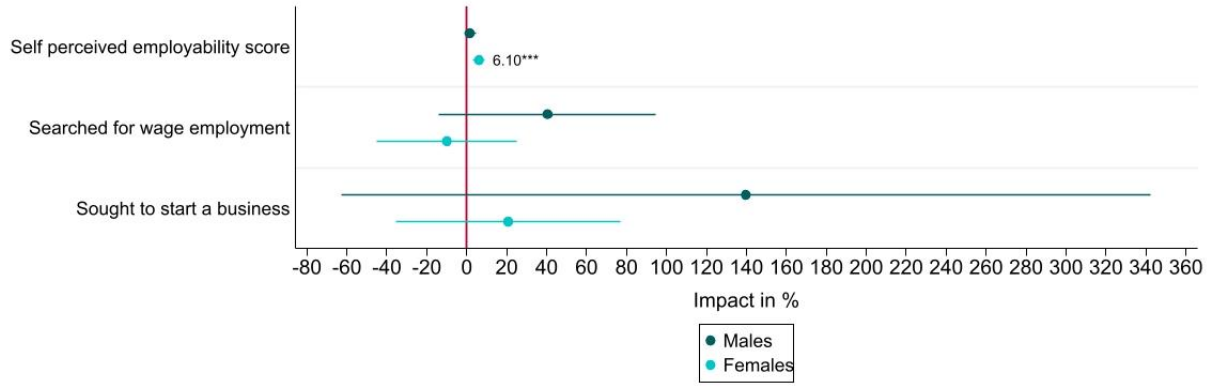
gap. After the project, almost a quarter of male and female beneficiaries have a formal job thanks to the project.

The project also increased the likelihood of facing occupational hazards among males by 25% (increasing the share from 49% to 61%). Among females, no impacts on job hazards can be detected; a gender difference probably due to males being more likely to work in the manufacturing sector than females.

Impacts on employability

For those who did not find employment, the results show that the project only improved the self-perceived employability scale by 6% among female beneficiaries 18 months after the training (Figure 15). These positive impacts are not significant six months after the training, suggesting that changes in their belief that they are more employable take time to materialise. Among male beneficiaries, the project did not have any significant impact. Interestingly, despite the career guidance and counselling provided in the TVET, there is no clear evidence that the project improved proactiveness in job search. It must be noted that fewer males in the sample do not have a stable job, which reduces to the capacity to detect impacts. Hence, there might be impacts, but they are not large enough for C4ED to detect. These results are stable six and 18 months after the training.

Figure 15: Overall impacts on employability by gender



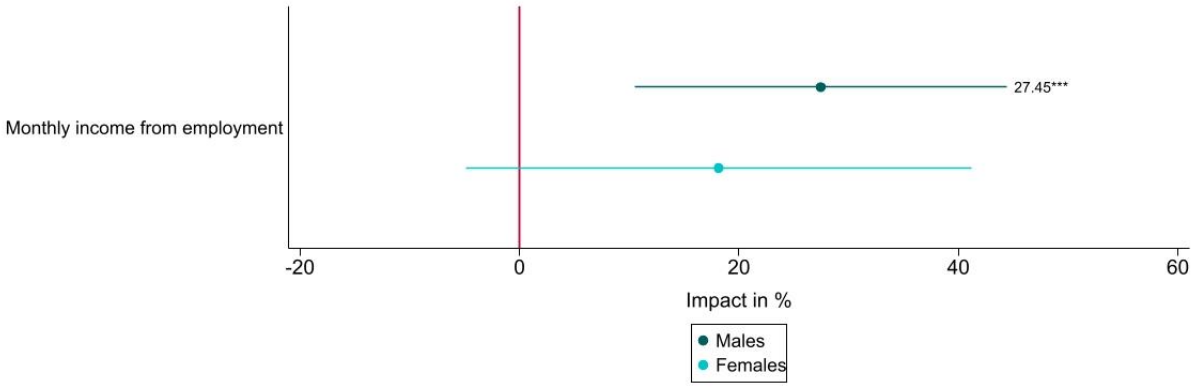
Source: C4ED elaboration

Impacts on income

The positive impact on income is specifically driven by the increase in males' income from employment. For males, the project contributed to an increase of 27% (raising their income from 3,763 GMB to 4,851 GMB – from 51.1 € to 65.8 €). For females, though the project seems to improve their income, C4ED cannot confirm it statistically (Figure 16). By improving the incomes from employment for males, the project has also increased the gender pay gap as males earn almost twice as much (+98%) than females after benefitting from the trainings, whereas they earn 55% more in the absence of the project. This finding suggests that despite the project's positive impacts on employment on both genders, only males' financial livelihood improves thanks to the project. This can be explained by several factors. First, considering that females tend to own new businesses (while males tend to have more well-anchored ones), the returns on investments might need more time to materialise. Indeed, setting up a business if often costly and gaining market shares can be lengthy. Another potential explanation is that most female beneficiaries were trained and occupy jobs in traditional and more competitive trades such as hairdressing, beauty therapy and garment making whereas male beneficiaries tend to be trained

in more modern trades such as solar and satellite installations. C4ED assumes that fewer youth have technical skills in these trades and therefore, (male) Tekki Fii beneficiaries can take advantage of the limited competition. Finally, as mentioned previously, though both genders tend to become entrepreneurs, females are still more likely to occupy other positions as apprentices. This status is considered as a vulnerable working status as they are usually paid at a lower rate.

Figure 16: Overall impacts on income by gender



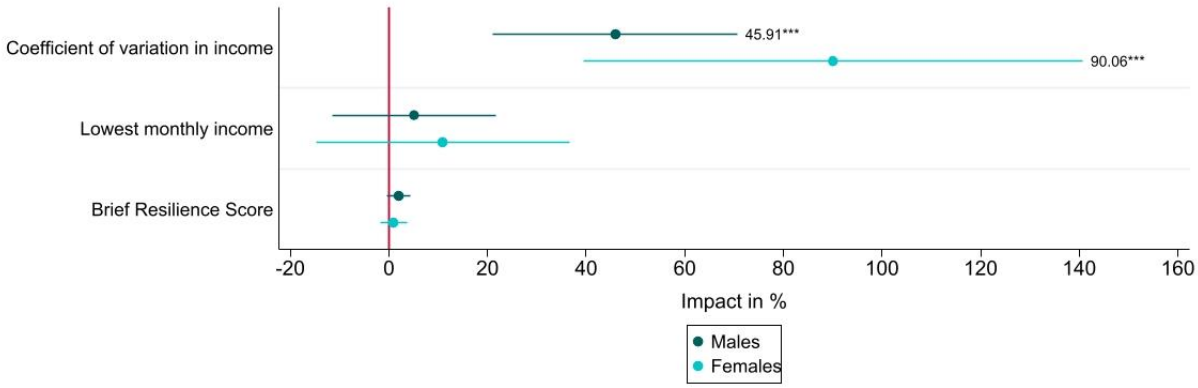
Source: C4ED elaboration

Impacts on resilience

Turning to resilience, the project impacted the variation of income across the year on both genders, but the magnitudes seem higher among females. Indeed, beneficiary males experience an increased variation in income of 49%, whereas beneficiary females experience an increase of 90% (Figure 17). Again, this increase in income variation appears to be due to an increase in their income during "good" months, as the lowest monthly income also increased thanks to the project, more specifically due to the combination of the TVET and BD component.

Tekki Fii did not have a statistically significant effect on the perceived resilience of either male or female beneficiaries 18 months after the training. For the ATR from shocks, C4ED finds marginal changes among females. Among males, impacts appear more volatile but not robust enough to confirm gender-specific trends.

Figure 17: Overall impacts on resilience by gender



Source: C4ED elaboration

What are the differentiated outcomes of the interventions across returnee status? (5.2.GMB)

As for the males and females, returnee and non-returnee beneficiaries display different characteristics before the start of the project. Returnees are, on average, two years older, less likely to be female (12% against 54% among non-returnees) and have a lower level of education (12% of them have only achieved up to the primary level, against 7% among non-returnees). Fewer returnees were born in GBA (36%, against 53% among non-returnees) or live in GBA. Though returnees' parents' income was, on average, lower than non-returnees' parents' income at baseline, this difference is also not statistically significant. Returnees belonged to households with 1.2 more children than non-returnee households, on average. Despite being given three additional points when qualifying as returnees (in line with the efforts made by the programme to enrol returnees), on average, returnees' interview score was similar to that of non-returnees.

Table 10: Baseline beneficiaries' characteristics by returnee status

	(1) Full sample	(2) Returnee beneficiaries	(3) Non-returnee beneficiaries	(4) (2)-(3) (p-value)
Age	25.9	27.6	25.7	1.9***
	(4.5)	(4.7)	(4.4)	(0.00)
Female	0.49	0.12	0.54	-0.42***
	(0.50)	(0.33)	(0.50)	(0.00)
Not married	0.84	0.83	0.85	-0.02
	(0.36)	(0.38)	(0.36)	(0.68)
Education				
Primary or lower	0.07	0.12	0.07	0.06*
	(0.26)	(0.33)	(0.25)	(0.10)
Junior Secondary	0.21	0.21	0.21	0.01
	(0.41)	(0.41)	(0.41)	(0.92)
Senior Secondary	0.49	0.45	0.50	-0.04
	(0.50)	(0.50)	(0.50)	(0.52)
Tertiary/vocational	0.22	0.20	0.22	-0.03
training	(0.41)	(0.40)	(0.42)	(0.64)
Higher level	0.01	0.02	0.01	0.01
	(0.10)	(0.12)	(0.09)	(0.61)
Region of birth and residence				
Born in the GBA	0.51	0.36	0.53	-0.16**
	(0.50)	(0.48)	(0.50)	(0.01)
Residence in the GBA	0.57	0.41	0.59	-0.17***
	(0.50)	(0.50)	(0.49)	(0.00)
Other characteristics				
Parents' income	4,668	4,089	4,714	-625
	(5,723)	(4,897)	(5,788)	(0.58)
# of adults in HH	5.2	5.8	5.1	0.7
	(3.8)	(3.9)	(3.8)	(0.14)
# of children in HH	5.4	6.5	5.3	1.2**
	(4.6)	(5.3)	(4.5)	(0.03)
Interview score				
Average interview score	15.9	15.7	15.9	-0.2
	(2.3)	(2.2)	(2.3)	(0.43)
Observations	742	82	658	

Note: Columns (1), (2) and (3) present the sample means (proportions when % is shown in the variable name or in the table) of selected variables for the full sample, the treatment group and the control group, respectively. Standard deviations in parentheses. Column (4) presents the mean difference between the treatment and control groups. P-value of the corresponding t-test in parentheses.
Significance stars: * $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$.
Source: C4ED elaboration

The survey data[47] show that a larger share of returnees applied for training on installation and repairs (51%) than non-returnees (45%). No returnee applied to hairdressing and beauty. These differences seem driven by gender differences between these two groups. Indeed, when comparing male returnees and non-returnees, there are no statistical differences in the share of applicants for the trades mentioned above.

As mentioned before, C4ED faced two important challenges for this disaggregated analysis. First, given that there are few returnees, the estimations have limited power to detect impacts unless the latter are large enough. In fact, due to the limited number of returnees, the regression model used throughout the study faced collinearity issues, and estimations did not converge for all outcomes of interest. Second, as most returnees are male, it is difficult to disentangle whether the impacts are due to gender dynamics or to their returnee status. Hence, the findings presented below must be considered more as an exploration of the potential effects on returnees and non-returnees. The results of the impact estimates on non-returnees are presented in Appendix 5.9.5. For assessing the impacts on returnees, C4ED compares the impacts on the overall sample and the specific impacts on the non-returnees to suggest the probable dynamics among returnees.

Impacts on employment

Eighteen months after the training, C4ED finds positive impacts among non-returnees on stable employment for those who benefitted from the TVET+BD training (+23% in stable employment). However, the impacts are diluted by the lack of impacts on non-returnees who benefitted of only the TVET. This leads to the assumption that the positive impacts have been particularly large among returnees as also suggested when comparing the treatment 2 returnees and comparison returnees. Regarding employment status, C4ED finds that the project principally promoted self-employment among non-returnees. Results report that a non-returnee is more than two times more likely to be self-employed 18 months after the training than a non-returnee non-beneficiary. C4ED also finds that the TVET+BD training promoted apprenticeship and increased the likelihood of finding a job a job as an apprentice by 96%, with no clear differences between returnees and non-returnees, though to a lesser extent. C4ED finds positive but limited impacts of the programme on formal employment among non-returnees thanks to the BD training. Given that impacts on formal employment on the overall sample are significant, one can assume that the impacts among returnees were particularly high. However, KIIs suggest that returnees face greater challenges in formalising their business if they lack documentation:

> *"Once that [business starter kit] is provided for them, they [trainers] encourage them [training graduates] to make sure they are not using the revenue for just for their personal gains but be able to reinvest it back into their businesses. So, they encourage them to have those business bank accounts and to have that added number with an ID card. So those things become challenging for them if they don't have the right documents."* (Implementing partner)

Regarding job injury or illness, hourly productivity, and job match with the trade applied for, magnitudes and effect sizes are similar between the overall sample and the non-returnees suggesting that the programme affected the returnees similarly.

[47] KIIs could not shed much light on differentiated outcomes and their potential causes, as GIZ and implementers reportedly did not track and measure outcomes disaggregated by migration status and stated that they were unaware of any differences.

Impact on income and resilience

Turning to indicators of livelihoods and resilience, non-returnees' average income increased by 13% eighteen months after the training, an impact triggered by the additional BD training and its combination with the TVET. The magnitudes of the impacts are similar to those found on the full sample, suggesting that impacts tend to be similar among returnees.

For resilience, once again, C4ED observes similar patterns of impacts on non-returnees: that is, large and significant impacts on the variation of income with no reduction of the lowest monthly income. As discussed above, the results indicate an improvement in the income from the "good" months thanks to Tekki Fii. When investigating the BRS and the ATR from shocks, C4ED finds no significant and robust impacts of the programme. From these results, C4ED assumes no large differences in the impacts across returnee status (see Appendix 5.9.5).

