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Making intense skills training work at scale: Evidence on business and labor market outcomes in Tanzania

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Margherita Calderone, Nathan Fiala, Lemayon Melyoki, Annekathrin Schoofs,
and Rachel Steinacher¹

Making Intense Skills Training Work at Scale: Evidence on Business and Labor Market Outcomes in Tanzania

Abstract

Improving youth labor market outcomes is a primary concern for countries around the world. We conduct a randomized controlled trial in Tanzania on an intense gender-sensitive skills training program that worked with over 53,000 youth in the region. After two years, we find the program increased women's economic outcomes, including income, savings, as well as engagement in the labor market, and quality of jobs for all participants. We find no significant effects on economic outcomes for male participants. We also find significant effects on hard skills for both women and men and soft skills for women in terms of self-awareness and confidence. In a cross experiment with micro-grants, we find smaller but economically significant effects on all outcomes for both genders. From a monetary perspective the training program is very cost-effective, paying for itself within 32 months when targeting both women and men.

JEL-Codes: J24, J68, L26, M53, O12, C93

Keywords: Business training; soft skills; youth unemployment; microenterprises; Tanzania

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1. Introduction

Youth unemployment, and especially women’s labor force participation, is a growing challenge in most developing countries. It is particularly severe across Africa, where the population is the world’s youngest and the number of young people living in working poverty¹ is expected to increase. The only way to meet basic needs is for many to engage in informal jobs, which often provide low pay and leave workers vulnerable to economic shocks ([International Labor Organization, 2019](#)). A common solution by international organizations and governments is the encouragement of entrepreneurship and private sector development ([Filmer and Fox, 2014](#)), fostering the creation and expansion of small businesses and skilled employment opportunities. Post-educational skills training programs have therefore grown in importance in Africa and worldwide ([Jameel Poverty Action Lab, 2017](#); [Kluve et al., 2019](#)). While most training programs focus on cognitive skills, such as technical or numeracy, some are increasingly emphasizing the relevance of non-cognitive or ‘soft’ skills, such as behavioral and life skills, for youths to successfully enter and develop on the labor market ([Heckman and Kautz, 2012](#); [Cunningham and Villaseñor, 2016](#); [Deming, 2017](#)). However, the evidence that such skills programs can improve labor market and economic outcomes is still limited and is concentrated among small-scale programming.

Using a clustered randomized controlled trial (RCT), we evaluate the second Strengthening Rural Youth Development through Enterprise (STRYDE 2.0) program in Tanzania - a large-scale soft skills training program for youth to develop skilled employment. The innovative and intensive program also helps participants to draw up and fund concrete business plans for self-employment. Implemented by TechnoServe (TNS), an international nonprofit organization that operates across sub-Saharan Africa and Latin America, STRYDE 2.0 has already reached over 53,000 youth across East Africa between 2015 and 2019.

STRYDE 2.0 has several unique features. First, the program starts with an intensive three-month classroom training. In two half-day sessions per week over 12 weeks, the training offers 96 hours on basic life and career skills. Beginning with self-awareness exercises focused on boosting self-confidence, continuing with personal effectiveness training and ending with the modules on how to develop concrete business plans, STRYDE 2.0 helps young people discover their strengths, present themselves profes-

¹The working poverty rate reveals the proportion of the employed population living in poverty despite being employed, implying that their employment-related incomes are not sufficient to lift them and their families out of poverty and ensure decent living conditions ([Gammarano, 2019](#)).

sionally, manage their finances, and start their own enterprises. Second, the classroom training is followed by a nine-month period of technical assistance or ‘aftercare’. This includes follow-up visits and personal advice by the trainers, support to link participants with employers or to develop their own micro-enterprises and a Business Plan Competition (BPC) where winners are awarded cash grants worth between \$86 and \$237, depending on the competition outcome.² Third, the intervention has an explicit gender focus. Trainers are about 50% women, providing youth with positive female role models, while women can attend class with children. In particular, the first training session is designed to challenge stereotyped perceptions of roles and capacities; it teaches how to reach one’s full potential regardless of gender as responsibilities and opportunities are ascribed by society, not biology, and hence can evolve.

In April 2017, 4,537 (mostly) rural youth in 135 clusters - defined as wards in urban areas and villages in rural areas - were enrolled in the study and completed the baseline survey.³ Participants were on average 23-year old farmers or vocational wage workers, who on average only finished primary school, and earned less than \$1 a day. 48% of the sample are women. Randomization was clustered at the ward / village level with 72 treatment clusters being trained between July and October 2017, awarded in a BPC in December 2017, and supported by the program’s aftercare through spring 2018. During the BPC, participants with the top three business plans per group were offered micro-grants by merit, as per STRYDE tradition. For this study, STRYDE further awarded micro-grants worth about \$65 (roughly three and a half times their monthly income) to a random sample of five participants from among the remaining 80% of top performers per group. We then randomly selected 18 participants per cluster for follow-up, resulting in an endline sampling pool of 2,422 persons. We used a two-phase tracking approach, which resulted in an effective response rate (weighted for selection into endline tracking) of 90% after two years.

We present findings for three preregistered, primary outcomes: labor force participation, an index of employment quality (whether the respondent has permanent work, working hours, and work satisfaction) and an index of economic outcomes (income, savings, and assets). We also preregistered heterogeneity analysis by gender. We find a small increase of 2.4% in whether a person is employed or running their own business two years after the STRYDE 2.0 program. We also find an increase in employment

²TZS-denominated grants are converted to dollars at the 2020 market exchange rate of 2,320 TZS per USD.

³Less than 5% of participants were selected from urban clusters, which are spread across 6 wards in the Mbeya Urban area. Results are robust to the exclusion of urban study participants.

quality of 0.12 standard deviations (SDs) but no significant impact on economic outcomes. Separating by gender, we find that these effects are driven by larger impacts on women. Our index of economic outcomes increases by 0.12 SDs for women. While differences between the effects on women and men are not statistically significant at conventional levels, such differences are relevant in economic terms. This could be partly due to the lower labor force participation rate among control women compared to control men, suggesting room for growth for women. We also find that both female and male experimental BPC winners are more likely to be employed by approximately three percentage points and observe modest increases in the employment quality and economic indices of about 0.12 SDs each.

We also estimate effects considering actual participation in the program, where participation is instrumented by the random program assignment (the treatment-on-treated, or TOT). We highlight this analysis as it allows for a direct comparison between the STRYDE 2.0 training and the effect of the grant (where compliance was 100%), as well as aiding in cost-benefit analysis. While take-up in our sample is 66%, all classrooms were full. The TOT thus captures the most relevant effect of the program. Compared to average treatment effects, treatment on the treated coefficients are significantly higher, though effects are still only statistically significant for women. Women's employment quality increases by 0.35 SDs and the economic-index increases by 0.26 SDs. This effect is much larger relative to the impact of the BPC on the economic-index, which is about 0.10 SDs. We conclude the STRYDE 2.0 training itself - compared with the provision of additional cash as part of the BPC - plays a significant role in determining the economic effects.

Additionally, we explore a series of preregistered, secondary outcomes to better understand which mechanisms may have facilitated the observed changes in primary outcomes. By design, the education component of the STRYDE 2.0 program comprises a combination of soft, financial, and work-specific skills and we are unable to isolate the impacts of the different skills modules. In line with TNS's theory of change and parallel qualitative work, we, however, expect both hard and soft skills to be vital to the program's success. We thus developed two indices: one comprising market-relevant or hard skills and one comprising soft skills, including several psychological well-being scales and a measure for confidence.

For both women and men, we find that hard skills substantially increase by 0.28 SDs. In line with our previous results, we observe that business outcomes improve by 0.14 SDs. The soft skills-index increases by 0.18 SDs for all participants. Among women this is mainly driven by participants' increased entrepreneurial confidence and

optimism, while among men it is driven by increased risk tolerance. Perceived as an important module by the participants, these features can matter for labor market success. The focus on self-awareness and confidence can translate into participants feeling more responsible for their life. It can help them to be more ambitious, to make better choices and to understand their role in the family and in the larger society. This is in line with qualitative evidence we collected that suggests women were more likely to find the learning component on how to be confident and assertive as particularly useful. Some commented that they would not have believed they had the ability to formulate and implement a business plan on their own.

The STRYDE 2.0 program is cost effective if we assume constant private earnings over time. The program breaks even 32 months after program participation, which is relatively quick for these types of programs. We thus provide a proof-of-concept that skills trainings that combine hard and soft skills can be an effective policy instrument as they provide participants with skills that are increasingly valued on the labor market.

An increasing number of experiments are testing specific hypothesis regarding the role of business training programs in the creation and expansion of entrepreneurship, with the hope of understanding what training contents might be more effective and which program components magnify the effects of training (e.g., [Chioda et al., 2021](#), on a program combining soft and hard-skills training). In Uganda, [Fiala \(2018\)](#) tests the differential effects of various combinations of business training and supply of capital and finds large impacts on sales and profits for male-owned micro-enterprises that were offered training and loans. In Peru, [Valdivia \(2015\)](#) studies whether a business training program for female micro-entrepreneurs has more substantial effects when followed by technical assistance. The author suggests that, compared to the standard training, the full treatment helped businesses in increasing sales more quickly, but it did not generate significant differential changes in firms' growth trajectories.

Also, there are only a few studies that provide evidence on the effectiveness of soft skills training in developing countries (e.g., [Campos et al., 2017](#); [Adhvaryu et al., 2019](#); [Alibhai et al., 2019](#); [Bassi and Nansamba, 2021](#)). Our results complement the findings of [Campos et al. \(2017\)](#). The authors randomly assigned 1,500 micro enterprise owners in Togo either to a control group, a 36-hour business training, or a 36-hour personal initiative training teaching on how to get into a proactive mindset. The authors find that, two years later, the personal initiative training increased profits by 30%, paying for itself within a year. Along similar lines, two recent studies find high labor market and economic returns to soft skills training, especially among women: [Acevedo et al.](#)

(2017) and Barrera-Osorio et al. (2020). Acevedo et al. (2017) examine the shorter (12-month) and medium run (36-month) effects of a soft skills training program in the Dominican Republic. In the short run, they find positive impacts on labor market outcomes for women, driven by better paid jobs and job satisfaction. The effects, however, diminish over the medium run. In Colombia, Barrera-Osorio et al. (2020) study 653 individuals and find large and sustained returns to vocational trainings driven by a shift to the formal sector. They find a larger initial increase in employment resulting from a program emphasizing technical skills, but with benefits diminishing over time, while this is not the case for the program emphasizing social skills.

Other findings are in sharp contrast to ours, especially where soft skills trainings targeted higher education graduates or the programs did not include a gender-sensitive angle. Groh et al. (2016), for instance, randomly assign female community college graduates to a soft skills training program in Jordan, scheduled for 45 hours over nine consecutive days. Follow-up surveys 6, 14, and 27 months later reveal no significant impact on various employment measures. Relying on administrative data, Alzúa et al. (2016) analyze the effects of the *entra21* program in Argentina, an intensive classroom training containing 100 hours of technical, 64 hours of life skills training, and internships. They show positive effects on formal employment and earnings concentrated among men but fading in the long run. Similarly, Arráiz et al. (2020) test the effectiveness of a soft skills training in Jamaica. They find positive effects on profits and sales, only significant for men, and vanishing twelve months after the training.