5.5. EVALUATION MATRIX

Table 11: Evaluation matrix

Evaluation question	Judgement criteria	Evaluation method	Indicators	Source of information	DAC criteria
EQ0. Did the Tekki Fii project reach its targets?					
	0.1.GMB.a. Did Tekki Fii train the intended number of individuals?	Quant.	0.1.1. Number of individuals trained 0.1.2. Number of females trained 0.1.3. Number of returnees trained	Desk review	Effectiveness
		Qual.	0.1.4. Reasons for limited enrolment of returnees	KIIs	
EQ1. To what extent did EUTF interventions contribute to employment, job creation, and skills? *To what extent did the Tekki Fii project contribute to employment, job creation, and skills?*					
1.1. What effects do trainings have on employability of beneficiaries and access to (decent) employment?	1.1.GMB.a. What effects does the Tekki Fii project have on (decent) employment?	Quant.	1.1.1. Employment (worked at least 1 hour in the past seven days) 1.1.2. Stable employment (worked for more than one month in the past 6 months) 1.1.3. Employment status (is self-employed, regular employee, apprentice, family worker, casual worker) 1.1.4. Formality of employment 1.1.5. Hourly productivity **1.1.6. Quality of employment index** 1.1.7. Exposure to job hazards ~~*Formality of enterprise*~~	Youth questionnaire	Impact
	1.1.GMB.b. What effects does the Tekki Fii project have on employability?	Quant.	1.1.8. Self-perceived employability score **1.1.9. Searched for a job in a firm** **1.1.10. Sought to open a business** **1.1.11. Talked friends/relatives about possible jobs** 1.1.12. **Use Internet/radio/Social media**	Youth questionnaire	Impact
1.5 To what extent are training facilities 'fit-for-purpose' in delivering skills training to final beneficiaries?	1.5.GMB. To what extent are training facilities 'fit-for-purpose' in delivering skills training to Tekki Fii trainees?	Quant.	1.5.1. Perceived trainee evaluation/feedback	Youth questionnaire	Relevance
EQ 2. To what extent did EUTF interventions change resilience and livelihoods for beneficiaries?					

To what extent did the Tekki Fii project change resilience and livelihoods for beneficiaries?					
2.1 What effects do trainings have on livelihoods and resilience?	2.1.GMB.a. What effects does the Tekki Fii project have on livelihood, in terms of income?	Quant.	*2.1.1.* Annualized average monthly income **2.1.2.** **Financial planning index** ~~Average monthly income from stable employment in the past 6 month~~	Youth questionnaire[1]	Impact
	2.1.GMB.b. What effects does the Tekki Fii project have on resilience?	Quant.	2.1.3. Lowest level of monthly income 2.1.4. Annual income variation (coefficient of variation) 2.1.5. BRS 2.1.6. Ability to recover from shocks index	Youth questionnaire	Impact
EQ 3. Which were the most cost-effective EUTF support options to enhance employability? *To what extent was the Tekki Fii project efficient?*					
3.1 What were the cost per beneficiaries of the EUTF interventions?	~~3.1.GMB. What were the costs of implementing the Tekki Fii trainings per beneficiary?~~	~~Quant.~~	~~Costs of implementation/number of trainees~~	~~Monitoring data~~	~~Efficiency~~
3.2 What are the impacts of the EUTF interventions (on employment) in terms of their costs?	~~3.2.GMB. What effects on employment and income do the Tekki Fii trainings have in relation to its costs?~~	~~Quant.~~	~~Effect on employment / Costs of implementation~~ ~~Effect on income / Costs of implementation~~	~~Youth questionnaire,~~ ~~Monitoring data~~	~~Efficiency~~
	3.1.GMB. Did the project implement efficient practices?	**Qual.**	**3.1.1. Curricula development process** **3.1.2. Selection process** **3.1.3. Covid-19 adaptation** **3.1.4. Efficiency assessment** **3.1.5. Cost-effectiveness of individualised support**	**Desk Review**	**Efficiency**
EQ 4. What other intended and unintended outcomes (e.g. mobility, migration, migration intentions, employment policies and reforms) did EUTF interventions contribute to? *Not applicable to the Tekki Fii IE*					
EQ 5. How did EUTF interventions include and promote different vulnerable groups such as youths, females, refugees, IDPs, migrants and host communities alike through its activities? *How did the Tekki Fii project include and promote different vulnerable groups?*					
5.1 What are the (differentiated) effects of EUTF interventions by youths, females, refugees, IDPs, returning migrants and host communities in terms of job creation, employability, and skills attainment?	5.1.GMB. What are the differentiated outcomes of the interventions across gender?	Quant	See indicators for respective EQs (1.1.GMB.a., 1.1.GMB.b., 2.1.GMB.a., 2.1.GMB.b.)	Youth questionnaire	Impact
	5.2.GMB. What are the differentiated outcomes of the interventions across returnee status?	Quant	See indicators for respective EQs (1.1.GMB.a., 1.1.GMB.b., 2.1.GMB.a., 2.1.GMB.b.)		Impact
		Qual	5.1.1. (Reasons for) differentiated outcomes between returnees and non-returnees	KIIs	

EQ 6. What were the likely contributions of EUTF interventions when compared to Member States' independent and separate bilateral interventions and to what extent were EUTF interventions coherent with other local interventions? *Questions for EQ6 are not asked at the national level in R1*					
Additional project-specific EQs					
7.1.GMB. Do graduates find work that matches the skills they learned during the training?	7.1.GMB. Is the income generating activity related to the skills learned during the Tekki Fii project?	Quant.	7.1.1. Has job in a branch related to trade	Youth questionnaire	Relevance

Note: indicators crossed demonstrated that they did not provide additional relevant information. Hence results on the latter are not displayed in this report. Indicators in bold have been added to the agreed at the inception phase provide further insights. Indicators in green are deemed highly reliable. Indicators in orange are considered moderately reliable. C4ED tested the reliability of psychometric and composite indicators by estimating the Conbrach Alpha (see Table 12).
Source: C4ED elaboration

Table 12: Composite psychometric indicators and internal consistency

Indicator	Cronbach Alpha	Internal consistency
Self-perceived employability (1.1.11)	0.678	Low internal consistency
Brief resilience scale (2.1.4)	0.311	Low internal consistency

Note: To be considered with an acceptable internal consistency, a Cronbach's alpha must range between 0.70 and 0.90 (Streiner et al., 2015).
Source: C4ED elaboration

5.6. RELEVANT GEOGRAPHIC MAP(S) WHERE THE INTERVENTION TOOK PLACE

N/A

5.7. LIST OF PERSONS/ORGANISATIONS CONSULTED

- Fabio Germano, project manager (GIZ – The Gambia)
- Momodou Bittaye (GIZ - The Gambia)
- Samboujang Touray (GIZ - The Gambia)
- Dominika Socha, EUTF project manager
- Hamidou Jawara (CepRaas)
- Lamin Dampha (CepRass)
- GIZ
- Insight Training Centre
- Start-Up Incubator Gambia
- Sterling Consortium
- Chigamba
- IOM
- National Youth Council
- Returnee organisation

5.8. LITERATURE AND DOCUMENTATION CONSULTED

Abay, K. A., Berhane, G., Hoddinott, J., & Tafere, K. (2021). *Assessing response fatigue in phone surveys: Experimental evidence on dietary diversity in Ethiopia* (IFRPI Discussion Papers 02017). IFRI.

AfDB, & OECD. (2017). *African Economic Outlook 2017: Entrepreneurship and Industrialisation* (African Economic Outlook). https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/AEO_2017_Report_Full_English.pdf

African Development Bank (AfDB). (2015). *Africa Gender Equality Index 2015*. African Development Bank. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/African_Gender_Equality_Index_2015-EN.pdf

African Development Bank (AfDB). (2020). *African Economic Outlook 2020 amid COVID-19*.

African Development Bank [AfDB]. (2020, January 30). *African Economic Outlook 2020* [Text]. African Development Bank - Building Today, a Better Africa Tomorrow; African Development Bank Group. https://www.afdb.org/en/documents/african-economic-outlook-2020

Agarwal, N., & Mani, S. (2023). New Evidence on Vocational and Apprenticeship Training Programs in Developing Countries. *Handbook of Experimental Development Economics*.

Bah, T. L., & Batista, C. (2018). *Understanding willingness to migrate illegally: Evidence from a lab in the field experiment* [NOVAFRICA Working Paper Series]. Universidade Nova de Lisboa, Faculdade de Economia, NOVAFRICA. https://econpapers.repec.org/paper/unlnovafr/wp1803.htm

Benes, E. M., & Walsh, K. (2018a). *Measuring Employment in Labour Force Surveys: Main findings from the ILO LFS pilot studies.* International Labour Organization. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/publication/wcms_635732.pdf

Benes, E. M., & Walsh, K. (2018b). *Measuring Unemployment and the Potential Labour Force in Labour Force Statistics: Main findings from the ILO LFS pilot studies.* International Labour Organization. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/publication/wcms_627878.pdf

Benjamin, N., Mbaye, A. A., & Diop, I. T. (2012). *The Informal Sector in Francophone Africa: Firm Size, Productivity, and Institutions*. World Bank Publications.

Blattman, C., & Dercon, S. (2016). *Occupational Choice in Early Industrializing Societies: Experimental Evidence on the Income and Health Effects of Industrial and Entrepreneurial Work* (SSRN Scholarly Paper 2849740). https://doi.org/10.2139/ssrn.2849740

Card, D., Kluve, J., & Weber, A. (2018). What Works? A Meta Analysis of Recent Active Labor Market Program Evaluations. *Journal of the European Economic Association*, *16*(3), 894–931. https://doi.org/10.1093/jeea/jvx028

Carranza, E., & McKenzie, D. (2024). Job Training and Job Search Assistance Policies in Developing Countries. *Journal of Economic Perspectives*, *38*(1), 221–244. https://doi.org/10.1257/jep.38.1.221

Cockx, B., & Picchio, M. (2013). Scarring effects of remaining unemployed for long-term unemployed school-leavers. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*, *176*(4), 951–980. https://doi.org/10.1111/j.1467-985X.2012.01086.x

Crépon, B., & Premand, P. (2019). *Direct and Indirect Effects of Subsidized Dual Apprenticeships* (SSRN Scholarly Paper 3495770). https://doi.org/10.2139/ssrn.3495770

de Mel, S., McKenzie, D. J., & Woodruff, C. (2009). Measuring microenterprise profits: Must we ask how the sausage is made? *Journal of Development Economics*, *88*(1), 19–31. https://doi.org/10.1016/j.jdeveco.2008.01.007

Dhaliwal, I., Duflo, E., Glennerster, R., & Tulloch, C. (2013). Comparative Cost-Effectiveness Analysis to Inform Policy in Developing Countries: A General Framework with Applications for Education. *Education Policy in Developing Countries*. http://hdl.handle.net/1721.1/116111

Ebere, C. (2018). *Gambians see sharp decline in emigration, though interest in leaving remains high* (Afrobarometer Dispatch No. 266). Centre for Policy, Research and Strategic Studies. https://afrobarometer.org/sites/default/files/publications/Dispatches/ab_r7_dispatchno266_gambian_migration_seen_decreasing_but_interest_still_high.pdf

Fergusson, D. M., McLeod, G. F., & Horwood, L. J. (2014). Unemployment and psychosocial outcomes to age 30: A fixed-effects regression analysis. *Australian & New Zealand Journal of Psychiatry*, *48*(8), 735–742. https://doi.org/10.1177/0004867414525840

Field, E. M., Linden, L. L., Malamud, O., Rubenson, D., & Wang, S. Y. (2019). *Does Vocational Education Work? Evidence from a randomized experiment in Mongolia*. National Bureau of Economic Research. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/meetingdocument/wcms_636042.pdf

Frölich, M., & Sperlich, S. (2019). *Impact evaluation*. Cambridge University Press.

FRONTEX. (2020). *Migratory Map*. https://frontex.europa.eu/we-know/migratory-map/

Fung, S. (2020). Validity of the Brief Resilience Scale and Brief Resilient Coping Scale in a Chinese Sample. *International Journal of Environmental Research and Public Health*, *17*(4), 1265. https://doi.org/10.3390/ijerph17041265

Garbero, A. (2016). *Measuring IFAD's impact: Background paper to the IFAD9 Impact Assessment Initiative* (280045; IFAD Research Series). International Fund for Agricultural Development (IFAD).

GBoS. (2018). *The Gambia Labour Force Survey 2018*. Gambia Bureau of Statistics. https://datacatalog.worldbank.org/dataset/gambia-labour-force-survey-2018#tab4

GBoS. (2021). *The Gambia Demographic and Health Survey 2019-20*. Gambia Bureau of Statistics.

GIZ. (2020). *EU-GIZ 'Tekki Fii—Make it in The Gambia' Project: Second Narrative Interim Report (1st June—30th November 2019)*.

GIZ. (2022). *EU-GIZ 'Tekki Fii' (Make it The Gambia) Project, Final Report (November 2018-November 2021)*. GIZ Internation Services.

GTTI. (2018). *GTTI Tracer Study Report 2015-2016* (p. 83).

Hardy, M. L., Mbiti, I. M., Mccasland, J. L., & Salcher, I. (2019). *The Apprenticeship-to-Work Transition: Experimental Evidence from Ghana*. The World Bank. https://doi.org/10.1596/1813-9450-8851

Heckman, J. J., & Kautz, T. (2012). Hard evidence on soft skills. *Labour Economics, 19*(4), 451–464. https://doi.org/10.1016/j.labeco.2012.05.014

Ho, D. E., Imai, K., King, G., & Stuart, E. A. (2007). Matching as Nonparametric Preprocessing for Reducing Model Dependence in Parametric Causal Inference. *Political Analysis*, *15*, 199–236.

ILO. (2013). *Measuring informality: A statistical manual on the informal sector and informal employment*. International Training Centre of the ILO. http://www.ilo.org/global/publications/ilo-bookstore/order-online/books/WCMS_222979/lang--en/index.htm

ILO. (2018). *Women and men in the informal economy: A statistical picture. Third edition* [Report]. International Labour Office. http://www.ilo.org/global/publications/books/WCMS_626831/lang--en/index.htm

ILO. (2019). *Skills and jobs mismatches in low- and middle-income countries*. International Labour Office. http://www.ilo.org/skills/pubs/WCMS_726816/lang--en/index.htm

ILO. (2020). *ILOSTAT database*. International Labour Office. https://ilostat.ilo.org/

Imbens, G. W., & Rubins, D. B. (2015). *Causal Inference for Statistics Social, and Biomedical Sciences: An Introduction*. Cambridge University Press.

IMF. (2020, October). *World Economic Outlook Database*. IMF. https://www.imf.org/en/Publications/WEO/weo-database/2020/October

International Labour Organization. (2013). *Guide to the new Millennium Development Goals Employment indicators: Including the full decent work indicator set*. http://site.ebrary.com/id/11018247

International Organization for Migration [IOM]. (2020). *Missing Migrants Project*. https://missingmigrants.iom.int/

International Trade Centre [ITC]. (2018). *Strategic Youth and Trade Development Roadmap of The Gambia 2018–2022*. https://www.intracen.org/uploadedFiles/intracenorg/Content/Redesign/Projects/YEP/Gambia%20SYTDR%20RoadMap%20Web%20Final.pdf

Joshi, A., Prichard, W., & Heady, C. (2014). Taxing the Informal Economy: The Current State of Knowledge and Agendas for Future Research. *The Journal of Development Studies*, *50*(10), 1325–1347. https://doi.org/10.1080/00220388.2014.940910

La Porta, R., & Shleifer, A. (2008). The Unofficial Economy and Economic Development. *Brookings Papers on Economic Activity*, *2008*, 275–352.