We thus contribute to the scarce experimental literature on trainings that combine hard skills with soft skills and help tip the balance in favor of the effectiveness of integrating soft skills modules. While traditional training programs yield surprisingly small productivity gains (Karlan and Valdivia, 2011; McKenzie and Woodruff, 2014), and have, therefore, been criticized for being too costly, the STRYDE 2.0 program is very cost effective. This evidence can inform the design and targeting of post-educational skills training programs and increases confidence that intense skills training can substantially change the employment dynamics of prospective young employees and entrepreneurs, especially when targeted at women and designed with a gender-responsive lens.

This paper is organized as follows: Section 2 describes the STRYDE 2.0 program, and Section 3 presents the experimental design. Section 4 provides further information on the data and descriptive statistics. Section 5 describes the regression specification, and Section 6 presents the empirical results. Section 7 presents the benefit-cost analysis. Section 8 discusses the quality of program delivery, and Section 9 concludes.

2. Program description

Between 2015 and 2019, the STRYDE 2.0 program has targeted over 53,000 mostly under-employed young adults aged between the ages of 18 and 30 in Kenya, Rwanda, Uganda, and Tanzania. It is funded by the Mastercard Foundation and promoted by TNS. Tanzania is the most recent country of program operations and the focus of this study.

STRYDE 2.0 contains a combination of an intensive career and soft skills training, the supply of technical assistance and micro-grants. It is implemented by Business Counselors (BCs) who are recruited, trained, and temporarily employed by TNS. TNS's decision to work in a village depends on both, recommendations by local government partners and the perceived interest of residents who attend the mobilization meetings held by BCs. Once a village has been selected for the program, a BC becomes responsible for setting up a training group for which s/he needs to enroll participants. BCs are recruited across the region and then relocated with financial incentives where needed. They teach one to two training groups at the same time.

The education component involves a three-month training delivered by the BC in a classroom setting at a venue located in the area in which the youth reside. On average, 35 students participated per class. In two half-day sessions per week over 12 weeks, the training offers 96 hours on basic life and career skills. The curriculum starts with self-awareness exercises boosting self-confidence and self-discipline, continuing with personal effectiveness training - including skills such as decision-making, communication, and time management to help young people discover their strengths, present themselves professionally and start their own enterprises. Throughout the course, there are continuous references to the first key modules on self-awareness and personal effectiveness. Even the traditional modules on better business practices (e.g., market research, record keeping, pricing, etc.) incorporate cognitive insights such as learning how to identify and follow the characteristics of successful entrepreneurs, how to generate and develop business ideas or how to create a vision statement in an inspiring way. Table [A.1](#) provides detailed information on the content of the training.

The teaching style outlined in the trainer manuals aims at supporting self-learning, relies on participatory approaches based on questions and answers, discussions, and group exercises, and favors internalization of concepts by allowing time for feedback and independent reflections. Importantly, the intervention has an explicit gender focus. Trainers are about 50% women, providing youth with positive female role models, while women can attend class with children. Also, the first training session is designed

to challenge stereotyped perceptions of roles and capacities and teaches how to reach one's full potential regardless of gender.

The program had no educational requirements. Participants graduate from training if they attend at least 75% of classes. After graduation, they receive continued support from their BCs during a period referred to as aftercare and lasting up to nine months. The BCs support participants refine and execute their business plans by visiting them a couple of times, and help them develop a better understanding of the income-generating opportunities available in their communities. This is done by organizing practical skills workshops at selected local businesses, such as product-specific seminars taught by established agricultural entrepreneurs of the area or batik-making sessions at successful cloth shops. During the aftercare component, beneficiaries are also encouraged to submit their business plans to the BPC. Three micro-grants per training group are awarded based on a business feasibility ranking compiled by a commission of experts.

The overall goal of the STRYDE 2.0 program is to improve the livelihoods of rural youth and their households by providing them with the necessary tools to motivate them and to enhance their ability to exploit existing labor market opportunities. It is anticipated that they would actively participate in the local economy and thus increase their long-term earning potential. The intended key outputs from this intervention include increased confidence, improved decision-making abilities, enhanced career and entrepreneurial skills, and increased awareness of potential business opportunities.

3. Experimental design

This RCT takes advantage of the large scale of the STRYDE 2.0 program to create a robust sample clustered at the ward / village level. In Tanzania, the program involves targeting 15,400 youth from selected wards of the Mbeya region (now Mbeya and Songwe regions)⁴ to be trained in six cohorts. We follow cohort number four of STRYDE 2.0 participants who were mobilized between April and June 2017, trained between July and October 2017, awarded in the BPC of December 2017, and supported during the aftercare until Spring 2018.

⁴The Mbeya region covers about 50 urban wards and 170 rural wards with almost 600 villages. It is divided into the Mbeya Urban area with 36 wards and five rural districts (Chunya, Kyela, Mbarali, Mbeya Rural, Rungwe) for a total of 89 wards with four to eight villages each. The new Songwe region, established in 2016 from the Western half of Mbeya, is divided into an urban area with 15 wards and four rural districts (Ileje, Mbozi, Momba, Songwe) for a total of 79 wards with an average of four villages each.

To facilitate the implementation of an experimental study, the mobilization phase (usually carried out by TNS) was, in this case, carried out in cooperation between TNS and the research team and was led by Innovations for Poverty Action (IPA). The mobilization process involved multiple steps, including high-level government meetings (with district and regional commissioners and community development officers), ward-level meetings, and at least three village-level meetings: a meeting with the village leaders, a village-wide information meeting and a youth registration one. Several steps ensured the recruitment process to be as successful as usual, including hiring and training an adequate number of local Field Officers (FOs)⁵, fostering coordination between IPA FOs and TNS BCs, and combining different reach-out approaches (such as repeating village-level meetings, targeting youth groups, handing out of information sheets, etc.).

At each field meeting, IPA presented itself as a research organization with links to anonymous international donors that were interested in sponsoring a youth training program in the area. The team specified that there was limited funding and, hence, it was not certain whether the village would receive the program. Besides such an introduction, all the details provided regarding the program were like those provided by TNS staff during standard recruitment efforts and TNS BCs were encouraged to participate at meetings. To support coordination between IPA FOs and TNS BCs, each FO was assigned to two specific BCs to work with during the mobilization. For the purpose of the study, during the last meeting devoted to youth registration, those that signed up for the program also filled out a brief survey to collect baseline information on the main socio-economic characteristics of respondents.

In cohort four, mobilization was attempted in 161 clusters, defined as training group catchment areas: 9 wards in the Mbeya Urban area and 152 villages in the rural areas of the Mbeya / Songwe regions (spread across 60 wards and the four districts of Kyela, Mbeya Rural, Rungwe, and Mbozi). These 161 clusters were selected together with TNS, based on two aspects: i) being in an area where a BC could live and work (namely close to other TNS operations), and ii) being a new area for TNS operations, where it was unlikely youth could have already heard about the program.

Clusters were grouped in pairs based on their geographic location: each pair comprised two clusters located close enough to allow the BCs to easily access both for training, but far enough to minimize spillover effects. In urban areas, a cluster / ward was considered sufficient to recruit two training groups. In rural areas, each BC was

⁵FOs are usually identified among individuals who applied to become a TNS BC but did not pass the selection procedure.

assigned two sets of clusters, so four clusters / villages in total. A mobilization effort was considered successfully completed if at least 20 participants per cluster filled out the baseline survey during the last meeting. Once the mobilization was completed, clusters were randomly assigned to treatment or control within each BC strata. The final sample includes 135 clusters and a total of 4,537 observations⁶, divided between 72 treatment and 63 control clusters, which will not be targeted by TNS in the recruitment efforts for STRYDE 2.0 cohort five nor six.

The 72 clusters randomly assigned to treatment, 3 urban wards and 69 rural villages, passed through a transition phase in June to July 2017, during which the 40 BCs assigned to them had to recruit at least 32 participants per cluster (64 in urban ones). At the beginning of the transition phase, IPA FOs and TNS BCs worked together to inform the enrolled youth of the imminent start of the program, invited them to an introductory meeting, and kept in touch with them to ensure they would have participated. At this introductory meeting, targeted youth received detailed information about the STRYDE 2.0 program and the schedule.

In December 2017, beneficiaries that graduated from training were encouraged to participate in the BPC. This involved participants from 88 training groups (72 from the baselined sample and 16 extra ones). As per STRYDE tradition, the best three plans per group were offered micro-grants by merit. To test whether the supply of capital could augment the effects of training, during this competition, among the remaining 80% of top performers per group, another five participants were randomly selected to receive micro-grants labeled as ‘honorably mention’ prizes of 150,000 TZS (about \$65). The prize is considerably lower than in other youth programs ([Blattman et al., 2014](#)), but should raise the incentive to participate in the BPC and is intended to get people excited about entrepreneurial activities. The final BPC experimental sample includes 1,278 participants, excluding the 264 traditional TNS winners. The BPC sample is only partially overlapping with the STRYDE 2.0 baseline data as it involves additional training groups that were not part of the study at baseline and program participants who were mobilized after baseline data collection. [Figure A.1](#) presents the steps of the experimental design.

⁶Specifically, 26 clusters were dropped before randomization of which 17 clusters were dropped during the mobilization phase as it was clear that the team would not have achieved the target of 20 surveys completed, 3 clusters were dropped at the end of the mobilization as no baseline surveys were distributed by the local FOs because of miscommunication problems, and other 6 clusters were dropped at the end of the mobilization because the collected surveys resulted to be fake.

4. Data and description of the sample

4.1. Baseline data and balancing

In June 2017, prior to the training and during the last mobilization meeting, young people who signed up for the program also hand-filled a brief questionnaire on their socio-economic characteristics, plus some questions about their expectations on the program. The baseline dataset was generated through Captricity, a paper-to-digital data transformation software that ensures a 99% level of accuracy.⁷ The final baseline sample includes 135 clusters, 72 treatment and 63 control clusters, with a mean of 33.6 individuals per cluster (and a variance of 7.5⁸) and a total of 4,537 observations.

Due to budget constraints, we follow-up a random sub-sample of 18 people per cluster, resulting in a total sample of 2,422 observations to evaluate the STRYDE 2.0 program. Table A.2 displays their pre-intervention values and test of balance (while Table A.3 presents the balance test on the original baseline sample and Table A.4 on the BPC sample). Out of 51 variables measured at baseline, only five show imbalance: people in control villages lived in slightly smaller households and were less likely to have a business before baseline. They were less likely to state no fears to attend the STRYDE 2.0 program; e.g., more likely to state time constraints. Only no fears is significant at the 1% level. This validates a successful program randomization at baseline.

From Table A.2, we see that 48% of participants are women, which allows disaggregation by gender. In 2017, participants were on average 23 years old, rural farmers or vocational wage workers. The unemployment rate of 1% is fairly low, though many are in precarious situations with very low-paid and informal contracts in the agricultural sector. This can partially be explained by their educational attainment. About half of our sample only finished seven years of primary school, about 39% reached the ordinary level of secondary school (plus four years), and less than 5% reached the advanced level of secondary school (plus two years).⁹ Cash earnings in the past month

⁷Between June and August 2017, a small local team of data-quality officers sorted the baseline forms, scanned them, submitted them to Captricity, manually inserted the values which the program could not read, checked that the other values corresponded to the originals, and cleaned the raw data.

⁸In control areas, the mean cluster size is 32.63 and the variance is 6.97, while in treatment areas, the mean cluster size is 34.46 and the variance is 7.83. In a standard t-test, the difference between the two means is not statistically significant. Note that the variance is smaller than the mean cluster size, so it should not affect the power of the experiment.

⁹In Tanzania, primary education is considered mandatory. Since 2015, reaching the ordinary level is mandatory, too.

averaged less than \$1 a day, and savings were about \$8, with two-thirds being informal savings. 35% did not save at all. Many participants (69%) stated that acquiring business skills was their main reason for pursuing STRYDE 2.0, followed by soft skills (54%), meeting new friends (26%), credit opportunities (26%), and new job opportunities (22%). This suggests that many of the participants lacked the necessary skills to find better jobs or to run their own businesses. Only 13% feared time constraints to attend; perhaps because the sample represents people who could be mobilized.

4.2. Endline data and attrition

For endline data collection, we targeted 3,728 individuals for a one-hour face-to-face interview. This sample includes about the 18 randomly selected individuals per cluster, plus all baselined BPC participants regardless of whether they were already selected in the 18 or not. We also added 953 BPC participants, who were not baselined, to increase power for the cash grant analysis. For this, we identified 16 extra treated clusters that were not baselined and additional trainees in baselined clusters, who were re-mobilized after the baseline survey was conducted. In total, the attempted BPC sample comprises 1,733 individuals, of whom 247 are traditional winners and 434 are experimental winners.

Endline activities were completed in two phases, following the approach in [Thomas et al. \(2001\)](#); [Blattman et al. \(2014\)](#). In Phase I, we attempted to interview all 3,728 participants in their last known location. 74% could be found between July and September 2019, roughly two years after the end of the STRYDE 2.0 program. Attrition levels are similar between treatment and control. In Phase 2, a random sample of 45% of respondents who were classified as ‘moved’ or ‘untraceable’ in Phase 1 were selected for the mop-up sample.¹⁰ FOs tracked respondents in regions across Tanzania including Mbeya, Dar es Salaam, Morogoro, Mwanza, Arusha, Kigoma, and Dodoma. We found 62%, 52% of them in control clusters. Table 1 shows an effective response rate at endline of 90%. Overall, attrition is not correlated with treatment status (Table A.5), and is, therefore, unlikely to be a problem in our estimation strategy.¹¹

¹⁰Respondents not interviewed in Phase 1 because they had refused or died were not included in the mop-up sampling frame.

¹¹We also compare found and unfound individuals separated by treatment status (Table A.6). Unfound controls are typically rural, self-employed, who expected to gain business skills from this program, but feared time constraints to attend. We do not expect to overstate effects of the program, as their earnings and education is comparable to found individuals.

Table 1: Survey response rates

	Total sought	Found	Final observations						
			Total	Main-18 sample				Top-up sample	
				Total	T	C	T-C		SE
Baseline	4,537	1.00	4,537						
Endline									
Phase I	3,728	0.74	2,758	1,745	0.71	0.73	-0.02	0.02	1,013
Phase II	414	0.62	256	163	0.64	0.52	0.09	0.06	93
Effective response rate		0.90	3,014	1,908	0.90	0.87	0.01	0.02	1,106

Notes: Column (1) reports the full study sample sought in each round. Column (2) reports the percentage of study participants found. At endline we had a second survey phase that tracked a random sample of unfound individuals. At endline, 33 individuals did not consent and are counted as attrited. T and C stand for treatment and control group, respectively; and SE stands for standard error.

4.3. Attendance

Among individuals who registered for the program through IPA, the take-up rate was 46%. Figures A.2 and A.3 present the distribution of the number of classes attended by gender, while Table A.7 presents the main drivers of attendance. A majority of both female and male participants attended at least 16 (75% percent of) classes and, hence, graduated from the STRYDE training. Women, better educated people and individuals with more income generating activities were more likely to attend and graduate. The drivers of attendance are similar across gender, with the only exception that women with higher income are less likely to attend. Qualitative evidence suggests that, while young men frequently found work before graduation and so were more prone to not completing the course, young women tended to graduate and find most training components to be very useful. For example, learning how to be confident and assertive was regarded as particularly important by women, who often believed they would not have had the ability to formulate and implement a business plan on their own (ODI, 2018).

5. Regression specification

We use the following regression model to estimate the intent-to-treat (ITT) effect, β , of the program:

$$Y_{ijs} = \alpha + \beta T_{js} + \gamma_s + \epsilon_{ijs} \quad (1)$$

where Y_{ijs} represents the different outcomes of interest for individual i in cluster j in BC strata s , measured after the intervention. T_{js} is a dummy variable equal to one

if the individual was registered in a cluster randomly selected to receive the STRYDE 2.0 training and zero if not. The estimation includes BC fixed effects, γ_s , because the randomization was implemented within BC strata. Further, ϵ_{ijs} represents the unobserved individual-specific residual. Standard errors are adjusted for clustering at the ward / village level to control for spatial and other correlation among participants in the same cluster. Individuals found in Phase 1 receive unit weight, those selected in Phase 2 are weighted by the inverse of their selection probability.

We then assess the effects of the BPC cash intervention by modifying equation 1 as follows:

$$Y_{is} = \alpha + \beta C_s + \gamma_s + \epsilon_{is} \quad (2)$$

where C_s is a binary variable equal to one if the individual from the treatment group was randomly assigned to receive the cash of the BPC and zero if not, and γ_s is a fixed effect for the training class because the randomization of the grant was implemented within training classes. Other variables are the same as those used in equation 1.

We are also interested in treatment heterogeneity by gender, as illustrated in regressions 3 and 4, respectively:

$$Y_{ijs} = \alpha + \beta_1 Female_{ijs} + \beta_2(T_{js} \cdot Female_{ijs}) + \beta_3(T_{js} \cdot Male_{ijs}) + \gamma_s + \epsilon_{ijs} \quad (3)$$

$$Y_{is} = \alpha + \beta_1 Female_{is} + \beta_2(C_s \cdot Female_{is}) + \beta_3(C_s \cdot Male_{is}) + \gamma_s + \epsilon_{is} \quad (4)$$

where the coefficients β_2 and β_3 reveal the differential impact on women and men. Note that this shows the direct effect for being either a woman or a man, not an interaction. The coefficients can thus be directly interpreted and do not need to be added together.

We account for multiple hypothesis testing by aggregating variables into pre-defined families of outcomes and studying the effect of treatment on an index for each family. All components of the index are standardized, added, and standardized again; hence, equally weighted. Despite grouping outcome measures into indices, in each table, we also report the Family-Wise Error Rate (FWER) adjusted p-values using the Westfall and Young step-down resampling method (Westfall and Young, 1993).¹² Both approaches correct for multiple hypothesis testing.

¹²The FWER represents the probability that at least one hypothesis out of a family of hypotheses is falsely rejected (type-1 error).

6. Empirical results

6.1. Impacts on employment and economic status

This section presents the economic impacts of the STRYDE 2.0 program. Table A.8 describes all primary and secondary outcomes. Like previous literature on labor market interventions for young people (McKenzie and Woodruff, 2014; Kluge et al., 2019), our three primary outcomes focus on standard indicators for economic status and employment: whether someone is currently employed as a wage worker or in their own business, an index of employment quality, and an index of economic outcomes, including income, savings, and assets.

Figure 1 and Table 2 show results from estimation of equation 1. In Table 2, while the first panel presents the effect of being randomly assigned to the STRYDE 2.0 program, the second panel looks at these effects by gender. In addition to the ITT regressions that estimate overall impacts, we also employ instrumental variable (IV) regressions to take into account imperfect compliance. We use the initial assignment as an instrument for actual treatment to assess the TOT. Using TNS attendance data, we create a binary variable for whether a person attended at least one session.¹³ Panel three to five show the TOT results; first overall and then divided by gender.

The results show a small increase of 2.4% in whether a person is employed or running their own business. We also find a modest increase in employment quality of 0.12 SDs. These effects are driven by the impacts on women, whereas we do not find any statistically significant impacts for men. For women, there is an increase of 0.12 SDs for the economic outcomes, too.¹⁴ ¹⁵ Part of the explanation could be that control women have much less labor force participation and income than control men, suggesting room for growth for women (see Figures A.5 to A.10).

In Table A.11, we show that the employment quality effects come from increases in job satisfaction for women, and that there may be some effects on permanent employment for men. This is relevant given that permanent work is rare and results in consistent income-earning less prone to shocks.

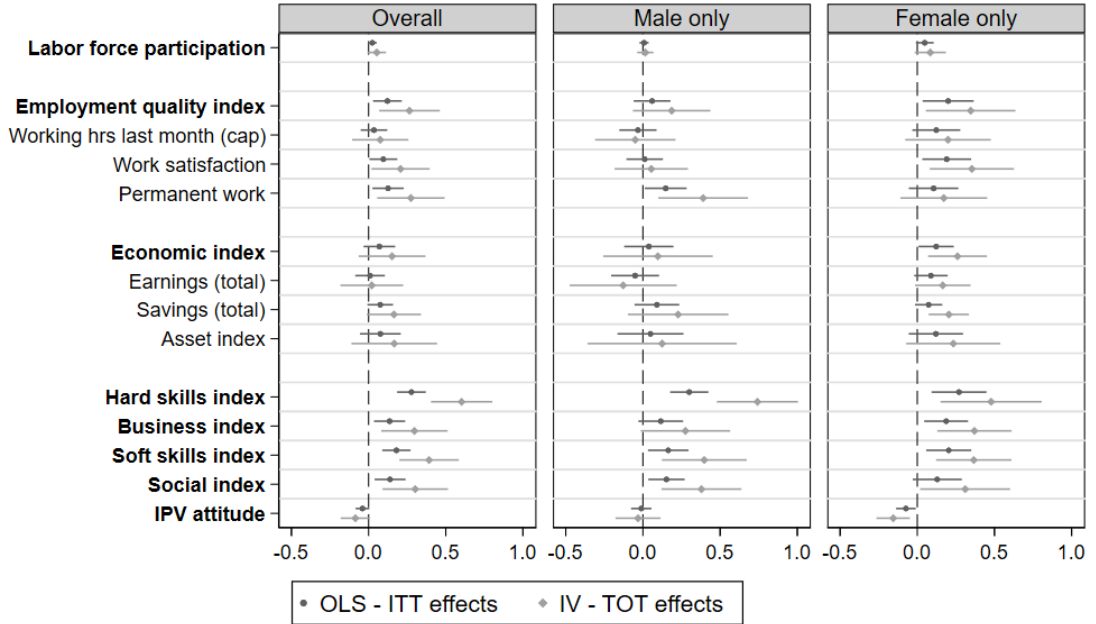
¹³We repeated that exercise, also looking at the actual number of training sessions as well as at people who attended at least 12 and 16 sessions. Results are available upon request.

¹⁴In Table A.9, we test the sensitivity of the main results presented in Table 2 to the exclusion of students and show that the results on the employment quality and economic indices are stable.

¹⁵To check for potential spillover effects, we compare individuals in the control group in villages that are close to treatment groups (a minimum distance below two-thirds of the distribution) against those that are far from treatment groups (a minimum distance upper to two-thirds of the distribution). Table A.10 shows that spillovers across villages are unlikely because there are no differences between these two control groups.

Table A.12 suggests that the economic effects are driven by the effects on savings for both women and men, with effects being larger for men in absolute magnitude. There are likely effects on earnings and assets, too, though these are not statistically significant. Again, these effects are only for women. Tables A.13 and A.14 suggest a possible link between permanent work and savings via more consistent earnings because respondents also claim to be better able to predict their earnings.