Lahire, N., Johanson, R., & Wilcox, R. T. (2011). *Youth employment and skills development in The Gambia*. International Bank for Reconstruction and Development/The World Bank.

McKee-Ryan, S., Song, Z., & Kinicki, A. (2005). Psychological and physical well-being during unemployment: A meta-analytic study. *The Journal of Applied Psychology*, *90*(1), 53–76. https://doi.org/10.1037/0021-9010.90.1.53

McKenzie, D. (2017). How Effective Are Active Labor Market Policies in Developing Countries? A Critical Review of Recent Evidence. *The World Bank Research Observer*, *32*(2), 127–154. https://doi.org/10.1093/wbro/lkx001

McKenzie, D., & Woodruff, C. (2014). What are We Learning from Business Training and Entrepreneurship Evaluations around the Developing World? *World Bank Research Observer*, *29*(1), 48–82. https://doi.org/10.1093/wbro/lkt007

McKenzie, D., & Woodruff, C. (2017). Business Practices in Small Firms in Developing Countries. *Management Science*, *63*(9), 2967–2981. https://doi.org/10.1287/mnsc.2016.2492

McKenzie, D., & Woodruff, C. (2023). *Training entrepreneurs* (3; VoxDevLit).

Mortensen, D. T., & Pissarides, C. A. (1999). Chapter 39 New developments in models of search in the labor market. In *Handbook of Labor Economics* (Vol. 3, pp. 2567–2627). Elsevier. https://doi.org/10.1016/S1573-4463(99)30025-0

NAQAA. (2018). *Employer Skills Need Assessment Survey 2018*. National Accreditation and Quality Assurance Authority.

OECD. (2010). *DAC Quality Standards for Development Evaluation*. OECD Publishing. https://doi.org/10.1787/9789264083905-en

Rankin, K., Cameron, D. B., Ingraham, K., Mishra, A., Burke, J., Picon, M., Miranda, J., & Brown, A. N. (2015). *Youth and transferable skills: An evidence gap map* [Evidence Gap Map]. 3ie.

Ripollone, J. E., Huybrechts, K. F., Rothman, K. J., Ferguson, R. E., & Franklin, J. M. (2020). Evaluating the utility of coarsened exact matching for pharmarcoepidemiology using real and simulated claims data. *American Journal of Epidemiology*, *189*(6), 613–622.

Rothwell, A., Herbert, I., & Rothwell, F. (2008). Self-perceived employability: Construction and initial validation of a scale for university students. *Journal of Vocational Behavior*, *73*(1), 1–12. https://doi.org/10.1016/j.jvb.2007.12.001

Samuel Hall. (2018). *Mapping and Socio-Economic Profiling of Communities of Return in the Gambia (Synthesis Report)*. Regional Office for West and Central Africa of the International Organization for Migration.

Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: Assessing the ability to bounce back. *International Journal of Behavioral Medicine*, *15*(3). https://doi.org/10.1080/10705500802222972

Stöterau, J., Kemper, J., & Ghisletta, A. (2022). *The Impact of Vocational Training Interventions on Youth Labor Market Outcomes: A Meta-Analysis* (SSRN Scholarly Paper 4217580). https://doi.org/10.2139/ssrn.4217580

Streiner, D. L., Norman, G. R., & Cairney, J. (2015). *Health Measurement Scales: A Practical Guide to Their Development and Use*. Oxford University Press.

Stuart, E. A. (2010). Matching methods for causal inference: A review and a look forward. *Statistical Science*, *1*, 1–21.

Stuart, E. A., Lee, B. K., & Leacy, F. P. (2013). Prognostic score–based balance measures can be a useful diagnostic for propensity score methods in comparative effectiveness research. *Journal of Clinical Epidemiology*, *66*(8), S84–S90.

The Gambia: Jobs, Skills and Finance (JSF) for Women and Youth | ITC. (n.d.). Retrieved 27 May 2024, from https://intracen.org/our-work/projects/the-gambia-jobs-skills-and-finance-jsf-for-women-and-youth

United Nations, Department of Economic and Social Affairs, Population Division. (2017). *World Population Prospects: The 2017 Revision* (Volume II). Demographic Profiles (ST/ESA/SER.A/400).

Urdal, H. (2006). A Clash of Generations? Youth Bulges and Political Violence. *International Studies Quarterly*, *50*(3), 607–629. https://doi.org/10.1111/j.1468-2478.2006.00416.x

White, H. (2009). Theory-based impact evaluation: Principles and practice. *Journal of Development Effectiveness*, *1*(3), 271–284. https://doi.org/10.1080/19439340903114628

Wooldridge, J. M. (2010). *Econometric Analysis of Cross Section and Panel Data* (Second Edition). Cambridge, MA: The MIT Press.

World Bank. (2020). *World Development Indicators*. World Bank. https://datatopics.worldbank.org/world-development-indicators/

World Bank, UNESCO, & ILO. (2023). *Building better formal TVET systems: Principles and practice in low- and midlle-income countries*. The World Bank, UNESCO, and ILO.

YEP | Homepage. (n.d.). Retrieved 27 May 2024, from https://www.yep.gm/

5.9. OTHER TECHNICAL ANNEXES

5.9.1. Balance tests

Table 13: Baseline characteristics (Treatment one vs Comparison)

	(1) Full sample	(2) Treatment 1 Group	(3) Comparison Group	(4) (2)-(3) (p-value)
Principal sociodemographic characteristics				
Age	25.0	25.2	24.8	0.4
	(4.4)	(4.6)	(4.2)	(0.11)
Female	0.49	0.49	0.50	-0.01
	(0.50)	(0.50)	(0.50)	(0.85)
Returnee	0.11	0.13	0.08	0.05***
	(0.31)	(0.34)	(0.28)	(0.01)
Not married	0.85	0.84	0.86	-0.02
	(0.36)	(0.36)	(0.35)	(0.35)
Education				
Primary or lower	0.07	0.07	0.06	0.01
	(0.25)	(0.26)	(0.23)	(0.33)
Junior Secondary	0.20	0.21	0.18	0.03
	(0.40)	(0.41)	(0.38)	(0.25)
Senior Secondary	0.48	0.49	0.47	0.03
	(0.50)	(0.50)	(0.50)	(0.38)
Tertiary/vocational	0.24	0.22	0.26	-0.05*
training	(0.43)	(0.41)	(0.44)	(0.07)
Higher level	0.02	0.01	0.03	-0.02***
	(0.14)	(0.10)	(0.17)	(0.01)
Region of birth and residence				
Born in GBA	0.56	0.51	0.62	-0.11***
	(0.50)	(0.50)	(0.49)	(0.00)
Residence in GBA	0.67	0.57	0.79	-0.22***
	(0.47)	(0.50)	(0.41)	(0.00)
Other characteristics				
Parents' income	4,721	4,668	4,791	-123
	(5,695)	(5,723)	(5,666)	(0.78)
# of adults in HH	5.1	5.2	5.1	0.1
	(3.6)	(3.8)	(3.3)	(0.51)
# of children in HH	5.1	5.4	4.8	0.6**
	(4.6)	(4.6)	(4.5)	(0.01)
Interview score				
Average interview score	15.4	15.9	14.6	1.3***
	(2.6)	(2.3)	(3.0)	(0.00)
Observations	1,329	742	587	

Note: Columns (1), (2) and (3) present the sample means (proportions when % is shown in the variable name or in the table) of selected variables for the full sample, the treatment group and the control group, respectively. Standard deviations in parentheses. Column (4) presents the mean difference between the treatment and control groups. P-value of the corresponding t-test in parentheses.
Significance stars: * $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$.
Source: C4ED elaboration

Table 14: Baseline characteristics (Treatment two vs Comparison)

	(1) Full sample	(2) Treatment 2 Group	(3) Comparison Group	(4) (2)-(3) (p-value)
Principal sociodemographic characteristics				
Age	25.0	25.4	24.8	0.6**
	(4.4)	(4.3)	(4.2)	(0.05)
Female	0.49	0.53	0.50	0.04
	(0.50)	(0.50)	(0.50)	(0.30)
Returnee	0.11	0.14	0.08	0.06***
	(0.31)	(0.35)	(0.28)	(0.01)
Not married	0.85	0.84	0.86	-0.02
	(0.36)	(0.37)	(0.35)	(0.36)
Education				
Primary or lower	0.07	0.07	0.06	0.01
	(0.25)	(0.25)	(0.23)	(0.63)
Junior Secondary	0.20	0.17	0.18	-0.01
	(0.40)	(0.37)	(0.38)	(0.66)
Senior Secondary	0.48	0.53	0.47	0.06*
	(0.50)	(0.50)	(0.50)	(0.07)
Tertiary/vocational	0.24	0.22	0.26	-0.04
training	(0.43)	(0.42)	(0.44)	(0.16)
Higher level	0.02	0.01	0.03	-0.02
	(0.14)	(0.11)	(0.17)	(0.12)
Region of birth and residence				
Born in GBA	0.56	0.50	0.62	-0.12***
	(0.50)	(0.50)	(0.49)	(0.00)
Residence in GBA	0.67	0.57	0.79	-0.22***
	(0.47)	(0.50)	(0.41)	(0.00)
Other characteristics				
Parents' income	4,721	4,483	4,791	-308
	(5,695)	(6,440)	(5,666)	(0.60)
# of adults in HH	5.1	5.4	5.1	0.3
	(3.6)	(3.8)	(3.3)	(0.20)
# of children in HH	5.1	5.6	4.8	0.8**
	(4.6)	(4.7)	(4.5)	(0.02)
Interview score				
Average interview score	15.4	16.3	14.6	1.7***
	(2.6)	(2.2)	(3.0)	(0.00)
Observations	1,329	319	587	

Note: Columns (1), (2) and (3) present the sample means (proportions when % is shown in the variable name or in the table) of selected variables for the full sample, the treatment group and the control group, respectively. Standard deviations in parentheses. Column (4) presents the mean difference between the treatment and control groups. P-value of the corresponding t-test in parentheses.
Significance stars: * $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$.
Source: C4ED elaboration

Table 15: Baseline characteristics (Treatment two vs Treatment one)

	(1) Full sample	(2) Treatment 2 Group	(3) Treatment 1 Group	(4) (2)-(3) (p-value)
Principal sociodemographic characteristics				
Age	25.0	25.4	25.0	0.4
	(4.4)	(4.3)	(4.8)	(0.32)
Female	0.49	0.53	0.46	0.07**
	(0.50)	(0.50)	(0.50)	(0.05)
Returnee	0.11	0.14	0.12	0.02
	(0.31)	(0.35)	(0.33)	(0.47)
Not married	0.85	0.84	0.85	-0.01
	(0.36)	(0.37)	(0.36)	(0.79)
Education				
Primary or lower	0.07	0.07	0.08	-0.01
	(0.25)	(0.25)	(0.27)	(0.60)
Junior Secondary	0.20	0.17	0.24	-0.07**
	(0.40)	(0.37)	(0.43)	(0.02)
Senior Secondary	0.48	0.53	0.46	0.07*
	(0.50)	(0.50)	(0.50)	(0.06)
Tertiary/vocational	0.24	0.22	0.22	0.00
training	(0.43)	(0.42)	(0.41)	(0.93)
Higher level	0.02	0.01	0.01	0.01
	(0.14)	(0.11)	(0.08)	(0.34)
Region of birth and residence				
Born in GBA	0.56	0.50	0.52	-0.03
	(0.50)	(0.50)	(0.50)	(0.49)
Residence in GBA	0.67	0.57	0.57	0.00
	(0.47)	(0.50)	(0.50)	(0.90)
Other characteristics				
Parents' income	4,721	4,483	4,812	-330
	(5,695)	(6,440)	(5,105)	(0.58)
# of adults in HH	5.1	5.4	5.1	0.3
	(3.6)	(3.8)	(3.8)	(0.27)
# of children in HH	5.1	5.6	5.3	0.2
	(4.6)	(4.7)	(4.5)	(0.48)
Interview score				
Average interview score	15.4	16.3	15.5	0.8***
	(2.6)	(2.2)	(2.4)	(0.00)
Observations	1,329	319	423	

Note: Columns (1), (2) and (3) present the sample means (proportions when % is shown in the variable name or in the table) of selected variables for the full sample, the treatment group and the control group, respectively. Standard deviations in parentheses. Column (4) presents the mean difference between the treatment and control groups. P-value of the corresponding t-test in parentheses.
Significance stars: * $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$.
Source: C4ED elaboration

5.9.2. Selection Criteria and Scoring System for TVET Applicant Interview

Table 16: Selection Criteria and Scoring System for TVET Applicant Interview

Criteria	Guiding Questions	Weight
Motivation	What prompted the Candidate to apply for technical training, in general, and for the specific trade area, in particular? What is the professional or personal objective behind this decision? How is this decision expected to help him / her improve his / her life conditions? [2 = very high, 1 = high]	2
Expectations vs. Responsibilities	Are the Candidate's expectations vis-à-vis the Training Project realistic / reasonable [Yes = 1 point]? Does he/she demonstrate a sense of responsibility, duty or personal obligations (if selected for the Training) [Yes = 1 point]?	2
Prior Trade Knowledge	On what grounds did the Candidate choose the area he / she applied for? To what extent did he/she make a well-grounded / well-informed choice? [2 = very well informed; 1 = sufficiently informed choice]	2
Technical Skills	Does the Candidate have any practical or technical skills either in the selected trade area or in other technical areas? [2 = significant skills; 1 = basic skills only]	2
Commitment	To what extent can the Candidate back-up his/her claim that he/she will attend courses regularly for 6/9 months, come on time every day, commit him-/herself to all the given tasks and assignments, besides respecting the Teachers as well as the basic rules and regulations of the Institution? What example of personal commitment can he/she give either from his private or student's life to substantiate his / her attitude? [2 = very high; 1 = high]	2
Life-Coping Skills	Is the Candidate aware of possible constraints that might push him/her to drop out? If so, how would he/she cope with these difficulties to ensure regular participation in the Training? Can he/she give a concrete example of a major constraint he/she had to face and explain how he/she dealt with it? [2 = very high level of awareness and responsiveness; 1 = satisfactory level]	2
Communication in English	Can the candidate speak, understand, read and write in English without major constraints? [2 = proficient; 1 = satisfactory]	2
Level of Education	Additional points if educational profile higher than minimum requirement of Grade nine or if the Applicant went beyond Grade nine: [3 = Senior secondary school leavers; 2 = Dropouts between Grade 10 and 12; 1 = Grade nine Leaver]	3
Vulnerability	Additional 3 points for any of the following categories: Female, Returnee, Person with Disability, Victim of Human Trafficking	3
TOTAL		20