Figure 1: Intention to treat and treatment on the treated effects



Compared to the first two panels, the TOT coefficients are considerably higher, though effects are still mostly happening for women. For women, the index on employment quality increases by 0.35 SDs and the economic-index increases by 0.26 SDs. Tables A.11 and A.12 show that impacts are still coming from the increased likelihood of working, increased job satisfaction, and increased savings. Women are also increasing their earnings and likely their assets (though this is not statistically significant).

In Table 3, we analyze the impacts of receiving a micro-grant through the BPC experiment to test how much of the program impact is due to the cash grant. We find that being an experimental winner increases the likelihood of being employed by approximately three percentage points (i.e., 91% of those in the BPC control group are employed, while 94% of those that received a grant are employed). We also observe modest increases in the employment quality and economic indices of about 0.12 SDs

Table 2: Primary outcomes: Intention to treat and treatment on the treated effects

	Labor force participation β / SE	Employment Quality -Index β / SE	Economic -Index β / SE
ITT - STRYDE training	0.024* (0.014)	0.122** (0.047)	0.070 (0.052)
Observations	1908	1907	1908
Control Mean	0.88	-0.12	-0.05
Control SD	0.32	1.05	1.04
R-squared	0.051	0.025	0.027
P-WYoung	0.260	0.060	0.260
Female X Training	0.049* (0.029)	0.200** (0.084)	0.123** (0.058)
Male X Training	0.007 (0.015)	0.059 (0.060)	0.039 (0.081)
Observations	1908	1907	1908
Female Control Mean	0.793	-0.282	-0.344
Female Control SD	0.405	1.114	0.738
Male Control Mean	0.962	0.034	0.216
Male Control SD	0.190	0.966	1.191
R-squared	0.102	0.040	0.078
Female treated = Male treated	0.251	0.202	0.395
TOT - STRYDE training (all)	0.053* (0.030)	0.265** (0.100)	0.152 (0.110)
Observations	1908	1907	1908
R-squared	0.045	0.022	0.032
F-Statistic	558.591	561.557	558.591
TOT - STRYDE training (women)	0.084 (0.051)	0.346** (0.148)	0.261** (0.097)
Observations	902	901	902
R-squared	0.071	0.049	0.062
F-Statistic	366.582	368.220	366.582
TOT - STRYDE training (men)	0.015 (0.027)	0.186 (0.128)	0.097 (0.181)
Observations	1006	1006	1006
R-squared	0.085	0.062	0.051
F-Statistic	340.175	340.175	340.175

Notes: The TOT coefficients correspond to instrumental variable regressions where the dummy variable taking the value of 1 if the respondent joined a minimum of 1 session of the training is instrumented by the treatment assignment (lottery) variable. Standard errors in parentheses are clustered by ward / village. We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group (Kling et al., 2007). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance. Monetary values are top-censored at the 99th percentile to contain outliers.

each. As shown by the positive coefficients in the second panel, impacts are coming from both women and men. In Tables A.15 and A.16, we find that the employment quality effects are likely a combination of all the components of this index, and the economic impacts are again coming from savings. For women, the effect of about 0.10 SDs is smaller relative to the TOT effect of the training on the economic-index, which is about 0.26 SDs (Table 2). Hence, the STRYDE 2.0 training itself - compared with the provision of additional cash as part of the BPC - plays a significant role in

determining these economic effects.

Given the importance of the economic-index, Tables A.17 through A.22 report additional economic outcomes, including more details on savings, borrowings, and assets. Table A.17 shows that the STRYDE 2.0 program has indeed substantial effects on savings, especially for men, as the likelihood of having a formal savings account increases by 6% and formal savings increase by 0.14 SDs.¹⁶ Informal savings remain unaffected, suggesting no crowding out effect but rather overall increased savings. The impact on having a formal account are stronger for men, whereas the impacts on formal savings are significant for both genders and likely driven by BPC winners (Table A.18). Table A.19 shows larger program effects on borrowing for men, while formal borrowings increased by about 0.11 SDs for both women and men. Table A.21 illustrates that there are modest increases in assets too; in particular, a 0.10 SDs improvement in the animal-index - driven by the impact on women.

Table 3: Treatment effects, primary outcomes for BPC sample

	Labor force participation β / SE	Employment Quality -Index β / SE	Economic -Index β / SE
Exp. winner	0.029* (0.018)	0.116* (0.065)	0.115* (0.066)
Observations	1278	1278	1278
Control Mean	0.91	-0.03	-0.03
Control SD	0.28	1.01	0.97
R-squared	0.100	0.084	0.080
P-WYoung	0.140	0.140	0.140
Female X Grant	0.042 (0.026)	0.089 (0.090)	0.100 (0.079)
Male X Grant	0.008 (0.022)	0.143 (0.094)	0.096 (0.108)
Observations	1278	1278	1278
R-squared	0.116	0.087	0.139
Female treated = Male treated	0.309	0.674	0.971

Notes: For this analysis, we look at BPC participants only regardless of whether they were already selected in the 18 or not. We also added 953 BPC participants, who were not baselined, to increase power. The overlap with our baselined sample for which we randomly selected 18 participants per cluster for follow-up is too small to combine both, the training, and the BPC analysis, in one equation.

We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group (Kling et al., 2007). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance. Monetary values are top-censored at the 99th percentile to contain outliers.

¹⁶Formal savings are defined as either having an own or a shared formal account, including banks and other formal financial institution (e.g., mobile money services provider).

6.2. Impacts on skills

To understand how the effects of the program on economic outcomes might have arisen, we consider four main skills indices for hard skills, business skills, soft skills and social skills.

The hard skills-index covers questions indicating the respondent’s familiarity with the definition and timing of business plans, and measures for participants’ financial knowledge, financial awareness, and financial attitudes (Carpena et al., 2019). In Table 4, we find that this index substantially increases by 0.28 SDs for both genders, perhaps facilitating effects on economic measures. Table 5 shows that this effect is mainly driven by improvements in business plan knowledge and financial awareness.

Among the self-employed, we also collect information on the adoption of recommended business practices (McKenzie and Woodruff, 2014). In particular, we find a 5% increase in the likelihood of setting sales targets and a 14% increase in the likelihood of having a written account, adhering to a written account and having a written business plan (Table A.23). These impacts are statistically significant for both women and men. Table A.25 presents results on business performance, such as profits, number of employees, and formal / permanent location (Karlan and Valdivia, 2011; Berge et al., 2014; Campos et al., 2017). In sum, we observe that business outcomes improve by 0.14 SDs, but this is statistically significant only for women.

Given the training’s focus on soft skills, we create a soft skills-index comprising the following information: locus of control, grit, risk-tolerance, optimism, and confidence about own entrepreneurial abilities. We collect various psychological scales that have been shown to be key in achieving high-term goals and being a successful entrepreneur, such as grit (Duckworth et al., 2007), readiness to take risks and locus of control (Caliendo et al., 2016; Groh et al., 2016; Haushofer and Shapiro, 2016). In addition, following Bandiera et al. (2020), we compute an economic empowerment-index, considering participants’ confidence with regard to job applications (e.g., self-assessed ability to find information about job opportunities, CV writing, and interviewing skills), as well as self-confidence with regard to entrepreneurial activities (e.g., run an own business, ability to obtain credit, and bargain cheap prices) (Chakravarty et al., 2019; Bandiera et al., 2020). In Table 6, we see that the treatment sample does extremely well in that their soft skills-index increases by 0.18 SDs, driven by higher entrepreneurial confidence and future life-satisfaction for women and by risk tolerance for men.

Also, social skills - measured by the number of memberships in social networks,

leadership position in group, family support - improve modestly by 0.14 SDs, though only significant for men (Table 4).

In Table A.28, further exploring along the psycho-social dimension, we find a statistically significant marginal increase of 0.03 percentage points in involvement in household decision making, including control over own monetary resources as in Karlan and Valdivia (2011). This is driven by the effects on men. An index on aspirations is positive and significant on the 10% level, mainly driven by participants' higher educational aspirations. We find no impact on self-control. The program, however, positively affects the Cantril Scale of subjective well-being, especially for women. The concept of life satisfaction measured as people's own assessment of feelings and attitudes on a scale between zero and ten increases by 24 percentage points. In the Appendix, Table A.27 suggests that the grant had no effects on secondary outcomes.

Table 4: Treatment effects, secondary outcomes

	Hard Skills-Index β / SE	Business-Index β / SE	Soft Skills-Index β / SE	Social-Index β / SE
STRYDE training	0.278*** (0.047)	0.136** (0.051)	0.180*** (0.047)	0.139** (0.051)
Observations	1908	1489	1908	1908
Control Mean	-0.24	-0.14	-0.14	-0.16
Control SD	1.03	1.03	1.01	0.99
R-squared	0.061	0.066	0.050	0.059
P-WYoung	0.000	0.020	0.000	0.020
Female X Training	0.270** (0.090)	0.187** (0.072)	0.204** (0.074)	0.129 (0.080)
Male X Training	0.300*** (0.063)	0.116 (0.073)	0.164** (0.066)	0.153** (0.059)
Observations	1908	1489	1908	1908
R-squared	0.111	0.097	0.055	0.064
Female treated = Male treated	0.805	0.514	0.701	0.811

Notes: Standard errors in parentheses are clustered by ward / village. We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group (Kling et al., 2007). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table 5: Treatment effects, hard skills outcomes

	Business plan knowledge β / SE	Financial numeracy β / SE	Financial awareness β / SE	Financial attitude β / SE
STRYDE training	0.350*** (0.038)	0.052 (0.046)	0.173*** (0.044)	0.072 (0.050)
Observations	1908	1908	1908	1908
Control Mean	-0.30	-0.05	-0.16	-0.06
Control SD	1.11	1.04	0.94	1.04
R-squared	0.073	0.036	0.046	0.019
P-WYoung	0.000	0.330	0.000	0.330
Female X Training	0.486*** (0.075)	0.014 (0.074)	0.182** (0.073)	-0.052 (0.087)
Male X Training	0.244*** (0.060)	0.097 (0.066)	0.172** (0.060)	0.187** (0.070)
Observations	1908	1908	1908	1908
R-squared	0.129	0.058	0.058	0.025
Female treated = Male treated	0.034	0.431	0.914	0.050

Notes: We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group (Kling et al., 2007). All outcomes present standardized scores. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table 6: Treatment effects, soft skills outcomes

	Entrepreneurial confidence β / SE	Locus of control β / SE	Grit β / SE	Risk tolerance β / SE	Optimism β / SE
STRYDE training	0.130** (0.046)	0.043 (0.045)	0.061 (0.057)	0.098** (0.041)	0.111** (0.047)
Observations	1908	1908	1908	1908	1908
Control Mean	-0.12	-0.02	-0.06	-0.04	-0.12
Control SD	1.04	1.04	0.94	0.91	1.04
R-squared	0.048	0.026	0.045	0.023	0.050
P-WYoung	0.050	0.510	0.510	0.110	0.110
Female X Training	0.179** (0.080)	0.068 (0.076)	0.055 (0.091)	0.049 (0.078)	0.150** (0.065)
Male X Training	0.089 (0.069)	0.034 (0.062)	0.071 (0.067)	0.141** (0.057)	0.067 (0.071)
Observations	1908	1908	1908	1908	1908
R-squared	0.052	0.062	0.052	0.025	0.066
Female treated = Male treated	0.448	0.750	0.888	0.387	0.420

Notes: We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group (Kling et al., 2007). All outcomes present standardized scores. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

6.3. Impact on intimate partner violence

Recent studies find that cash transfer programs can affect intimate partner violence (IPV) (Heath et al., 2020). Less evidence exists linking soft-skills training approaches to IPV with a few exceptions. The article by Gulesci et al. (2021) shows that a multi-faceted skills enhancing program in Bolivia reduced the reported prevalence of

violence against girls possibly due to increased bargaining power or reductions in income related-stress. Other two recent studies find more egalitarian gender views and less social acceptability of violence from soft-skills programs in Uganda ([Annan and Bates-Jefferys, 2019](#); [Bandiera et al., 2020](#)).

To contribute to this scarce literature, we analyze five dimensions of IPV, including attitudes towards IPV, prevalence of controlling behavior, emotional abuse, physical violence, and sexual violence. Questions are in line with the World Health Organization (WHO) module on domestic violence. Interviews were conducted in a privacy-secured setting without partner and other family members present.¹⁷ A description of indices composition is documented in [Table A.8](#). [Table 7](#) presents results on these indices. While the first column, IPV attitude, was asked to both women and men, the remaining columns are only asked to ever-partnered women. For indices on emotional, physical, and sexual violence, we focus on ‘current’ prevalence that is the period twelve months before follow-up data collection.

We find a reduction in participants’ attitudes towards IPV by four percentage points, meaning that less people in the treatment group agree to the fact that marriage grants a man unconditional right to beat his wife under certain circumstances. These effects are concentrated among women.

For the BPC sample, effects are still negative, but slightly smaller and statistically insignificant (see [Table A.32](#)). Similarly, we find a statistically significant reduction in controlling behavior for ever-partnered women being offered the soft-skills training by seven percentage points and for the prevalence of at least one act of physical violence by four percentage points, but not for BPC winners. Both indicators of at least one act of emotional abuse and sexual violence remain largely unaffected. Overall, the soft-skills training appears to have been effective in reducing IPV, though we cannot confirm impacts on IPV from the cash grant component of the STRYDE 2.0 program.

¹⁷We implemented best practices for ensuring the safe and ethical conduct of IPV research, following IPA guidance and the principles that guide all human subjects’ research. This includes informed consent, ensuring participant safety, protecting privacy and confidentiality, minimizing participant distress, mandatory reporting of violence, referral for care and support as well as protecting field staff.

Table 7: Treatment effects, intimate partner violence outcomes

	IPV attitude (at least one)	Any experience controlling behavior	Any experience sexual violence	Any experience physical violence	Any emotional abuse
	β / SE	β / SE	β / SE	β / SE	β / SE
STRYDE training (OLS)	-0.039* (0.022)	-0.067** (0.032)	0.008 (0.017)	-0.043** (0.019)	0.007 (0.030)
Observations	1908	865	865	865	865
Control Mean	0.69	0.70	0.07	0.14	0.31
Control SD	0.46	0.46	0.25	0.35	0.46
R-squared	0.046	0.066	0.099	0.077	0.057
P-WYoung	0.340	0.220	0.870	0.220	0.870
Female X Training	-0.073** (0.032)				
Male X Training	-0.011 (0.033)				
Observations	1908				
R-squared	0.051				
Female treated = Male treated	0.193				

Notes: We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

7. Cost-benefit analysis

We look at the ratio of average treatment effect on income and average per person cost of the program to estimate the cost-effectiveness of the STRYDE 2.0 program. Per person cost estimates are calculated considering all the activities that contributed to the training of cohort four, including mobilization, classroom training, aftercare and BPC activities, and do not include the costs related to the evaluation. TNS considers the incremental cost to enroll and graduate each additional youth to be \$346 in direct costs, and \$418 after the inclusion of TNS overheads.

From the TOT estimates on total earnings and savings in shillings, we see an increase of about 61,000 shillings in monthly income for women, which corresponds to \$26 per month or \$312 per year (Table A.33). If we assume constant earnings over time, this means the program will break even by 16 months after a woman participated. Compared to other programs, such as the Bangladesh Rural Advancement Committee (BRAC) Graduation that takes a lifetime to break even, this is a very cost-effective program. Exceptions are the personal initiative training by Campos et al. (2017), which has impressive results and pays for itself within a year, and the social and technical training by Barrera-Osorio et al. (2020) that breaks even after seven months. Considering the costs for treating men (who represent 52% of the sample), the break-even point doubles to 32 months, which is still relatively quick for this

type of programs.

The cost implications are for those who take up space in the classroom. While only about half of our intended sample attended the training, the classrooms were full, due to BC’s recruitment of additional community members after baseline. Comparing the TOT effects for attending one versus attending twelve or even sixteen sessions, we find similar coefficients as participants ended up attending for most of the sessions.¹⁸

8. Quality of program delivery

The success of this program likely benefited from the great attention and reliability of TNS. In addition to the sample studied here, the training and BPC was conducted by technical schools in Tanzania that were contracted and trained by TNS. In focus group discussions, participants generally agreed that STRYDE 2.0 fitted well into existing curriculum of the schools, though some reported different experiences during the development of the business plan for the BPC and its feedback phase. Compared to those participants who were treated by TNS, those who attended the training at technical schools were often disappointed by the process. While we cannot comment on the impact of the training at these technical schools, it is likely that variation in implementation can matter for the success of a program like this.

To better understand whether delivery matters, we look at the distribution of treatment effects on the soft skills index by BC (Haushofer et al., 2020). We restrict the sample to treated individuals only, and regress the standardized soft skill-index on indicator variables for each of the BCs who delivered the program. While the assignment of BCs was not random, a histogram of the resulting coefficients can help to understand the role of BCs.

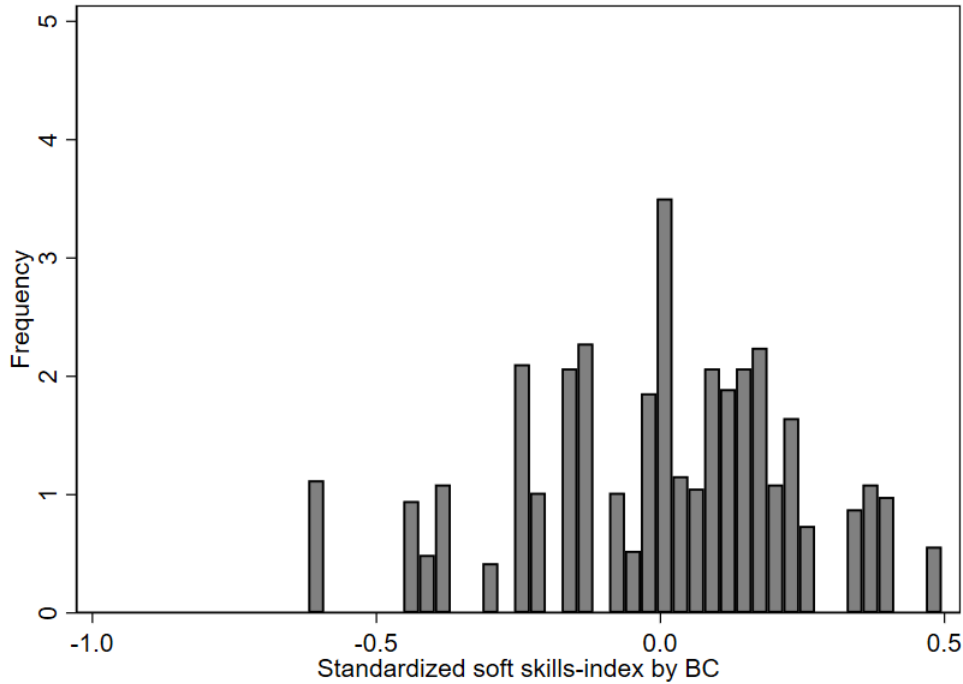
In Figure 2 we find a distribution that is similar to a normal distribution. This suggests that some BCs were more effective than others in administering the program. Tables A.34 and A.35 additionally suggest that the gender of the BC mattered for program effectiveness.

Like Haushofer et al. (2020), we also test whether BC performance predicts outcomes out-of-sample by testing whether the soft skills outcome of each STRYDE 2.0 participant is predicted by the average soft skills outcome of the other participants who were served by the same BC, clustering standard errors at the BC level. We find a coefficient of 0.51 SDs, which is highly significant at the 1% level. Thus the impact

¹⁸Results are available upon request.

of the program differed by which of the BCs delivered the intervention. This suggests that it is important to ensure high-quality delivery of the program and to invest in training of trainers.

Figure 2: Distribution of treatment effects on soft skills-index by BC



9. Conclusion

Our results show that a soft-skills training program targeted at young adults has large, positive impact on women’s employment and economic outcomes. Effects are coming from increased likelihood of working, job satisfaction, earnings, and savings. Two years after the STRYDE 2.0 program, we see limited economic effects on men - except for a notable increase in permanent employment. One explanation as to why we see economic effects mostly for women can be the much lower labor force participation rate among control women than among control men, suggesting more room for women to economically grow. The BPC has modest effects for both women and men.

Effects on participants’ hard and soft skills as well as on social outcomes come entirely from the training itself, not the cash grant, and are significant for both women and men. Participants are doing well in that we find large improvements in terms of market relevant hard skills, driven by positive impacts on knowledge about busi-

ness plans and financial awareness. Participants' soft skills outcomes in terms of entrepreneurial self-confidence, readiness to take risks, and optimism about their future life also increased. The training also strengthened business outcomes, likely driven by improved business-relevant skills and entrepreneurial self-confidence. Young adults were better equipped to participate in, interact with or volunteer in social groups and to even play a leading role. These results are in line with qualitative work suggesting that the training affected not only business performance but also the personal life of young adults, ultimately leading to better employment situations and economic status. Overall, results are promising, especially for women, for whom the program breaks even just 16 months after participation.

Because program participation was not conditional on wealth or educational attainment and covered both rural and urban areas, the sample represents people with varying socio-economic characteristics. We, therefore, believe that these results would be replicable in other regions and countries with similar population and employment context. However, this study benefits from the great attention and reliability of our implementing partner. Future work on understanding how important program implementation is to the outcomes we observe is needed.