Source: Tekki Fii

5.9.3. Quality of the weighting procedure

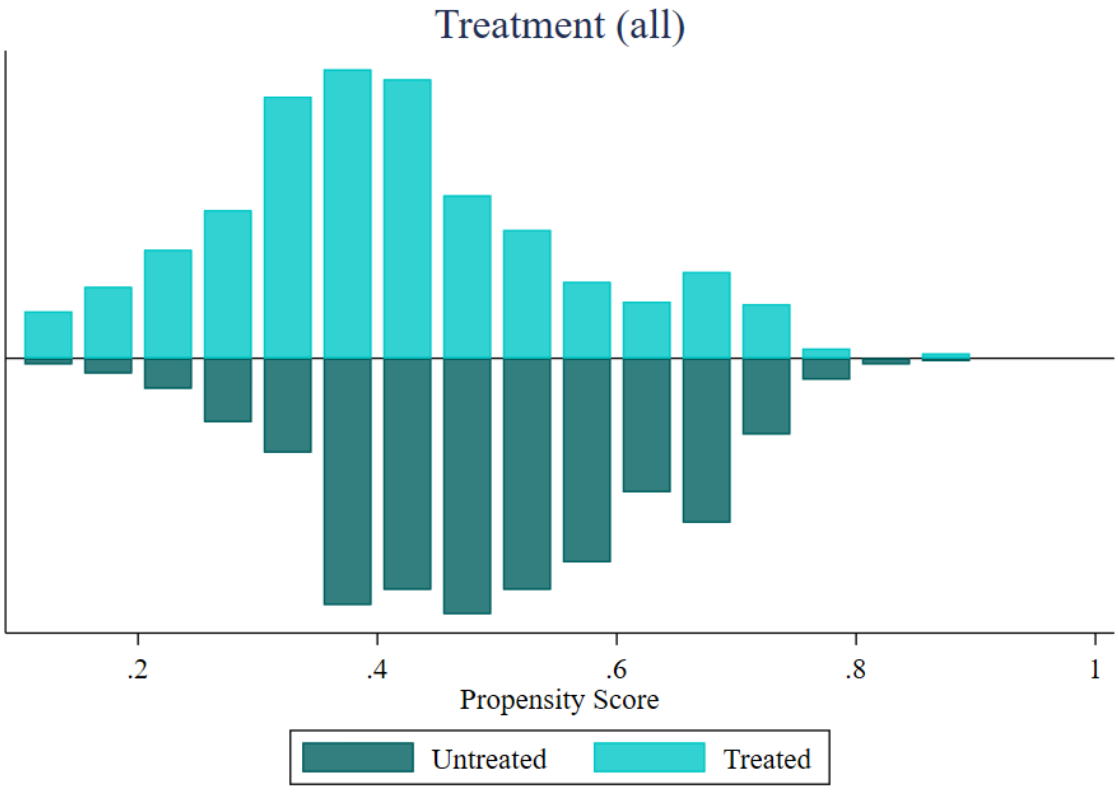
C4ED applies a weighting approach (IPWRA) to account for initial differences between youths benefitting from Tekki Fii and youths rejected from Tekki Fii. For this purpose, C4ED estimates the probability of participating in Tekki Fii training, also called propensity scores, based on a set of observed characteristics referred to as matching variables.[48]

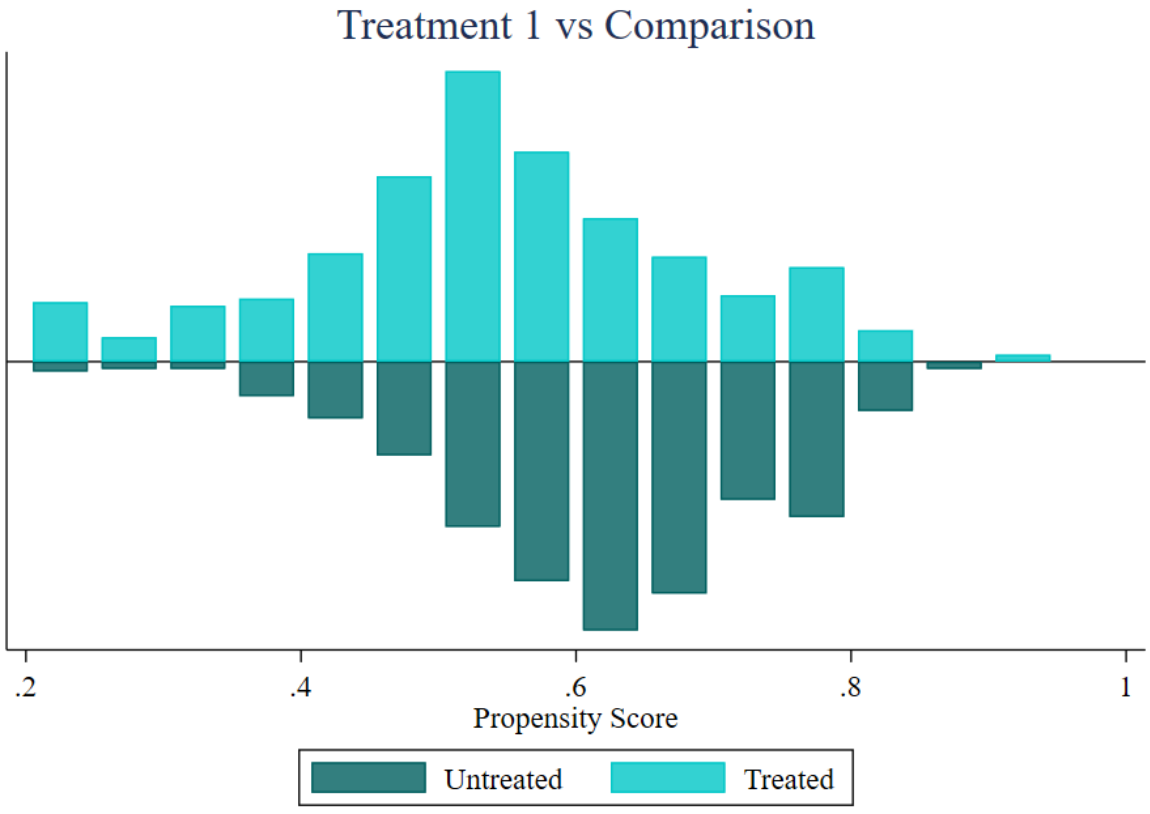
C4ED assesses the quality of the weighting procedure in two ways: (i) by comparing the overlap of propensity scores between beneficiaries and non-beneficiaries and (ii) by comparing the distribution of respondents' characteristics before and after weighting. For the former, Figure 18 shows the distribution of propensity scores for beneficiaries and non-beneficiaries before weighting. Both distributions tend to overlap across most values of propensity scores. C4ED excludes non-beneficiaries from the analysis if their propensity scores fall beyond the most extreme propensity score among the beneficiaries. This allows for enforcing the common support of propensity scores between the groups, improving their comparability. As a result, the rest of the analysis focuses on the following samples: 1,309 observations when comparing all beneficiaries to non-selected candidates (T vs C – 98.8% of the initial sample), 999 when comparing TVET beneficiaries to non-selected candidates (T1 vs C – 99.3% of the initial sample), 891 when comparing TVET+BD component beneficiaries to non-selected candidates (T2 vs C – 98.3% of the initial sample) and 735 when comparing TVET+BD component beneficiaries to TVET only beneficiaries (T2 vs T1 – 99.46% of the initial sample). Figure 18 displays the propensity scores (PS) distribution after removing the observation outside the range of common support. Additional observations might be missing as some respondents did not provide the required information.

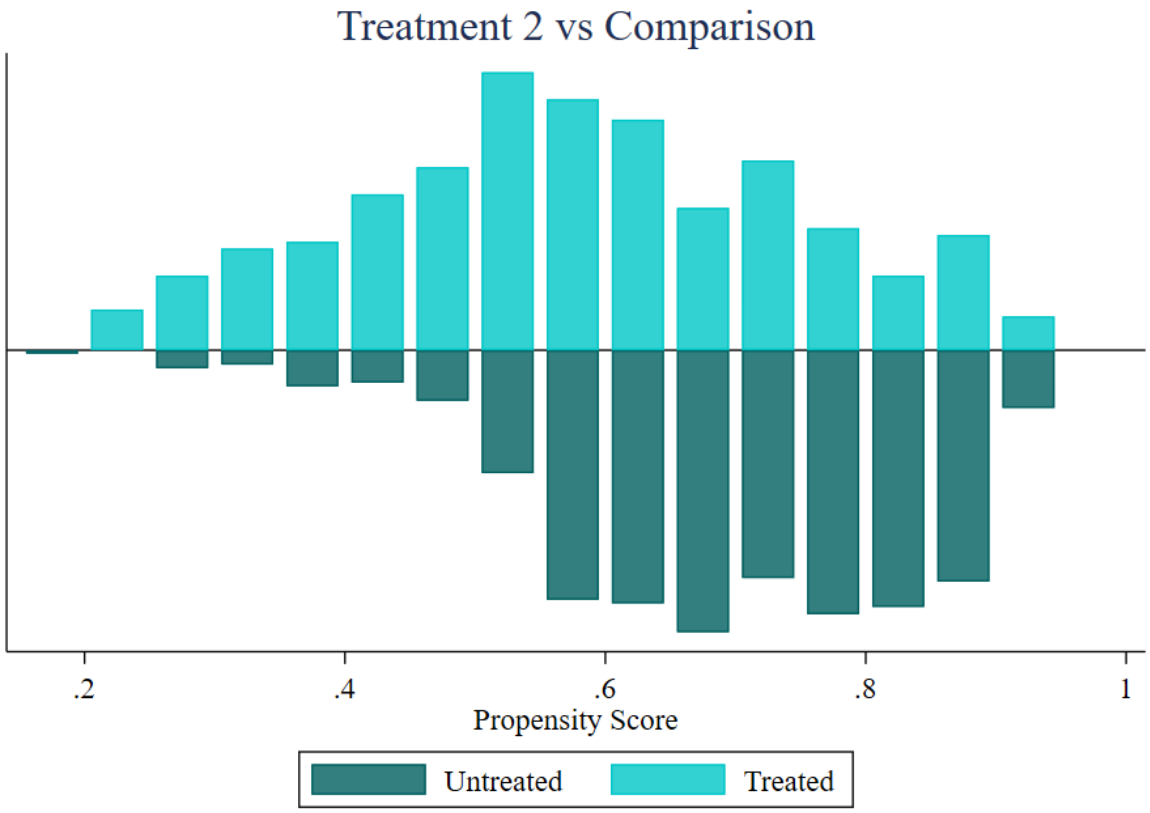
Moving to the second criterion of weighting quality, C4ED computed the standardised differences in respondents' characteristics before weighting and after applying inverse probability weights, illustrated by Figure 19. The figure displays two benchmarks: one of 0.25 standard deviation, represented by dotted lines, which is an often-used rule of thumb (Ho et al., 2007), and one more conservative benchmark of 0.1, represented by dashed lines, considered as more effective at reducing bias (Stuart, 2010; Stuart et al., 2013). As shown in Figure 19, all core matching variables display smaller differences due to weighting (lighter dots are closer to the null axis than darker dots), and all have a final standardised difference below 0.1. Hence, our weighting procedure successfully improved the comparability of the beneficiaries with non-beneficiaries.

[48] Specifically, matching variables include the candidate's age, gender, returnee status, baseline level of education and English before the programme started. In addition, the matching variables include indexes of the training characteristics and an index of household characteristics. More details are provided in Appendix E.

Figure 18: Distribution of PS and common support after removing observations outside the range of common support