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A. Appendix

Table A.1: Training content

Training module	Content
Independence from social roles (1 session, 4 hrs)	<ul style="list-style-type: none"> - Understand roles and responsibilities are identified by society, not biology, and hence can evolve - Ability to take actions that can enable reaching one's full potential
Personal effectiveness (4 sessions, 16 hrs)	<ul style="list-style-type: none"> - Awareness of self, definition of SWEETs- Strength Weaknesses Experiences Expectations Talents - Knowledge of personality strengths and how to maximize them - Set short- and long- term goals and their importance for prioritization - Ability to identify barriers to achieving goals and ways to overcome barriers - Create and write a plan to achieve personal goals - Define and strengthen key interpersonal relationships, and identify and resolve conflicts - Understand how to communicate and negotiate effectively - Ability to define and manage decision making influences, models, and consequences - Develop creative and critical thinking skills for decision making - Keep a time management plan and use time management tools
Personal finance (3 sessions, 12 hrs)	<ul style="list-style-type: none"> - Define difference between financial wants and needs - Understand the importance of saving and its relationship to spending - Create a budget - Set financial goals and develop a savings plan - Knowledge of different savings options, with their advantages and disadvantages - Evaluate possible credit uses responsibly - Steps of a financial life-cycle
Functioning of Village Savings & Loan Associations (2 sessions, 8 hrs)	<ul style="list-style-type: none"> - Understand functions and benefits of Savings and Lending Groups (SLGs) - Learn record-keeping guidelines and best practices for the functioning of SLGs - Identify the advantages of setting a group business and investment opportunities suitable for it - Practice by developing a business idea for a group
Agribusinesses (3 sessions, 12 hrs)	<ul style="list-style-type: none"> - Understand characteristics of successful agribusinesses and tasks of an agricultural entrepreneur - Knowledge of agricultural marketing and research - Exercises to keep comprehensive agribusiness records by product / crop - Ability to calculate projected yield and cost of production - Awareness of strategies to increase profits
Professional effectiveness (2 sessions, 8 hrs)	<ul style="list-style-type: none"> - Define key career skills - Ability to identify careers that match personal skills and interests - Knowledge of opportunities search techniques - Awareness of professional responsibility and ethics - Understand existence of barriers to employment and how to overcome them
Being entrepreneurial (5 sessions, 20 hrs)	<ul style="list-style-type: none"> - Define entrepreneurship, with advantages and disadvantages - Identify the characteristics of a successful entrepreneur - Learn how to generate business ideas - Steps of value chain analysis - Ability to develop, prioritize, and improve business ideas - Principles on how to select a business name and how to create a vision and a mission statements - Capacity to conduct good market research - Awareness of importance of record-keeping and of good record-keeping practices - Determine business costs and pricing, and calculate profit - Develop a cash flow budget - Knowledge of effective customer care and stakeholders management - Understand advertising strategies and techniques
Business planning (4 sessions, 16 hrs)	<ul style="list-style-type: none"> - Exercise ability to generate business ideas - Knowledge of the components and purpose of a business plan - Steps to complete a business plan component by component - Ability to present business plan - Understand steps in the STRYDE Business Plan Competition

Figure A.1: Experimental design

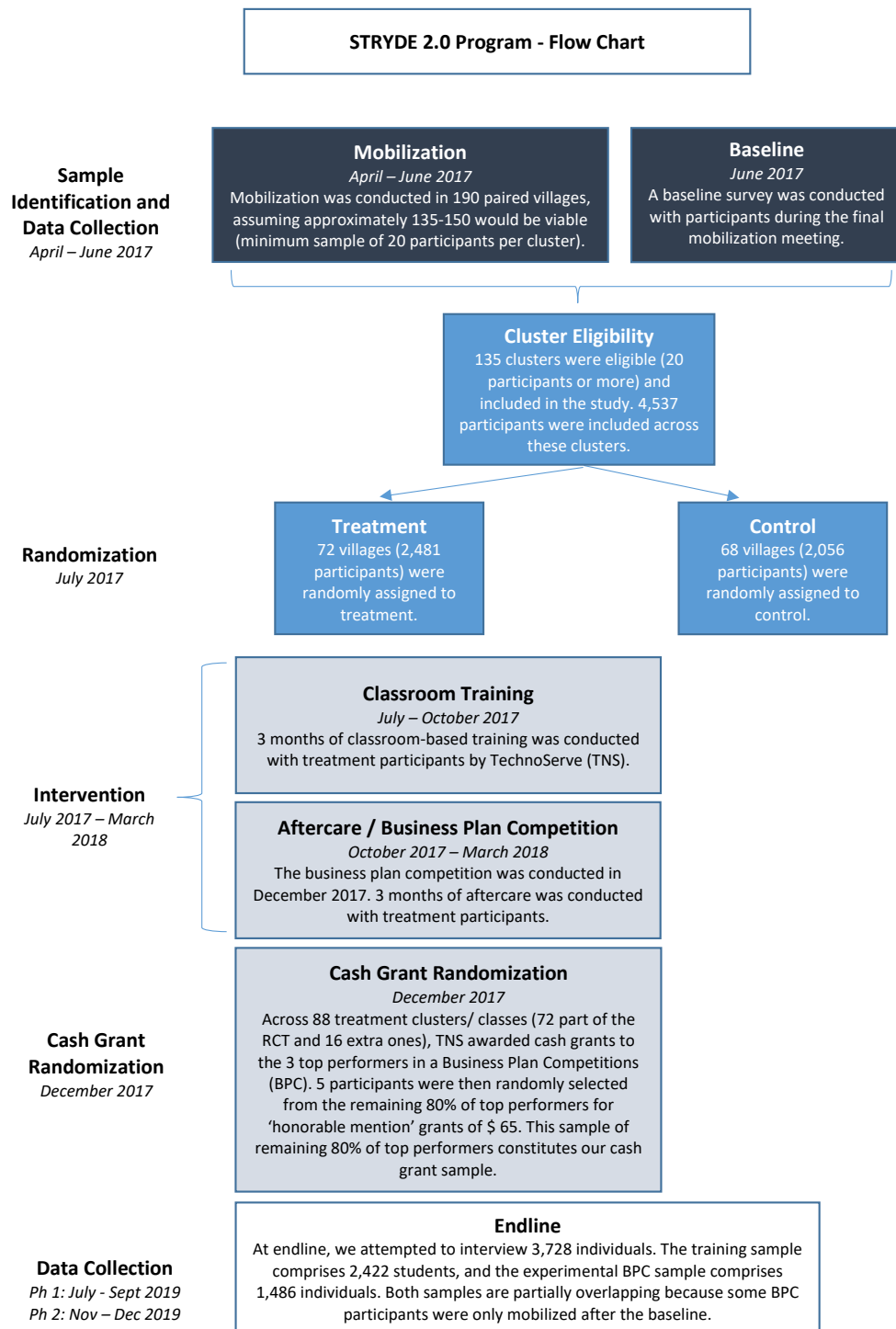


Table A.2: Descriptives and balance test on the main 18 sample

	Obs	Sample mean	Treatment mean	Control mean	Regression difference	p-Value
Covariate in 2017 (pre-intervention)						
Urban	2,422	0.04	0.04	0.05	-0.000	
Female	2,422	0.48	0.49	0.48	0.012	0.586
Age	2,422	23.20	23.19	23.21	-0.072	0.629
Secondary school or more	2,422	0.54	0.54	0.54	-0.003	0.907
Married	2,422	0.46	0.46	0.45	0.001	0.972
Lives with partner / spouse	2,422	0.41	0.42	0.40	0.001	0.963
Lives with family	2,422	0.48	0.48	0.48	0.009	0.716
Household size (cap)	2,422	4.85	4.91	4.79	0.184	0.094
No. children	2,422	0.89	0.91	0.87	0.028	0.547
No. hh minors	2,422	1.84	1.85	1.83	0.051	0.376
No. hh adults	2,422	3.01	3.06	2.96	0.141	0.087
Ratio of working hh members	2,422	0.30	0.30	0.30	0.006	0.528
No. older siblings	2,422	2.88	2.87	2.90	-0.017	0.884
No. younger siblings	2,422	3.06	3.06	3.06	0.032	0.761
Father: Primary school or less	2,422	0.71	0.72	0.71	0.005	0.805
Father: Secondary school or more	2,422	0.17	0.17	0.17	0.002	0.893
Father: Missing value	2,422	0.11	0.11	0.12	-0.007	0.607
Mother: Secondary school or more	2,422	0.10	0.10	0.11	-0.017	0.230
No. of IGA	2,422	1.95	1.98	1.91	0.068	0.289
Works on own farm	2,422	0.52	0.53	0.52	-0.002	0.925
Works in agriculture	2,422	0.44	0.45	0.43	0.032	0.113
Works on a trade	2,422	0.10	0.10	0.10	0.004	0.767
Works on a vocational job	2,422	0.44	0.44	0.43	0.008	0.710
Works as an employee	2,422	0.24	0.24	0.23	-0.003	0.899
Has no employment	2,422	0.01	0.01	0.01	0.000	0.872
Main IGA is own farm	2,422	0.35	0.35	0.35	-0.010	0.610
Main IGA is agriculture	2,422	0.19	0.19	0.19	-0.001	0.944
Main IGA is trade	2,422	0.06	0.06	0.06	0.005	0.703
Main IGA is vocational job	2,422	0.28	0.28	0.28	0.010	0.607
Main IGA is being an employee	2,422	0.11	0.12	0.11	-0.004	0.779
Previous business	2,422	0.53	0.55	0.50	0.050	0.038
Earnings (total)	2,422	42.24	43.01	41.35	0.717	0.840
Income from business	2,343	18.33	17.84	18.90	-1.788	0.322
Income from formal employment	2,249	9.82	10.72	8.80	1.701	0.250
Income from other sources	2,206	10.92	11.47	10.29	1.171	0.314
Savings (total)	2,422	18.07	17.37	18.88	-1.701	0.308
Saves formally	2,422	0.31	0.32	0.31	0.016	0.415
Saves informally	2,422	0.61	0.61	0.60	0.020	0.362
Spending on family	2,422	0.48	0.49	0.46	0.030	0.183
Income hiding	2,422	0.74	0.73	0.75	-0.028	0.207
Locus of control (1-10)	2,422	5.45	5.42	5.49	-0.064	0.374
Wants to gain business skills	2,422	0.69	0.68	0.71	-0.032	0.134
Wants to gain soft skills	2,422	0.54	0.55	0.53	0.031	0.134
Wants to meet new friends	2,422	0.26	0.26	0.25	0.010	0.621
Wants new credit opportunities	2,422	0.26	0.26	0.26	0.010	0.675
Wants new job opportunities	2,422	0.22	0.23	0.22	0.008	0.694
Fears time constraints	2,422	0.13	0.11	0.15	-0.040	0.013
Fears losing earnings	2,422	0.02	0.02	0.02	-0.004	0.427
Fears transport costs	2,422	0.06	0.05	0.06	-0.011	0.333
Fears lack of family support	2,422	0.03	0.03	0.04	-0.003	0.660
No fears	2,422	0.75	0.78	0.71	0.066	0.007

Notes: Values are calculated using baseline survey data of the main 18 study participants selected for endline. We follow [Lin and Green \(2016\)](#) in treating missing covariates. If no more than 10% of the covariate's values are missing, we recode the missing values to the overall mean. If more than 10% of the covariate's values are missing, we include a missingness dummy as an additional covariate and recode missing values to zero. Monetary values are top-censored at the 99th percentile to contain outliers and divided by 1,000. The last column reports the p-value of the OLS regression of the listed baseline characteristics on the indicator for random program assignment plus BC fixed effects, with robust standard errors clustered at the village level. Hh stands for household and IGA for income generating activity.

Table A.3: Descriptives and balance test on the original baseline sample

	Obs	Sample mean	Treatment mean	Control mean	Regression difference	p-Value
Covariate in 2017 (pre-intervention)						
Urban	4,537	0.05	0.05	0.05	0.000	
Female	4,537	0.48	0.49	0.48	0.019	0.380
Age	4,537	23.23	23.24	23.22	-0.004	0.975
Secondary school or more	4,537	0.55	0.55	0.54	0.023	0.254
Married	4,537	0.45	0.45	0.45	-0.007	0.744
Lives with partner / spouse	4,537	0.40	0.40	0.40	-0.007	0.716
Lives with family	4,537	0.48	0.48	0.47	0.009	0.658
Household size (cap)	4,537	4.86	4.91	4.81	0.165	0.068
No. children	4,537	0.90	0.92	0.87	0.029	0.487
No. hh minors	4,537	1.86	1.88	1.85	0.052	0.252
No. hh adults	4,537	2.99	3.03	2.95	0.118	0.095
Ratio of working hh members	4,537	0.30	0.30	0.30	0.000	0.979
No. older siblings	4,537	2.92	2.92	2.92	0.018	0.856
No. younger siblings	4,537	3.08	3.04	3.13	-0.074	0.465
Father: Primary school or less	4,537	0.71	0.72	0.70	0.018	0.301
Father: Secondary school or more	4,537	0.17	0.17	0.18	-0.007	0.630
Father: Missing value	4,537	0.12	0.11	0.12	-0.011	0.323
Mother: Secondary school or more	4,537	0.10	0.10	0.11	-0.007	0.571
No. of IGA	4,537	1.94	1.96	1.91	0.059	0.344
Works on own farm	4,537	0.52	0.52	0.53	-0.011	0.631
Works in agriculture	4,537	0.44	0.44	0.44	0.011	0.535
Works on a trade	4,537	0.10	0.10	0.09	0.015	0.149
Works on a vocational job	4,537	0.44	0.44	0.43	0.008	0.669
Works as an employee	4,537	0.24	0.24	0.23	0.006	0.747
Has no employment	4,537	0.01	0.01	0.01	0.001	0.801
Main IGA is own farm	4,537	0.35	0.34	0.36	-0.024	0.195
Main IGA is agriculture	4,537	0.19	0.19	0.18	0.008	0.561
Main IGA is trade	4,537	0.06	0.06	0.05	0.009	0.350
Main IGA is vocational job	4,537	0.28	0.29	0.28	0.007	0.685
Main IGA is being an employee	4,537	0.12	0.12	0.11	-0.001	0.919
Previous business	4,537	0.54	0.56	0.51	0.055	0.006
Earnings (total)	4,537	43.10	44.13	41.87	2.019	0.563
Income from business	4,415	18.95	18.99	18.89	-0.270	0.871
Income from formal employment	4,186	10.02	10.68	9.22	1.413	0.291
Income from other sources	4,087	11.05	11.51	10.50	1.165	0.236
Savings (total)	4,537	17.56	17.03	18.19	-1.002	0.424
Saves formally	4,537	0.31	0.32	0.31	0.028	0.122
Saves informally	4,537	0.61	0.61	0.60	0.009	0.651
Spending on family	4,537	0.48	0.49	0.48	0.018	0.297
Income hiding	4,537	0.74	0.73	0.76	-0.041	0.047
Locus of control (1-10)	4,537	5.47	5.44	5.50	-0.048	0.482
Wants to gain business skills	4,537	0.69	0.68	0.71	-0.026	0.171
Wants to gain soft skills	4,537	0.55	0.55	0.54	0.015	0.440
Wants to meet new friends	4,537	0.24	0.25	0.23	0.020	0.264
Wants new credit opportunities	4,537	0.25	0.26	0.24	0.015	0.477
Wants new job opportunities	4,537	0.21	0.22	0.21	0.009	0.634
Fears time constraints	4,537	0.12	0.10	0.13	-0.022	0.102
Fears losing earnings	4,537	0.02	0.02	0.02	0.001	0.885
Fears transport costs	4,537	0.06	0.05	0.06	-0.011	0.235
Fears lack of family support	4,537	0.04	0.03	0.04	-0.008	0.136
No fears	4,537	0.76	0.78	0.74	0.043	0.029

Notes: Values are calculated using baseline survey data of all baselined individuals. We follow [Lin and Green \(2016\)](#) in treating missing covariates. If no more than 10% of the covariate's values are missing, we recode the missing values to the overall mean. If more than 10% of the covariate's values are missing, we include a missingness dummy as an additional covariate and recode missing values to zero. Monetary values are top-censored at the 99th percentile to contain outliers and divided by 1,000. The last column reports the p-value of the OLS regression of the listed baseline characteristics on the indicator for random program assignment plus BC fixed effects, with robust standard errors clustered at the village level. Hh stands for household and IGA for income generating activity.

Table A.4: Descriptives and balance test on the BPC sample

	Obs	Sample mean	Experimental winner mean	Non-winner mean	Regression difference	p-Value
Covariate in 2017 (pre-intervention)						
Urban	668	0.05	0.05	0.05	0.000	
Female	668	0.57	0.56	0.58	0.010	0.814
Age	668	23.61	23.20	23.77	-0.521	0.104
Secondary school or more	668	0.60	0.57	0.61	-0.058	0.184
Married	668	0.49	0.44	0.51	-0.044	0.312
Lives with partner / spouse	668	0.44	0.41	0.46	-0.020	0.637
Lives with family	668	0.46	0.49	0.44	0.025	0.580
Household size (cap)	668	4.95	4.84	5.00	-0.279	0.177
No. children	668	1.03	0.93	1.07	-0.082	0.380
No. hh minors	668	1.97	1.84	2.03	-0.198	0.117
No. hh adults	668	2.99	2.95	3.00	-0.188	0.151
Ratio of working hh members	668	0.28	0.28	0.28	-0.002	0.904
No. older siblings	668	3.00	2.77	3.09	-0.224	0.435
No. younger siblings	668	3.02	2.66	3.17	-0.365	0.147
Father: Primary school or less	668	0.73	0.70	0.74	-0.041	0.304
Father: Secondary school or more	668	0.18	0.18	0.17	0.015	0.659
Father: Missing value	668	0.09	0.12	0.08	0.026	0.360
Mother: Secondary school or more	668	0.09	0.13	0.07	0.052	0.048
No. of IGA	668	2.07	2.12	2.05	-0.023	0.825
Works on own farm	668	0.52	0.47	0.54	-0.095	0.029
Works in agriculture	668	0.45	0.50	0.43	0.021	0.624
Works on a trade	668	0.09	0.06	0.10	-0.042	0.077
Works on a vocational job	668	0.49	0.51	0.48	0.040	0.361
Works as an employee	668	0.25	0.28	0.24	0.009	0.807
Has no employment	668	0.00	0.01	0.00	0.012	0.144
Main IGA is own farm	668	0.33	0.31	0.34	-0.029	0.475
Main IGA is agriculture	668	0.17	0.20	0.16	0.034	0.311
Main IGA is trade	668	0.06	0.04	0.06	-0.027	0.168
Main IGA is vocational job	668	0.33	0.34	0.33	0.043	0.311
Main IGA is being an employee	668	0.11	0.09	0.11	-0.032	0.241
Previous business	668	0.58	0.58	0.58	-0.010	0.809
Earnings (total)	668	48.67	40.40	51.95	-13.583	0.152
Income from business	646	19.45	19.13	19.57	-0.758	0.839
Income from formal employment	620	12.50	10.28	13.41	-5.622	0.100
Income from other sources	615	12.60	9.40	13.88	-5.082	0.071
Savings (total)	668	17.43	14.97	18.41	-4.203	0.145
Saves formally	668	0.29	0.30	0.29	0.009	0.815
Saves informally	668	0.63	0.60	0.64	-0.060	0.117
Spending on family	668	0.52	0.48	0.54	-0.067	0.129
Income hiding	668	0.70	0.69	0.70	0.009	0.826
Locus of control (1-10)	668	5.44	5.45	5.44	-0.065	0.629
Wants to gain business skills	668	0.72	0.72	0.72	0.005	0.890
Wants to gain soft skills	668	0.59	0.63	0.57	0.065	0.146
Wants to meet new friends	668	0.22	0.19	0.23	-0.029	0.420
Wants new credit opportunities	668	0.25	0.26	0.25	0.003	0.944
Wants new job opportunities	668	0.23	0.25	0.22	0.019	0.621
Fears time constraints	668	0.09	0.09	0.10	-0.005	0.856
Fears losing earnings	668	0.02	0.01	0.02	-0.000	0.991
Fears transport costs	668	0.05	0.04	0.06	-0.021	0.288
Fears lack of family support	668	0.02	0.02	0.02	0.005	0.686
No fears	668	0.81	0.83	0.81	0.016	0.628

Notes: Values are calculated using baseline survey data of BPC participants who were baselined. We follow [Lin and Green \(2016\)](#) in treating missing covariates. If no more than 10% of the covariate's values are missing, we recode the missing values to the overall mean. If more than 10% of the covariate's values are missing, we include a missingness dummy as an additional covariate and recode missing values to zero. Monetary values are top-censored at the 99th percentile to contain outliers and divided by 1,000. The last column reports the p-value of the OLS regression of the listed baseline characteristics on the indicator for random cash grant assignment plus training class fixed effects. Hh stands for household and IGA for income generating activity.

Table A.5: Attrition regression

	Attrition β / SE	Attrition β / SE
STRYDE training	0.016 (0.019)	0.017 (0.017)
Covariates		✓
Observations	2,422	2,422
Control Mean	0.255	0.255
Control SD	0.436	0.436
R-squared	0.053	0.099

Notes: At endline, 33 individuals did not consent and are counted as attritted. Regressions include BC fixed effects and standard errors in parentheses are clustered by ward / village.

Table A.6: Attrition balancing for baselined sample

	Found		Unfound		Regression difference	p-Value
	Treatment mean	Control mean	Treatment mean	Control mean		
Urban	0.04	0.04	0.07	0.00	-0.000	
Female	0.49	0.47	0.32	0.54	0.085	0.416
Age	23.26	23.28	23.26	21.63	0.524	0.461
Secondary school or more	0.54	0.55	0.33	0.54	0.157	0.104
Married	0.47	0.46	0.52	0.23	-0.000	1.000
Lives with partner / spouse	0.43	0.41	0.38	0.23	0.049	0.589
Lives with family	0.47	0.47	0.47	0.63	-0.001	0.989
Household size (cap)	4.92	4.83	6.11	4.82	-0.729	0.130
No. children	0.93	0.90	1.29	0.47	-0.186	0.557
No. hh minors	1.86	1.88	2.07	1.49	0.015	0.957
No. hh adults	3.07	2.95	4.04	3.33	-0.739	0.007
Ratio of working hh members	0.31	0.29	0.27	0.46	-0.022	0.663
No. older siblings	2.90	2.88	2.70	2.33	0.438	0.294
No. younger siblings	3.11	3.07	2.27	2.84	0.791	0.021
Father: Primary school or less	0.72	0.71	0.54	0.54	0.170	0.074
Father: Secondary school or more	0.16	0.17	0.36	0.31	-0.179	0.071
Father: Missing value	0.12	0.11	0.10	0.14	0.009	0.865
Mother: Secondary school or more	0.08	0.11	0.22	0.48	-0.201	0.026
No. of IGA	2.03	1.95	2.07	1.00	0.132	0.512
Works on own farm	0.54	0.55	0.64	0.30	-0.012	0.909
Works in agriculture	0.46	0.43	0.52	0.31	-0.024	0.808
Works on a trade	0.10	0.09	0.07	0.16	0.010	0.875
Works on a vocational job	0.44	0.43	0.26	0.23	0.155	0.061
Works as an employee	0.24	0.24	0.30	0.00	0.021	0.798
Has no employment	0.01	0.00	0.00	0.00	0.007	0.102
Main IGA is own farm	0.36	0.37	0.32	0.30	0.033	0.688
Main IGA is agriculture	0.19	0.19	0.35	0.31	-0.135	0.126
Main IGA is trade	0.06	0.05	0.01	0.16	0.015	0.751
Main IGA is vocational job	0.28	0.27	0.22	0.23	0.033	0.638
Main IGA is being an employee	0.11	0.12	0.11	0.00	0.047	0.346
Previous business	0.57	0.50	0.60	0.46	-0.036	0.734
Earnings (total)	42.87	42.50	19.45	41.06	18.581	0.025
Income from business	17.76	18.47	16.48	40.09	-2.979	0.718
Income from formal employment	10.95	9.25	0.47	0.59	10.597	0.000
Income from other sources	11.40	11.07	4.16	0.00	6.798	0.046
Savings (total)	18.18	20.07	4.76	15.28	12.358	0.002
Saves formally	0.31	0.30	0.36	0.16	0.076	0.394
Saves informally	0.62	0.60	0.47	0.54	0.078	0.417
Spending on family	0.49	0.48	0.46	0.46	-0.010	0.922
Income hiding	0.73	0.75	0.72	0.60	0.049	0.591
Locus of control (1-10)	5.44	5.54	5.25	5.16	0.115	0.685
Wants to gain business skills	0.68	0.73	0.65	0.93	-0.017	0.857
Wants to gain soft skills	0.56	0.52	0.41	0.31	0.161	0.092
Wants to meet new friends	0.25	0.25	0.26	0.16	0.041	0.630
Wants new credit opportunities	0.27	0.25	0.39	0.31	-0.105	0.211
Wants new job opportunities	0.22	0.21	0.13	0.30	0.042	0.557
Fears time constraints	0.11	0.15	0.08	0.31	-0.013	0.873
Fears losing earnings	0.02	0.03	0.00	0.00	0.022	0.001
Fears transport costs	0.04	0.06	0.10	0.07	-0.033	0.554
Fears lack of family support	0.03	0.04	0.03	0.16	-0.042	0.409
No fears	0.79	0.71	0.78	0.46	0.056	0.538