Treatment 2 vs Comparison
.2
.4
.6
.8
1
Propensity Score
Untreated
Treated

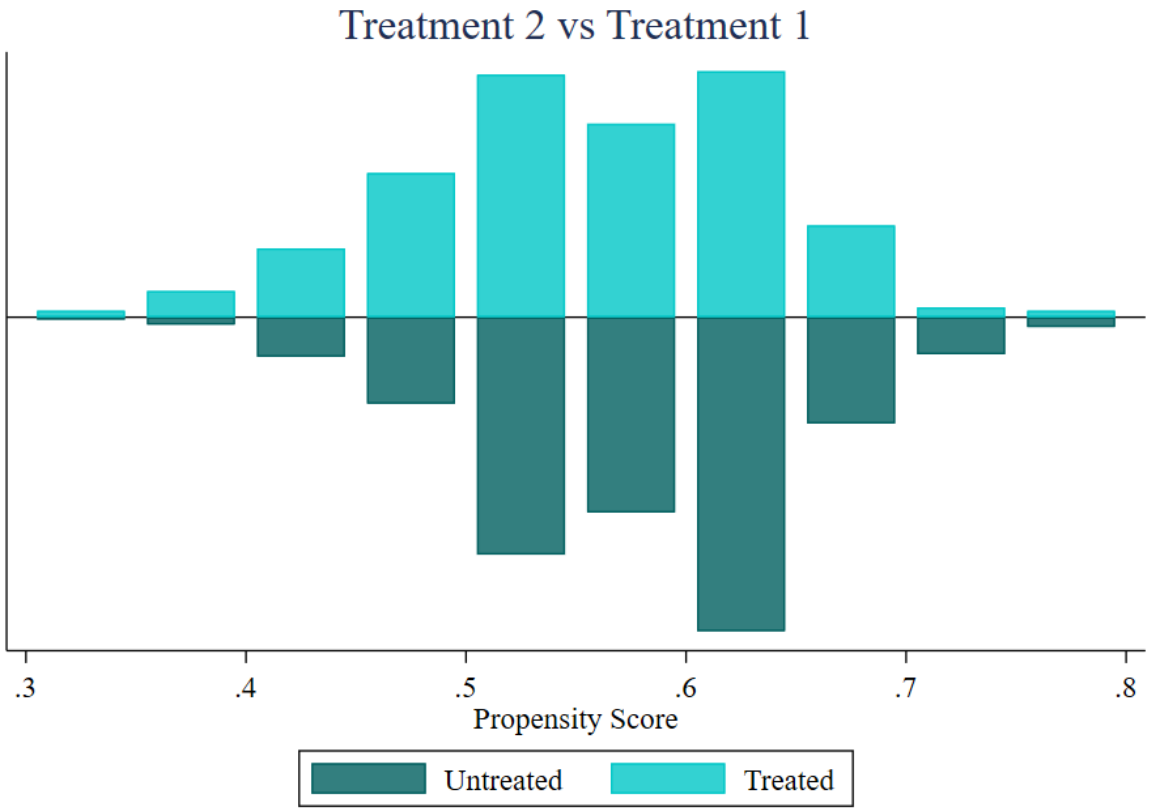
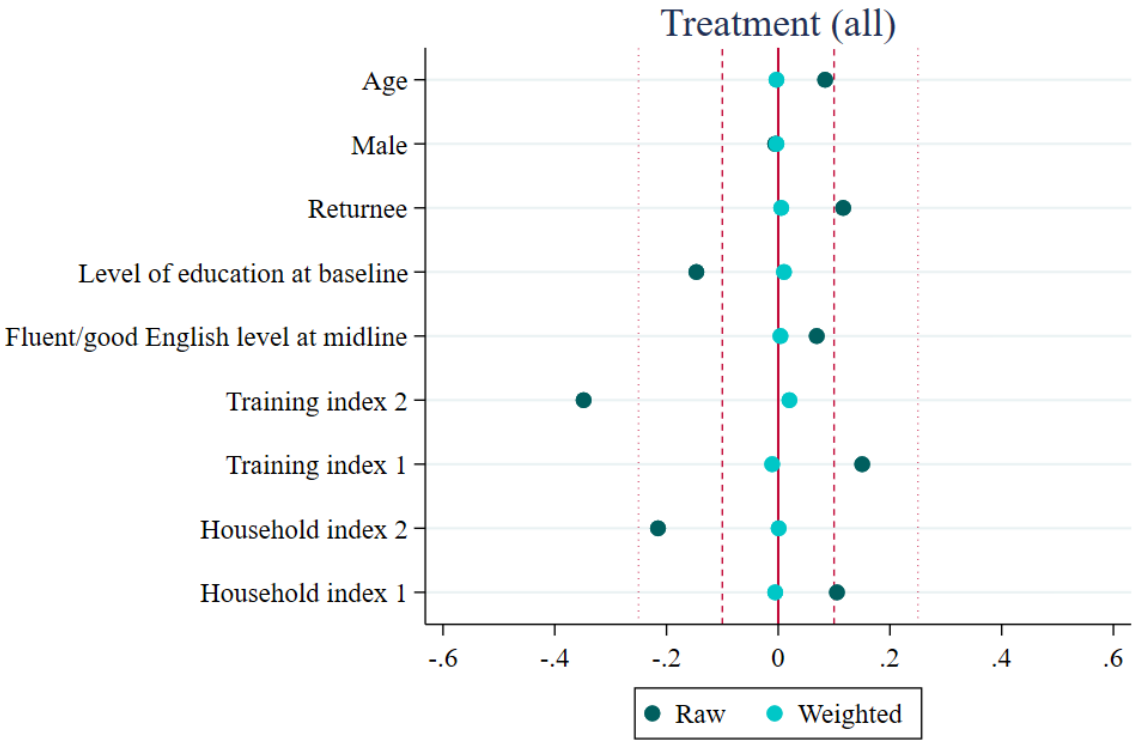
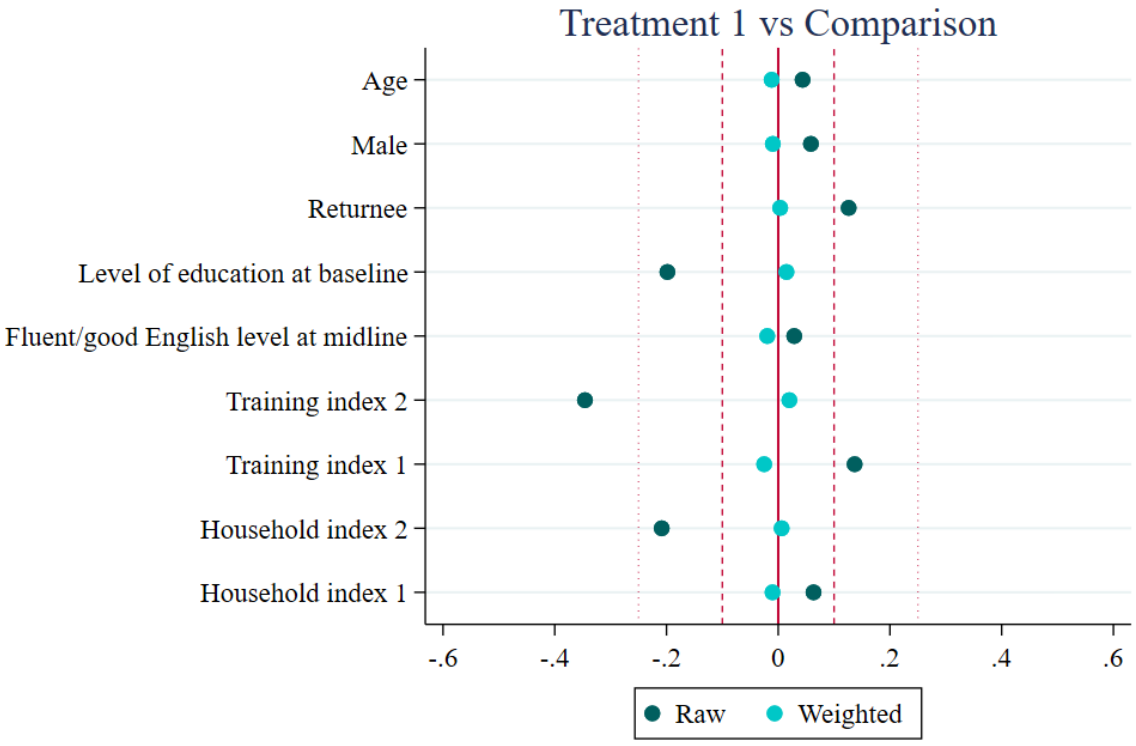
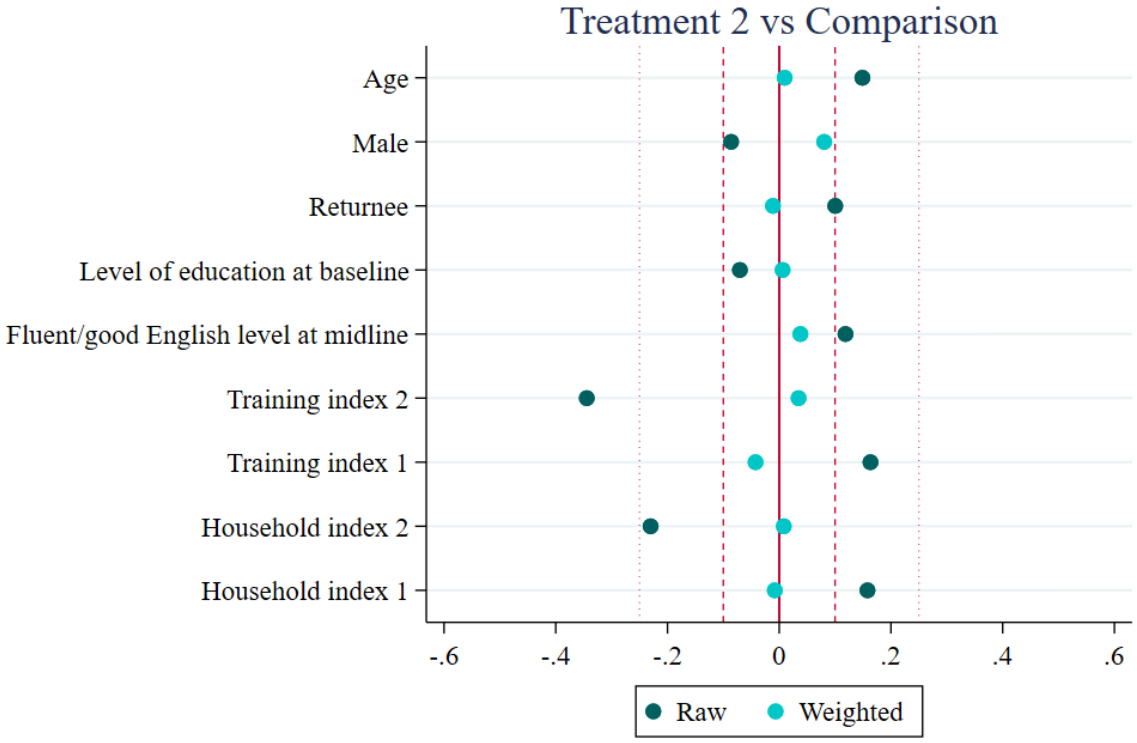
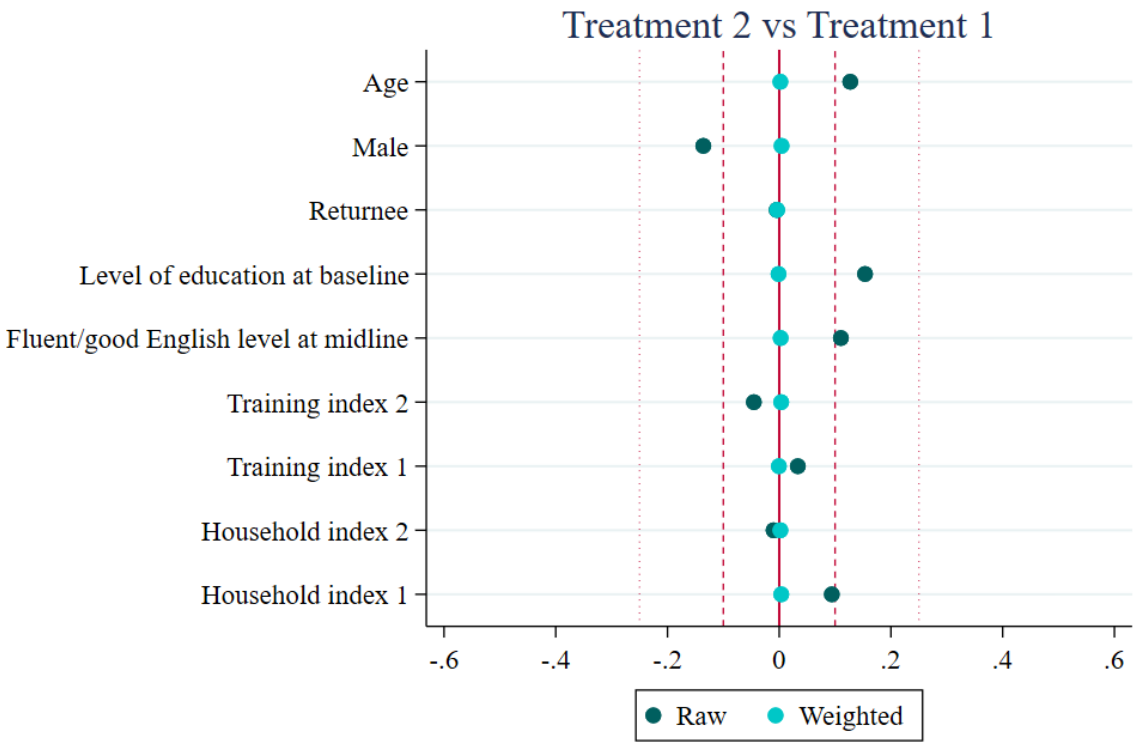

Treatment 2 vs Treatment 1
.3
.4
.5
.6
.7
.8
Propensity Score
Untreated
Treated

Figure 19: Standardised differences before and after the weighting procedure









Notes: Standardised differences correspond to the difference in the mean of a variable between the treated and comparison group, divided by an estimate of the within-group standard deviation. The standardised differences after weighting were obtained using inverse probability weights. The dashed line illustrates thresholds of 0.25 and 0.1. Standardized differences below 0.25 are deemed acceptable, but below 0.1 indicate a more effective bias reduction (Stuart, 2010, Stuart et al., 2013).
Source: C4ED elaboration

5.9.4. Results from the main specification (IPWRA)

Table 17: Impacts on employment (18 months after the training - complete sample)

	T vs C				T1 vs C				T2 vs C				T2 vs T1			
	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM
Employment (18 months)																
In Employment (past 7 days)	1,309	0.07	*	0.53	831	0.05		0.53	784	0.11	***	0.51	612	0.05		0.57
		(0.03)				(0.04)				(0.04)				(0.04)		
In stable employment	1,309	0.12	***	0.61	831	0.07		0.62	784	0.18	***	0.60	612	0.08	*	0.70
		(0.04)				(0.04)				(0.04)				(0.04)		
Self-employed	1,309	0.18	***	0.22	831	0.09	**	0.23	784	0.27	***	0.22	612	0.13	***	0.36
		(0.03)				(0.03)				(0.04)				(0.04)		
Employee	1,309	-0.02		0.24	831	0.01		0.23	784	-0.06		0.25	612	-0.07	*	0.26
		(0.03)				(0.03)				(0.04)				(0.04)		
Apprentice	1,309	0.04		0.08	831	0.02		0.09	784	0.05	*	0.08	612	0.04		0.09
		(0.02)				(0.02)				(0.02)				(0.02)		
Casual worker	1,309	-0.01		0.06	831	-0.02		0.06	784	0.00		0.07	612	0.02		0.04
		(0.02)				(0.02)				(0.02)				(0.02)		
Formal employment	1,309	0.07	**	0.17	831	0.04		0.15	784	0.13	***	0.17	612	0.08	*	0.22
		(0.03)				(0.03)				(0.04)				(0.04)		
Reported job injury or illness	892	0.14	***	0.37	543	0.08		0.38	538	0.19	***	0.36	448	0.11	*	0.45
		(0.04)				(0.05)				(0.05)				(0.05)		
Hourly productivity	1,124	0.14		3.31	503	0.18		3.33	505	0.10		3.28	426	-0.17		3.55
		(0.13)				(0.13)				(0.16)				(0.13)		
Quality of employment index	1,124	0.02		1.75	831	0.03		1.80	784	0.03		1.69	612	0.05		1.66
		(0.16)				(0.19)				(0.19)				(0.19)		
Job matches trade applied for	772	0.26	***	0.35	543	0.20	***	0.36	538	0.33	***	0.33	448	0.17	***	0.50
		(0.04)				(0.05)				(0.05)				(0.05)		

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates.
Source: C4ED elaboration

Table 18: Impacts on employment (six months after the training - complete sample)

	T vs C				T1 vs C				T2 vs C				T2 vs T1			
	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM
Employment (Six months)																
In Employment (past 7 days)	1,147	0.08	**	0.56	852	0.05		0.56	811	0.12	***	0.56	637	0.08	*	0.60
		(0.03)				(0.04)				(0.04)				(0.04)		
In stable employment	1,148	0.09	**	0.61	853	0.03		0.61	811	0.15	***	0.62	638	0.13	***	0.64
		(0.03)				(0.03)				(0.04)				(0.04)		
Self-employed	1,148	0.10	***	0.26	853	0.04		0.25	811	0.18	***	0.26	638	0.14	***	0.30
		(0.03)				(0.03)				(0.04)				(0.04)		
Employee	1,148	-0.07	**	0.22	853	-0.07	**	0.22	811	-0.06	*	0.23	638	0.01		0.16
		(0.02)				(0.03)				(0.03)				(0.03)		
Apprentice	1,148	0.06	***	0.09	853	0.05		0.10	811	0.08	***	0.09	638	0.03		0.14
		(0.02)				(0.02)				(0.03)				(0.03)		
Casual worker	1,148	0.00		0.06	853	0.00		0.06	811	-0.01		0.06	638	-0.01		0.05
		(0.01)				(0.02)				(0.02)				(0.02)		
Formal employment	1,148	0.05	**	0.12	853	0.00		0.12	811	0.11	***	0.13	638	0.12	***	0.13
		(0.02)				(0.02)				(0.03)				(0.03)		
Reported job injury or illness	753	0.01		0.34	528	0.03		0.35	540	0.00		0.33	446	-0.03		0.37
		(0.04)				(0.04)				(0.04)				(0.05)		
Hourly productivity	731	-0.09		3.11	509	-0.08		3.13	526	-0.08		3.09	435	-0.10		3.14
		(0.12)				(0.14)				(0.14)				(0.14)		
Job matches trade applied for	897	0.29	***	0.20	658	0.20	***	0.19	609	0.40	***	0.20	537	0.21	***	0.39
		(0.03)				(0.04)				(0.04)				(0.04)		

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates. POM is expressed in the outcome's original unit.
Source: C4ED elaboration

Table 19: Impacts on employability (18 months after the training - complete sample)

	T vs C			T1 vs C			T2 vs C			T2 vs T1		
	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM
Employability (18 months)												
Self perceived employability score	578	0.17 ***	3.65	462	0.12 **	3.66	399	0.24 ***	3.64	299	0.06	3.83
		(0.04)			(0.04)			(0.05)			(0.05)	
Searched for wage employment	578	0.03	0.28	462	0.02	0.28	399	0.03	0.28	299	0.02	0.29
		(0.04)			(0.05)			(0.06)			(0.06)	
Sought to start a business	578	0.05	0.14	462	0.05	0.13	399	0.06	0.14	299	-0.01	0.21
		(0.03)			(0.04)			(0.05)			(0.05)	
Talked friends/relatives about possible jobs	578	0.04	0.23	462	0.02	0.24	399	0.06	0.22	299	0.03	0.25
		(0.04)			(0.04)			(0.05)			(0.05)	
Use Internet/radio/Social media	578	0.05	0.11	462	0.05	0.11	399	0.03	0.12	299	0.00	0.16
		(0.03)			(0.03)			(0.04)			(0.04)	

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates. POM is expressed in the outcome's original unit.
Source: C4ED elaboration

Table 20: Impacts on employability (six months after the training - complete sample)

	T vs C			T1 vs C			T2 vs C			T2 vs T1		
	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM
Employability (Six months)												
Self perceived employability score	364	0.08	3.76	270	0.09	3.76	243	0.07	3.75	208	-0.05	3.87
		(0.04)			(0.05)			(0.05)			(0.06)	
Searched for wage employment	364	-0.01	0.28	270	0.01	0.28	243	-0.04	0.28	208	-0.04	0.29
		(0.05)			(0.06)			(0.06)			(0.06)	
Sought to start a business	364	0.07	0.19	270	0.02	0.22	243	0.14	0.15	208	0.10	0.19
		(0.04)			(0.05)			(0.06)			(0.07)	
Talked friends/relatives about possible jobs	364	0.01	0.22	270	0.02	0.23	243	-0.01	0.23	208	-0.01	0.23
		(0.05)			(0.06)			(0.06)			(0.06)	
Use Internet/radio/Social media	364	-0.03	0.13	270	-0.03	0.12	243	-0.04	0.13	208	-0.01	0.11
		(0.04)			(0.04)			(0.05)			(0.04)	

Note: Notes: *, **, & *** represent statistical significance at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates. POM is expressed in the outcome's original unit.
Source: C4ED elaboration

Table 21: Impacts on income (18 months after the training - complete sample)

	T vs C			T1 vs C			T2 vs C			T2 vs T1		
	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM
Income (18 months)												
Annualized monthly income from employment	1,309	0.89 ***	7.04	999	0.74 ***	7.06	891	1.10 ***	7.04	735	0.39 *	7.80
		(0.19)			(0.20)			(0.22)			(0.20)	
Average monthly income from stable employment	1,309	0.20	3.14	999	0.27	3.21	891	0.08	3.05	735	-0.29	3.42
		(0.26)			(0.29)			(0.32)			(0.32)	

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates.
Source: C4ED elaboration

Table 22: Impacts on income (six months after the training - complete sample)

	T vs C			T1 vs C			T2 vs C			T2 vs T1		
	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM
Income (Six months)												
Monthly income from employment	1,034	0.22	3.25	767	0.23	3.23	741	0.20	3.33	567	0.01	3.64
		(0.22)			(0.25)			(0.26)			(0.26)	
Monthly income from stable employment	1,143	-0.13	1.16	849	-0.15	1.14	807	-0.11	1.17	636	0.09	1.00
		(0.13)			(0.14)			(0.16)			(0.16)	

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates.
Source: C4ED elaboration

Table 23: Impacts on resilience (18 months after the training - complete sample)

		T vs C			T1 vs C			T2 vs C			T2 vs T1		
	Obs	ATT		POM	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM
Resilience (18 months)													
Coefficient of variation in income	1,121	0.13	***	0.23	817	0.10 ***	0.23	736	0.17 ***	0.23	698	0.06 **	0.34
		(0.02)				(0.02)			(0.02)			(0.02)	
Lowest monthly income	1,304	0.57	**	5.97	996	0.46 *	5.98	887	0.73 ***	5.96	732	0.32	6.41
		(0.20)				(0.23)			(0.25)			(0.24)	
Brief Resilience Score	1,309	0.05		3.33	999	0.05	3.34	891	0.05	3.32	735	-0.01	3.39
		(0.03)				(0.03)			(0.04)			(0.04)	
ATR from shocks	1,199	-0.01		1.72	914	-0.09	1.73	818	0.11	1.71	668	0.20 **	1.63
		(0.06)				(0.07)			(0.08)			(0.07)	

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates.
Source: C4ED elaboration

Table 24: Impacts on resilience (six months after the training - complete sample)

		T vs C			T1 vs C			T2 vs C			T2 vs T1		
	Obs	ATT		POM	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM
Resilience (Six months)													
Coefficient of variation in income	1,109	0.02		0.26	826	0.01	0.26	786	0.05 *	0.25	612	0.03	0.27
		(0.02)				(0.02)			(0.02)			(0.02)	
Lowest monthly income	1,116	-0.08		1.53	831	-0.19	1.54	793	0.07	1.51	614	0.21	1.42
		(0.12)				(0.14)			(0.15)			(0.15)	
Brief Resilience Score	1,147	0.06		3.19	852	0.04	3.19	811	0.07	3.19	637	0.01	3.25
		(0.03)				(0.04)			(0.04)			(0.04)	
Coefficient of variation in income	1,109	0.02		0.26	826	0.01	0.26	786	0.05 *	0.25	612	0.03	0.27
		(0.02)				(0.02)			(0.02)			(0.02)	

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates.
Source: C4ED elaboration

Table 25: Impacts on employment (18 months after the training - females)

	T vs C				T1 vs C				T2 vs C				T2 vs T1			
	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM
Employment females (18 months)																
In Employment (past 7 days)	582	0.14	**	0.35	419	0.09		0.38	407	0.19	**	0.33	321	0.07		0.45
		(0.06)				(0.05)				(0.08)				(0.06)		
In stable employment	582	0.21	***	0.49	419	0.11		0.52	407	0.35	***	0.42	321	0.12	*	0.65
		(0.06)				(0.06)				(0.08)				(0.06)		
Self-employed	582	0.19	***	0.21	419	0.11		0.22	407	0.29	***	0.18	321	0.12	*	0.35
		(0.05)				(0.05)				(0.06)				(0.06)		
Employer in stable job	582	0.09	***	0.08	419	0.05		0.09	407	0.14	***	0.06	321	0.02		0.18
		(0.03)				(0.04)				(0.04)				(0.05)		
Own account in stable job	582	0.10	*	0.13	419	0.05		0.12	407	0.15	**	0.12	321	0.10		0.17
		(0.04)				(0.04)				(0.05)				(0.05)		
Employee	582	0.04		0.20	419	0.04		0.23	407	0.01		0.20	321	-0.09		0.30
		(0.04)				(0.05)				(0.05)				(0.06)		
Apprentice	582	0.03		0.06	419	0.02		0.06	407	0.07	*	0.04	321	0.05		0.06
		(0.04)				(0.03)				(0.03)				(0.03)		
Casual worker	582	0.00		0.03	419	-0.02		0.03	407	0.02		0.02	321	0.03		0.01
		(0.02)				(0.02)				(0.02)				(0.02)		
Formal employment	582	0.08		0.16	419	0.05		0.15	407	0.14	**	0.13	321	0.05		0.23
		(0.05)				(0.05)				(0.05)				(0.05)		
Reported job injury or illness	374	-0.01		0.40	248	-0.09		0.41	263	0.03		0.42	225	0.11		0.33
		(0.12)				(0.12)				(0.11)				(0.07)		
Hourly productivity	342	0.15		3.05	222	0.29		3.10	243	0.34		2.70	207	-0.40	*	3.45
		(0.29)				(0.25)				(0.61)				(0.19)		
Job matches trade applied for	374	0.37	***	0.25	248	0.28	***	0.26	263	0.48	***	0.21	225	0.21	**	0.49
		(0.08)				(0.08)				(0.07)				(0.06)		

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates.
Source: C4ED elaboration

Table 26: Impacts on employability (18 months after the training - females)

	T vs C			T1 vs C			T2 vs C			T2 vs T1		
	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM
Employability females (18 months)												
Self-perceived employability score	367	0.22 ***	3.60	283	0.15 *	3.61	254	0.31 ***	3.58	194	0.08	3.83
		(0.05)			(0.06)			(0.07)			(0.07)	
Searched for wage employment	367	-0.03	0.28	283	-0.02	0.27	254	-0.05	0.30	194	0.03	0.22
		(0.05)			(0.06)			(0.07)			(0.06)	
Sought to start a business	367	0.03	0.17	283	0.04	0.16	254	0.03	0.16	194	-0.10	0.30
		(0.04)			(0.05)			(0.05)			(0.07)	
Talked friends/relatives about possible jobs	367	0.01	0.22	283	0.03	0.22	254	-0.02	0.23	194	-0.01	0.22
		(0.05)			(0.05)			(0.07)			(0.06)	
Use Internet/radio/Social media	367	0.00	0.12	283	0.01	0.11	254	-0.02	0.13	194	-0.01	0.11
		(0.04)			(0.04)			(0.06)			(0.05)	

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates.
Source: C4ED elaboration

Table 27: Impacts on income (18 months after the training - females)

	T vs C			T1 vs C			T2 vs C			T2 vs T1		
	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM
Income females (18 months)												
Monthly income from employment	652	0.47	2.56	484	0.64 *	2.50	455	0.22	2.68	360	-0.37	3.32
		(0.27)			(0.29)			(0.38)			(0.33)	
Monthly income from stable employment	652	0.23	0.94	484	0.22	0.94	455	0.20	0.95	360	-0.06	1.24
		(0.19)			(0.21)			(0.27)			(0.26)	

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates.
Source: C4ED elaboration

Table 28: Impacts on resilience (18 months after the training - females)

	T vs C				T1 vs C				T2 vs C				T2 vs T1			
	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM
Resilience females (18 months)																
Coefficient of variation in income	562	0.16	***	0.18	398	0.10	**	0.17	379	0.23	***	0.18	342	0.12	***	0.29
		(0.03)				(0.03)				(0.04)				(0.04)		
Lowest monthly income	648	0.15		1.35	481	0.29		1.33	452	-0.02		1.39	358	-0.33		1.69
		(0.16)				(0.19)				(0.23)				(0.20)		
Brief Resilience Score	652	0.03		3.34	484	0.01		3.34	455	0.05		3.33	360	0.05		3.34
		(0.05)				(0.05)				(0.06)				(0.06)		
ATR from shocks	591	0.03		1.74	438	0.00		1.75	414	0.05		1.73	325	0.07		1.72
		(0.08)				(0.09)				(0.11)				(0.10)		

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates.
Source: C4ED elaboration

Table 29: Impacts on employment (18 months after the training - males)

	T vs C			T1 vs C			T2 vs C			T2 vs T1		
	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM
Employment males (18 months)												
In Employment (past 7 days)	578	0.05	0.66	435	0.03	0.65	395	0.08	0.66	312	0.04	0.70
		(0.05)			(0.05)			(0.05)			(0.05)	
In stable employment	578	0.07	0.68	435	0.06	0.67	395	0.08	0.70	312	0.05	0.73
		(0.06)			(0.06)			(0.06)			(0.05)	
Self-employed	578	0.20 ***	0.21	435	0.11 *	0.22	395	0.30 ***	0.22	312	0.16 *	0.36
		(0.04)			(0.05)			(0.05)			(0.06)	
Employer in stable job	578	0.15 ***	0.13	435	0.09 *	0.14	395	0.22 ***	0.13	312	0.08	0.27
		(0.04)			(0.04)			(0.05)			(0.05)	
Own account in stable job	578	0.05	0.08	435	0.02	0.08	395	0.08 *	0.09	312	0.08 *	0.09
		(0.03)			(0.03)			(0.04)			(0.04)	
Employee	578	0.00	0.19	435	0.02	0.18	395	-0.05	0.21	312	-0.04	0.20
		(0.04)			(0.04)			(0.05)			(0.05)	
Apprentice	578	0.03	0.11	435	0.02	0.12	395	0.02	0.11	312	0.00	0.13
		(0.03)			(0.04)			(0.04)			(0.04)	
Casual worker	578	-0.04	0.13	435	-0.05	0.12	395	-0.04	0.13	312	0.02	0.07
		(0.03)			(0.03)			(0.04)			(0.03)	
Formal employment	578	0.10 **	0.14	435	0.04	0.13	395	0.15 ***	0.17	312	0.12 *	0.19
		(0.04)			(0.04)			(0.05)			(0.05)	
Reported job injury or illness	422	0.23 ***	0.38	310	0.14 *	0.43	286	0.31 ***	0.35	237	0.11	0.56
		(0.06)			(0.07)			(0.07)			(0.07)	
Hourly productivity	403	0.01	3.59	294	-0.15	3.66	271	0.12	3.56	231	0.14	3.53
		(0.17)			(0.17)			(0.19)			(0.19)	
Job matches trade applied for	422	0.19 **	0.41	310	0.17 *	0.41	286	0.27 ***	0.37	237	0.12	0.53
		(0.07)			(0.07)			(0.08)			(0.07)	

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates.
Source: C4ED elaboration

Table 30: Impacts on employability (18 months after the training - males)

	T vs C			T1 vs C			T2 vs C			T2 vs T1		
	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM
Employability males (18 months)												
Self perceived employability score	211	0.06	3.76	179	0.05	3.74	145	0.08	3.79	105	0.01	3.82
		(0.06)			(0.06)			(0.07)			(0.08)	
Searched for a job in a firm	211	0.12	0.29	179	0.11	0.27	145	0.13	0.31	105	0.07	0.34
		(0.07)			(0.07)			(0.10)			(0.11)	
Sought to start a business	211	0.09	0.06	179	0.09	0.05	145	0.13	0.07	105	0.12	0.11
		(0.04)			(0.05)			(0.08)			(0.08)	
Talked friends/relatives about possible jobs	211	0.09	0.25	179	0.04	0.24	145	0.18	0.26	105	0.18	0.24
		(0.06)			(0.07)			(0.10)			(0.10)	
Use Internet/radio/Social media	211	0.13 *	0.11	179	0.12	0.10	145	0.15	0.11	105	0.06	0.19
		(0.05)			(0.06)			(0.08)			(0.09)	

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates.
Source: C4ED elaboration

Table 31: Impacts on income (18 months after the training - males)

	T vs C			T1 vs C			T2 vs C			T2 vs T1		
	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM
Income males (18 months)												
Monthly income from employment	657	1.04 ***	3.81	515	0.71 **	3.77	436	1.68 ***	3.88	375	0.99 **	4.72
		(0.28)			(0.32)			(0.37)			(0.37)	
Monthly income from stable employment	657	-0.04	2.11	515	0.16	2.10	436	-0.39	2.15	375	-0.60 *	2.31
		(0.26)			(0.31)			(0.31)			(0.32)	

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates.
Source: C4ED elaboration

Table 32: Impacts on resilience (18 months after the training - males)

	T vs C			T1 vs C			T2 vs C			T2 vs T1		
	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM
Resilience males (18 months)												
Coefficient of variation in income	559	0.14 ***	0.29	419	0.14 ***	0.30	357	0.15 ***	0.29	356	-0.01	0.44
		(0.03)			(0.03)			(0.03)			(0.03)	
Lowest monthly income	656	0.12	2.11	515	0.02	2.10	435	0.37	2.14	374	0.40	2.16
		(0.17)			(0.19)			(0.22)			(0.21)	
Brief Resilience Score	657	0.07	3.33	515	0.09 *	3.33	436	0.04	3.33	375	-0.06	3.42
		(0.04)			(0.05)			(0.05)			(0.05)	
ATR from shocks	608	-0.07	1.73	476	-0.19 *	1.73	404	0.15	1.73	343	0.34 ***	1.53
		(0.09)			(0.10)			(0.10)			(0.10)	

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates.
Source: C4ED elaboration

Table 33: Impacts on employment (18 months after the training – non-returnees)

	T vs C				T1 vs C				T2 vs C				T2 vs T1			
	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM
Employment non-returnees (18 months)																
In Employment (past 7 days)	1,184	0.09	***	0.49	907	0.07		0.49	813	0.12	***	0.49	653	0.07		0.54
		(0.03)				(0.04)				(0.04)				(0.04)		
In stable employment	1,184	0.13	***	0.59	907	0.12	***	0.59	813	0.16	***	0.59	653	0.05		0.70
		(0.03)				(0.03)				(0.04)				(0.04)		
Self-employed	1,184	0.15	***	0.22	907	0.10	***	0.21	813	0.22	***	0.23	653	0.13	**	0.33
		(0.03)				(0.03)				(0.04)				(0.04)		
Employer in stable job	1,184	0.09	***	0.10	907	0.07	***	0.10	813	0.12	***	0.11	653	0.06		0.18
		(0.02)				(0.02)				(0.03)				(0.03)		
Own account in stable job	1,184	0.06	***	0.12	907	0.03		0.11	813	0.10	***	0.12	653	0.07	*	0.15
		(0.02)				(0.02)				(0.03)				(0.03)		
Employee	1,184	0.00		0.23	907	0.02		0.23	813	-0.04		0.23	653	-0.05		0.25
		(0.03)				(0.03)				(0.03)				(0.03)		
Apprentice	1,184	0.03		0.09	907	0.04		0.10	813	0.02		0.09	653	-0.01		0.12
		(0.02)				(0.02)				(0.02)				(0.02)		
Casual worker	1,184	-0.01		0.06	907	-0.02		0.06	813	0.01		0.06	653	0.04	*	0.03
		(0.01)				(0.01)				(0.02)				(0.02)		
Formal employment	1,184	0.09	***	0.14	907	0.04		0.14	813	0.14	***	0.15	653	0.09	**	0.20
		(0.02)				(0.03)				(0.03)				(0.03)		
Reported job injury or illness	795	0.09	**	0.39	589	0.06		0.40	536	0.15	***	0.37	473	0.08		0.45
		(0.04)				(0.05)				(0.05)				(0.05)		
Hourly productivity	739	0.37		23.93	541	0.76		23.63	500	0.16		24.39	445	-0.38		25.45
		(1.74)				(1.94)				(2.30)				(2.30)		
Job matches trade applied for	795	0.24	***	0.36	589	0.20	***	0.35	536	0.29	***	0.37	473	0.12	**	0.54
		(0.04)				(0.05)				(0.05)				(0.05)		

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates.
Source: C4ED elaboration

Table 34: Impacts on employability (18 months after the training – non-returnees)

	T vs C				T1 vs C				T2 vs C				T2 vs T1		
	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT	POM
Employability non-returnees (18 months)															
Self perceived employability score	532	0.17	***	3.64	426	0.12	**	3.65	370	0.25	***	3.64	271	0.09	3.80
		(0.04)				(0.05)				(0.06)				(0.05)	
Searched for wage employment	532	0.03		0.27	426	0.02		0.26	370	0.03		0.28	271	0.05	0.26
		(0.04)				(0.05)				(0.06)				(0.06)	
Sought to start a business	532	0.07	*	0.12	426	0.08	*	0.12	370	0.08		0.13	271	-0.02	0.23
		(0.03)				(0.04)				(0.05)				(0.06)	
Talked friends/relatives about possible jobs	532	0.04		0.22	426	0.03		0.22	370	0.06		0.22	271	0.05	0.23
		(0.04)				(0.04)				(0.06)				(0.06)	
Use Internet/radio/Social media	532	0.05		0.12	426	0.05		0.11	370	0.05		0.12	271	0.02	0.14
		(0.03)				(0.04)				(0.05)				(0.05)	

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates.
Source: C4ED elaboration

Table 35: Impacts on income (18 months after the training – non-returnees)

	T vs C			T1 vs C			T2 vs C			T2 vs T1		
	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM
Income non-returnees (18 months)												
Monthly income from employment	1,184	0.81	3.02	907	0.79	2.97	813	0.90	3.10	653	0.27	3.85
		(0.19)			(0.22)			(0.25)			(0.26)	
Monthly income from stable employment	1,184	0.03	1.53	907	0.12	1.52	813	-0.09	1.54	653	-0.13	1.58
		(0.16)			(0.19)			(0.21)			(0.21)	

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates.
Source: C4ED elaboration

Table 36: Impacts on resilience (18 months after the training – non-returnees)

	T vs C				T1 vs C				T2 vs C				T2 vs T1			
	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM
Resilience non-returnees (18 months)																
Coefficient of variation in income	1,011	0.14	***	0.23	739	0.11	***	0.23	672	0.19	***	0.23	618	0.07	**	0.34
		(0.02)				(0.02)				(0.03)				(0.03)		
Lowest monthly income	1,179	0.17		1.69	904	0.20		1.66	809	0.17		1.73	650	0.03		1.89
		(0.12)				(0.14)				(0.16)				(0.16)		
Brief Resilience Score	1,184	0.05		3.32	907	0.04		3.33	813	0.07		3.32	653	0.02		3.36
		(0.03)				(0.04)				(0.04)				(0.04)		
ATR from shocks	1,082	0.01		1.71	827	-0.06		1.71	743	0.12		1.71	594	0.20	**	1.64
		(0.06)				(0.07)				(0.08)				(0.08)		

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates.
Source: C4ED elaboration

5.9.5. Comparison of beneficiary returnees versus comparison returnees

Table 37: Comparison of employment outcomes (18 months after the training – returnees)

	(1) Comparison	(2) Treatment 1	(3) Treatment 2
In Employment (past 7 days)	0.58	0.64	0.69
	(0.50)	(0.49)	(0.47)
In stable employment	0.69	0.74	0.94***
	(0.47)	(0.44)	(0.24)
Self-employed	0.33	0.30	0.66***
	(0.48)	(0.46)	(0.48)
Employee	0.13	0.26	0.09
	(0.34)	(0.44)	(0.28)
Apprentice	0.16	0.15	0.26
	(0.37)	(0.36)	(0.44)
Casual worker	0.09	0.11	0.03
	(0.29)	(0.31)	(0.17)
Formal employment	0.16	0.23	0.29
	(0.37)	(0.43)	(0.46)
Reported job injury or illness	0.48	0.66	0.67
	(0.51)	(0.48)	(0.48)
Hourly productivity	27.2	30.9	23.3
	(22.1)	(23.6)	(24.5)
Job matches trade applied for	0.39	0.63*	0.67**
	(0.50)	(0.49)	(0.48)
Observations	45	47	35

Note: Columns (1), (2) and (3) present the sample means of selected variables of the returnees in the final sample. Standard deviations in parentheses. The stars, correspond to the significance level of t-test comparing the comparison group to the treatment group. Significance stars: * $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$.
Source: C4ED elaboration

Table 38: Comparison of employability outcomes (18 months after the training – returnees)

	(1) Comparison	(2) Treatment 1	(3) Treatment 2
Self-perceived employability score	3.8	3.8	3.8
	(0.6)	(0.4)	(0.3)
Searched for wage employment	0.32	0.47	0.27
	(0.48)	(0.51)	(0.47)
Sought to start a business	0.26	0.06	0.09
	(0.45)	(0.24)	(0.30)
Talked friends/relatives about possible jobs	0.32	0.41	0.27
	(0.48)	(0.51)	(0.47)
Use Internet/radio/Social media	0.05	0.18	0.00
	(0.23)	(0.39)	(0.00)
Observations	19	17	11

Note: Columns (1), (2) and (3) present the sample means of selected variables of the returnees in the final sample. Standard deviations in parentheses. The stars correspond to the significance level of t-test comparing the comparison group to the treatment group. Significance stars: * $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$.
Source: C4ED elaboration

Table 39: Comparison of income outcomes (18 months after the training – returnees)

	(1) Comparison	(2) Treatment 1	(3) Treatment 2
Monthly income from employment	4.5	4.6	5.3
	(4.0)	(3.5)	(3.6)
Monthly income from stable employment	1.6	2.7	1.2
	(3.0)	(3.4)	(2.4)
Observations	45	47	35

Note: Columns (1), (2) and (3) present the sample means of selected variables of the returnees in the final sample. Standard deviations in parentheses. The stars correspond to the significance level of t-test comparing the comparison group to the treatment group. Significance stars: * $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$.
Source: C4ED elaboration

Table 40: Comparison of resilience outcomes(18 months after the training – returnees)

	(1) Comparison	(2) Treatment 1	(3) Treatment 2
Coefficient of variation in income	0.30	0.47	0.48***
	(0.26)	(0.27)	(0.24)
Lowest monthly income	2.2	2.0	2.0
	(2.4)	(1.8)	(1.8)
Brief Resilience Score	3.5	3.6	3.3
	(0.6)	(0.4)	(0.4)
ATR from shocks	1.9	1.5	1.7
	(0.9)	(1.0)	(0.8)
Observations	45	47	35

Note: Columns (1), (2) and (3) present the sample means of selected variables of the returnees in the final sample. Standard deviations in parentheses. The stars correspond to the significance level of t-test comparing the comparison group to the treatment group. Significance stars: * $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$.
Source: C4ED elaboration

5.9.6. Robustness checks

This appendix displays the estimation results on all indicators of interest using endline data. The first set of robustness checks consists in reproducing the IPWRA but using the weighting from the interview scores. A second set of robustness checks consist in using CEM. Midline robustness checks are available upon request. Each table presents the results for each outcome of interest for the different comparisons being performed (T vs C, T1 vs C, T2 vs C and T2 vs T1).

Within each group analysed, there are three columns. The first informs on the number of observations included in the regression. The second column displays the impact (ATT) in the outcome, and its standard error in parenthesis. Asterisks are used to signal the level of confidence of the estimated impacts, with three stars indicating that the result is statistically significant at the 1% level, two stars at the 5% level, and one star at the 10% level. The significance levels account for the multiple hypothesis testing (they represent Anderson's sharpened q-values). The third column indicates the reference level (the counterfactual). It corresponds to the value of the outcome that the beneficiaries would have had in the absence of the project. When IPWRA regressions are used, this value corresponds to the POM. When CEM regressions are used, it corresponds to the outcome mean of the comparison group after matching.

To illustrate how to interpret results from these tables, Table 19 displays results on a single indicator of employment. In this table, the outcome of interest is binary and corresponds to having had a job in the seven days preceding the survey. The table indicates that the project led to an increase in this indicator of nine percentage points (ATT), statistically significant at the 1% level. This means that beneficiaries saw their likelihood of having had a job moving from 50% to 59% thanks to the project (that is, a 18% increase in the employment rate). This estimation relied on 1,309 observations.

Table 41: Example table

	Obs	ATT		POM
In Employment (past 7 days)	1,309	0.09	***	0.50
		(0.03)		

Source: C4ED elaboration

Table 42: Impacts on employment (18 months after the training – IPWRA using interview scores and complete sample)

	T vs C				T1 vs C				T2 vs C				T2 vs T1			
	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM
Employment (18 months)																
In Employment (past 7 days)	1,124	0.07	*	0.53	831	0.05		0.53	784	0.11	***	0.51	612	0.05		0.57
		(0.03)				(0.04)				(0.04)				(0.04)		
In stable employment	1,124	0.12	***	0.61	831	0.07		0.62	784	0.18	***	0.60	612	0.08	*	0.70
		(0.04)				(0.04)				(0.04)				(0.04)		
Self-employed	1,124	0.18	***	0.22	831	0.09	**	0.23	784	0.27	***	0.22	612	0.13	***	0.36
		(0.03)				(0.03)				(0.04)				(0.04)		
Employee	1,124	-0.02		0.24	831	0.01		0.23	784	-0.06		0.25	612	-0.07	*	0.26
		(0.03)				(0.03)				(0.04)				(0.04)		
Apprentice	1,124	0.04		0.08	831	0.02		0.09	784	0.05	*	0.08	612	0.04		0.09
		(0.02)				(0.02)				(0.02)				(0.02)		
Casual worker	1,124	-0.01		0.06	831	-0.02		0.06	784	0.00		0.07	612	0.02		0.04
		(0.02)				(0.02)				(0.02)				(0.02)		
Formal employment	1,124	0.07	**	0.17	831	0.04		0.15	784	0.13	***	0.17	612	0.08	*	0.22
		(0.03)				(0.03)				(0.04)				(0.04)		
Reported job injury or illness	772	0.14	***	0.37	543	0.08		0.38	538	0.19	***	0.36	448	0.11	*	0.45
		(0.04)				(0.05)				(0.05)				(0.05)		
Hourly productivity	724	0.14		3.31	503	0.18		3.33	505	0.10		3.28	426	-0.17		3.55
		(0.13)				(0.13)				(0.16)				(0.13)		
Job matches trade applied for	772	0.26	***	0.35	543	0.20	***	0.36	538	0.33	***	0.33	448	0.17	***	0.50
		(0.04)				(0.05)				(0.05)				(0.05)		

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates. POM is expressed in the outcome's original unit.
Source: C4ED elaboration

Table 43: Impacts on employability (18 months after the training – IPWRA using interview scores and complete sample)

	T vs C			T1 vs C			T2 vs C			T2 vs T1		
	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM
Employability (18 months)												
Self perceived employability score	482	0.22 ***	3.59	371	0.17 ***	3.60	313	0.30 ***	3.58	285	0.04	3.84
		(0.04)			(0.05)			(0.06)			(0.05)	
Searched for a job in a firm	482	0.02	0.28	371	0.00	0.29	313	0.04	0.28	285	0.07	0.24
		(0.05)			(0.05)			(0.07)			(0.06)	
Sought to start a business	482	0.06	0.12	371	0.07	0.11	313	0.06	0.14	285	-0.01	0.21
		(0.04)			(0.04)			(0.05)			(0.05)	
Talked friends/relatives about possible jobs	482	0.03	0.24	371	0.00	0.25	313	0.06	0.23	285	0.08	0.21
		(0.05)			(0.05)			(0.06)			(0.05)	
Use Internet/radio/Social media	482	0.00	0.15	371	0.01	0.13	313	-0.01	0.17	285	0.03	0.12
		(0.04)			(0.04)			(0.06)			(0.04)	

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates. POM is expressed in the outcome's original unit.
Source: C4ED elaboration

Table 44: Impacts on income (18 months after the training – IPWRA using interview scores and complete sample)

	T vs C			T1 vs C			T2 vs C			T2 vs T1		
	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM
Income (18 months)												
Monthly income from employment	1,033	0.38	3.59	730	0.35	3.55	661	0.45	3.69	685	0.33	3.93
		(0.27)			(0.28)			(0.35)			(0.26)	
Monthly income from stable employment	1,033	-0.08	1.69	730	0.04	1.72	661	-0.23	1.67	685	-0.29	1.72
		(0.21)			(0.23)			(0.26)			(0.21)	

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates. POM is expressed in the outcome's original unit.
Source: C4ED elaboration

Table 45: Impacts on income (18 months after the training – IPWRA using interview scores and complete sample)

	T vs C				T1 vs C				T2 vs C				T2 vs T1			
	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM
Resilience (18 months)																
Coefficient of variation in income	1,027	0.13	***	0.26	727	0.09	***	0.27	657	0.17	***	0.25	680	0.06	**	0.36
		(0.02)				(0.02)				(0.03)				(0.02)		
Lowest monthly income	1,030	-0.03		1.90	729	0.02		1.89	658	-0.07		1.95	683	0.00		1.92
		(0.16)				(0.17)				(0.21)				(0.15)		
Brief Resilience Score	1,033	0.07		3.32	730	0.09	*	3.32	661	0.04		3.33	685	-0.02		3.39
		(0.04)				(0.04)				(0.05)				(0.04)		
ATR from shocks	940	0.06		1.66	662	-0.03		1.67	603	0.18	*	1.66	620	0.21	**	1.64
		(0.07)				(0.08)				(0.08)				(0.08)		

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Results from IPWRA regressions. Regressions include covariates. POM is expressed in the outcome's original unit.
Source: C4ED elaboration

Table 46: Impacts on employment (18 months after the training – CEM using complete sample)

	T vs C				T1 vs C				T2 vs C				T2 vs T1			
	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM	Obs	ATT		POM
Employment (18 months)																
In Employment (past 7 days)	814	0.11	***	0.46	588	0.06		0.49	386	0.18	***	0.42	396	0.06		0.56
		(0.03)				(0.04)				(0.05)				(0.05)		
In stable employment	814	0.15	***	0.58	588	0.12	***	0.59	386	0.18	***	0.57	396	0.04		0.72
		(0.03)				(0.04)				(0.04)				(0.04)		
Self-employed	814	0.16	***	0.20	588	0.08	**	0.21	386	0.27	***	0.20	396	0.12	*	0.36
		(0.03)				(0.03)				(0.04)				(0.05)		
Employee	814	0.00		0.23	588	0.03		0.23	386	-0.05		0.24	396	-0.09	*	0.29
		(0.03)				(0.03)				(0.04)				(0.04)		
Apprentice	814	0.06		0.07	588	0.08	***	0.07	361	0.02		0.09	396	0.02		0.11
		(0.02)				(0.02)				(0.03)				(0.03)		
Casual worker	814	0.00		0.06	588	-0.02		0.07	361	0.03		0.05	396	0.02		0.05
		(0.02)				(0.02)				(0.03)				(0.02)		
Formal employment	814	0.09	***	0.16	588	0.05		0.14	386	0.13	***	0.19	396	0.05		0.25
		(0.03)				(0.03)				(0.04)				(0.04)		
Reported job injury or illness	546	0.15	***	0.30	378	0.10	*	0.32	265	0.22	***	0.26	292	0.05		0.47
		(0.04)				(0.05)				(0.05)				(0.05)		
Hourly productivity	504	-4.51	**	29.57	351	-4.19		28.59	240	-4.91		31.08	276	0.11		24.50
		(2.06)				(2.32)				(3.16)				(2.75)		
Job matches trade applied for	546	0.30	***	0.26	378	0.22	***	0.29	265	0.39	***	0.22	292	0.17	**	0.49
		(0.04)				(0.04)				(0.04)				(0.05)		

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Coefficients from OLS regressions for continuous outcomes, and marginal effects from probit regressions for binary outcomes, using CEM. Regressions include covariates.
Source: C4ED elaboration

Table 47: Impacts on employability (18 months after the training – CEM using complete sample)

	T vs C				T1 vs C				T2 vs C				T2 vs T1			
	Obs	ATT		POM	Obs	ATT	POM	Obs	ATT		POM	Obs	ATT		POM
Employment (18 months)																
Self perceived employability score	387	0.13	***	3.65	284	0.07	3.67	189	0.23	***	3.63	163	0.17	**	3.73
		(0.04)				(0.05)			(0.06)				(0.07)		
Searched for wage employment	376	0.01		0.25	278	0.06	0.21	177	-0.08		0.30	164	0.04		0.23
		(0.04)				(0.05)			(0.07)				(0.07)		
Sought to start a business	376	0.07		0.14	278	0.07	0.15	177	0.08		0.13	164	0.01		0.15
		(0.04)				(0.04)			(0.05)				(0.06)		
Talked friends/relatives about possible jobs	376	0.01		0.22	278	0.04	0.19	177	-0.06		0.27	164	0.07		0.19
		(0.04)				(0.05)			(0.07)				(0.06)		
Use Internet/radio/Social media	376	0.06		0.08	257	0.06	0.07	177	0.04		0.10	164	0.04		0.12
		(0.03)				(0.04)			(0.05)				(0.05)		
Casual worker	746	0.00		0.06	537	-0.02	0.07	361	0.03		0.05	396	0.02		0.05
		(0.02)				(0.02)			(0.03)				(0.02)		

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Coefficients from OLS regressions for continuous outcomes, and marginal effects from probit regressions for binary outcomes, using CEM. Regressions include covariates.
Source: C4ED elaboration

Table 48: Impacts on income (18 months after the training – CEM using complete sample)

	T vs C			T1 vs C			T2 vs C			T2 vs T1		
	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM	Obs	ATT	POM
Income (18 months)												
Monthly income from employment	814	0.14	3.61	588	0.00	3.67	386	0.36	3.51	396	-0.23	4.28
		(0.22)			(0.27)			(0.31)			(0.32)	
Monthly income from stable employment	814	0.01	1.59	588	0.05	1.66	386	-0.09	1.50	396	-0.58	1.97
		(0.19)			(0.23)			(0.26)			(0.28)	

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Coefficients from poisson regressions. Regressions include covariates.
Source: C4ED elaboration

Table 49: Impacts on resilience (18 months after the training – CEM using complete sample)

	T vs C				T1 vs C				T2 vs C				T2 vs T1			
	Obs	ATT		Reference Mean	Obs	ATT		Reference Mean	Obs	ATT		Reference Mean	Obs	ATT		Reference Mean
Resilience (18 months)																
Coefficient of variation in income	776	0.09	***	0.27	547	0.05		0.29	382	0.15	***	0.26	393	0.07	*	0.34
		(0.02)				(0.03)				(0.03)				(0.03)		
Lowest monthly income	811	0.01		1.84	586	0.05		1.83	385	-0.06		1.85	394	-0.14		2.04
		(0.14)				(0.17)				(0.20)				(0.20)		
Brief Resilience Score	814	0.09	**	3.31	588	0.07		3.34	386	0.13	**	3.27	396	0.05		3.36
		(0.04)				(0.04)				(0.05)				(0.05)		
ATR from shocks	744	0.12		1.65	536	0.04		1.63	356	0.21	**	1.68	361	0.19	*	1.66
		(0.07)				(0.08)				(0.09)				(0.09)		

Note: *, **, & *** represent statistical significance of Anderson's sharpened q values at the 10%, 5%, & 1% level respectively.
Coefficients from OLS regressions for continuous outcomes, and marginal effects from probit regressions for binary outcomes, using CEM. Regressions include covariates.
Source: C4ED elaboration

5.10. CONTRIBUTING EVALUATORS

Dr. Thomas Eekhout is an M&E Specialist at C4ED. Dr. Eekhout has seven years of relevant experience leading and managing impact evaluations that build on the complementarity of mixed methods. More specifically, he has developed expertise in topics related to labor economics, education, and the environment, with field experience in Sub-Saharan Africa and Latin America. Before joining C4ED, he investigated the barriers to the development of MSMEs in developing countries with a particular focus on the urban West African informal sector (Burkina Faso and Senegal). His research, in partnership with the telecommunication operator Orange, has also led him to explore the effects of new (mobile) technologies, social networks, and (formal and informal) financial services on economic performance. He personally designed, developed, and monitored mixed surveys to collect hard-to-measure indicators such as economic performances (sales, profits, wages, capital and soft skills. Since 2021, he has led numerous impacts evaluations for C4ED. He is responsible for the evaluation of the impacts of field farm schools in Ecuador implemented by UNDP and in Lesotho implemented by GIZ on deforestation, production, and productivity. He is also leading an impact evaluation financed by Deval of the SME Loop in Benin implemented by GIZ. Since 2023, Dr. Eekhout is diversifying his technical expertise by conducting monitoring evaluations of a WASH multi-country project implemented by UNICEF.

Since the start of the collaboration between C4ED and EUTF, Dr. Eekhout has been the focal point and coordinator of the R1 evaluations. In addition to the impact evaluation of the Tekki Fii project implemented by GIZ (T05-EUTF-SAH-GM-03-01), he also has led the impact evaluations of the second component of the RISE project in Uganda implemented by GIZ (T05-EUTF-HOA-UG-39-01), the INTEGRA component implemented by ITC (T05-EUTF-SAH-GN-01-01) as well as the component implemented by GIZ (T05-EUTF-SAH-GN-01-03). Within the framework of the evaluation, Dr. Eekhout also acted as Quality Assurance, peer reviewing other R1 and R2 reports.

Mr Elikplim Atsiatorme is a Quantitative Research Manager at C4ED. He has extensive experience working in impact assessments in Ghana, The Gambia, Uganda, Ethiopia and Bangladesh and Nepal. He has extensive field-experience working as a data collector, and in the design of surveys for monitoring and evaluation and environmental and social impact assessments in Ghana. Some of these assessments include household surveys, assessing alternative sources of livelihoods and microfinance schemes for the Ghana Wildlife Society in the Western and Volta Regions of Ghana. He was also part of a survey to collect baseline data for an EU Forest Law Enforcement Governance Program ("FLEGT") Pilot Project in the Western Region of Ghana. Mr Atsiatorme holds a Master's degree from the Freie Universität Berlin in Sociology, where his research focused on a quantitative analysis of precarious employment and its political consequences. He also has a second Master's degree from the University of Cape Coast, Ghana, in Peace and Development Studies. He used mixed methods (surveys, interviews and FGDs) in evaluating conflicts in the execution of community-based Natural Resource Management projects. At C4ED, he is currently involved in other projects involving the collection of data under the themes of maternal and child health and nutrition and WASH.

Mr Atsiatorme has been involved in EUTF projects leading data collections on the impact evaluations of the Tekki Fii Project by GIZ (T05-EUTF-SAH-GM-03-01) in The Gambia, the impact evaluation of the RISE project in Uganda (T05-EUTF-HOA-UG-39-01) implemented by GIZ while also assisting data collections in the STEDE project implemented by Mercy Corps (T05-EUTF-HOA-ET-40-02) in Ethiopia. In these evaluations, Mr Atsiatorme has successfully managed several rounds of baseline,

midline and endline surveys involving phone surveys and face-to-face surveys. Mr Atsiatorme has been the focal coordinator for the R4 component which involves several rounds of capacity building sessions on impact evaluation.

Ms. Johanna Kern is a Qualitative Research and Evaluation Specialist (QREM) at C4ED. Ms. Kern has over 10 years of experience in the field of development cooperation, consulting and co-operating with international donors, partnering government agencies, civil society organisations, private sector representatives and International Organizations. Her expertise lies in collaborative approaches for planning, monitoring and evaluation of development programmes. She is an expert at applying human-rights-based and participatory approaches for inclusive development. Ms. Kern has acted as gender expert for several organizations and was responsible for setting up, backstopping, and evaluating gender-sensitive development projects. Ms. Kern has extensive experience in applied qualitative research for impact evaluations in a variety of sectors including economic empowerment and gender. At C4ED she planed and coordinated qualitative research for mixed-method impact evaluations of programmes such as, the IFAD-funded "Productive Partnerships in Agriculture Project (PPAP)" in Papua New Guinea, the IFC/GAFSP-funded "Global Agriculture and Food Security Program Private Sector Window" in Madagascar as well as other studies such as the GIZ funded "Study on the impact of the COVID-19 on employment and other economic opportunities for Women in Jordan". Ms. Kern holds a Master's degree in Political Science with a Minor in Cultural Studies from the Friedrich-Alexander Universität Erlangen-Nürnberg.

Ms. Kern has been involved in qualitative research for several R1 projects since the beginning of the collaboration between C4ED and EUTF. In addition to leading the qualitative research for the Tekki Fii project implemented in the Gambia by GIZ (T05-EUTF-SAH-GM-03-01), she also led the qualitative research component for the "Boosting Green Employment and Enterprise Opportunities (GrEEn) project" in Ghana implemented by UNCDF and SNV (T05-EUTF-SAH-GH-02) and designed the qualitative research component for the "Strengthened Socio-Economic Development and Better Employment Opportunities for Refugees and Host Communities" (STEDE) project in Ethiopia, implemented by Mercy Corps (T05-EUTF-HOA-ET-40.2). Within the framework of the evaluation, Ms. Kern also acted as Quality Assurance, peer reviewing other R1 and R2 reports.

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