Notes: Values are calculated using baseline survey data of the main 18 study participants selected for endline. Monetary values are top-censored at the 99th percentile to contain outliers and divided by 1,000. The last column reports the p-value of the OLS regression of the listed baseline characteristics on the indicator for being found at endline plus BC fixed effects, with robust standard errors clustered at the village level. Hh stands for household and IGA for income generating activity.

Figure A.2: Distribution of No. of classes attended

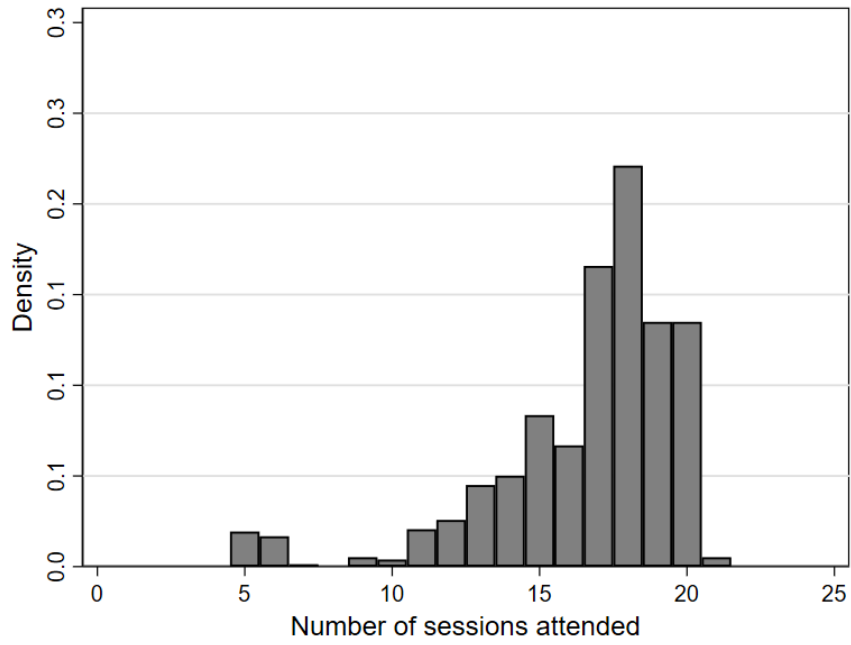


Figure A.3: Distribution of No. of classes attended, by gender

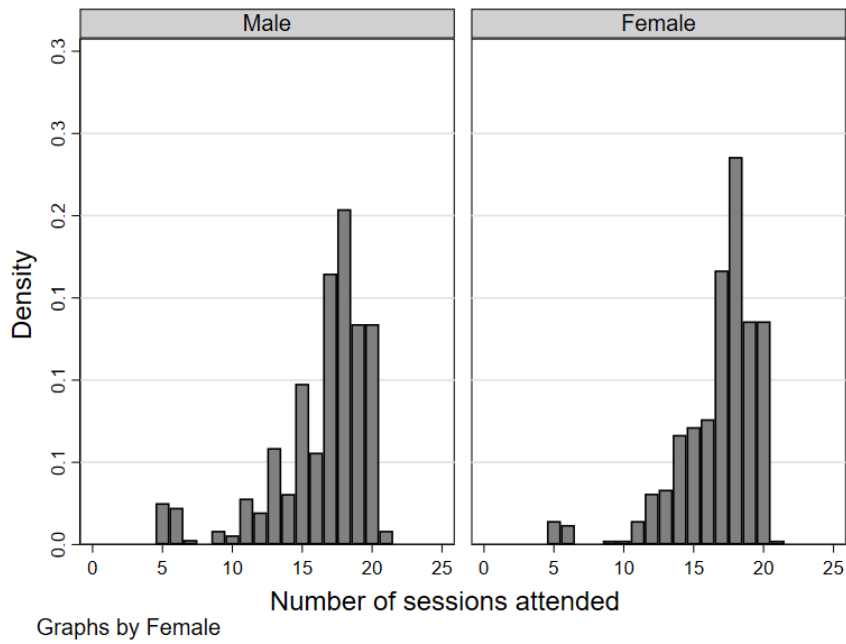


Table A.7: Correlates of attendance

	Attended at all			No. of classes attended			Attended at least 75% of classes		
	Full sample	Women	Men	Full sample	Women	Men	Full sample	Women	Men
Female	0.082*** (0.027)			0.281* (0.144)			0.054** (0.026)		
Education level	0.019*** (0.006)	0.023*** (0.009)	0.014* (0.007)	0.075*** (0.028)	0.080* (0.043)	0.060 (0.039)	0.016** (0.007)	0.015 (0.009)	0.018* (0.010)
Age	0.014 (0.049)	0.006 (0.070)	0.031 (0.062)	-0.008 (0.196)	-0.116 (0.243)	0.239 (0.443)	-0.049* (0.028)	-0.089* (0.050)	0.020 (0.054)
Age squared	-0.000 (0.001)	-0.000 (0.001)	-0.001 (0.001)	0.001 (0.004)	0.004 (0.005)	-0.005 (0.009)	0.001* (0.001)	0.002* (0.001)	-0.001 (0.001)
Urban	0.108*** (0.031)	-0.243 (0.164)	0.150*** (0.024)	-1.639 (1.053)	2.595*** (0.391)	-6.930*** (0.254)	-0.045 (0.293)	0.147*** (0.055)	-1.134*** (0.055)
Household size	0.001 (0.004)	-0.001 (0.006)	0.004 (0.006)	-0.075*** (0.028)	-0.069 (0.048)	-0.082** (0.036)	-0.012*** (0.004)	-0.010 (0.007)	-0.017*** (0.007)
Ratio of working hh members	-0.114* (0.059)	-0.234** (0.091)	-0.023 (0.083)	-0.637** (0.304)	-0.349 (0.544)	-0.843** (0.355)	-0.091* (0.051)	-0.051 (0.084)	-0.085 (0.086)
Mother's education attainment	-0.012 (0.011)	0.006 (0.017)	-0.033** (0.014)	0.154** (0.071)	0.103 (0.086)	0.337*** (0.114)	0.031*** (0.012)	0.028** (0.014)	0.039* (0.021)
Income, z-scores	-0.011 (0.019)	-0.042*** (0.014)	0.001 (0.024)	0.230* (0.124)	0.395** (0.194)	0.076 (0.139)	0.019 (0.016)	0.059 (0.036)	0.001 (0.016)
No of IGAs	0.031*** (0.009)	0.024* (0.015)	0.044*** (0.013)	0.103** (0.045)	0.086 (0.064)	0.148** (0.064)	0.029*** (0.010)	0.031** (0.015)	0.035*** (0.014)
Main IGA is formal employment	-0.223* (0.123)	-0.218 (0.137)		-2.114 (2.152)	-2.132 (2.226)		-0.047 (0.266)		-0.047 (0.263)
Fears lack of family support	-0.094* (0.053)	-0.074 (0.080)	-0.089 (0.084)	-0.535 (0.375)	-0.295 (0.351)	-0.716 (0.585)	-0.009 (0.066)	0.052 (0.078)	-0.041 (0.102)
Locus of control, z-scores	0.020* (0.011)	0.023 (0.015)	0.009 (0.016)	-0.017 (0.052)	0.044 (0.070)	-0.075 (0.090)	-0.010 (0.012)	-0.002 (0.017)	-0.022 (0.017)
Observations	1.975	1.026	949	967	541	426	967	541	426
R-squared	0.109	0.122	0.147	0.719	0.712	0.771	0.535	0.572	0.566

Notes: Values are calculated using TNS attendance data. According to TNS, participants graduate from training if they attend at least 75% of classes. IGA means income generating activities.

Table A.8: Primary and secondary variable descriptions

Variable name	Indicator definition
Labor Force Participation	
IGA	In the last four weeks, respondent had at least one source of income / involved in IGA
Employment Quality-Index	
Permanent work	Dummy equals one if at least one IGA is a permanent work (not short-term or seasonal)
Working hrs last month	Product of average hours per days and days in total worked in the last four weeks (capped)
Work satisfaction	Step on the Cantril ladder indicating respondent's current employment situation
Economic-Index	
Wage income	Total earnings from all IGA in the last four weeks (wins)
Savings total	Total savings in all currently existing savings accounts (wins)
Assets	PCA, including animals, household items, and transportation (no land or electricity)
Hard Skills-Index	
Business plan knowledge	Standardized mean of two questions indicating the respondent's familiarity with the definition and timing of business plans
Financial numeracy	Standardized mean of two questions indicating the respondent's familiarity with interest rates and ability to perform a mathematical computation
Financial awareness	Standardized mean of three questions indicating the respondent's Awareness to prepare a budget Awareness to keep accounts for household and business separate Knowledge that profits are total revenue minus expenditures
Financial attitude	Standardized mean of three questions indicating the respondent Agrees that a budget can help to bring down unnecessary expenses Recognizes an unproductive loan Knows that savings of any kind are important
Business-Index	
Profits	Total profits in the last four weeks (wins)
Employees	Total number of employees who have worked for respondent in the last four weeks
Location	Dummy equals one if the business has a formal / permanent location
Reinvestment	Dummy equals one if respondent did reinvest some profits into a personal business in the last 12 months
Innovation	Dummy equals one if business is offering a new type of product or service
Motivation	Dummy equals one if respondent opened new business to take advantage of an opportunity or to prefer an own business (not because respondent could not find formal work)
Soft Skills-Index	
Entrepreneurial confidence	Standardized mean of five questions indicating confidence on a ladder from zero to ten: Ability to find relevant information about formal job opportunities Ability to write a successful CV and cover letter Skills and knowledge to run / start your own business Ability to obtain credit to start up new business or expand existing business Ability to bargain cheap prices when you are buying anything for business
Locus of control	Scale comprised of ten questions indicating high internal locus of control
Grit	Short Grit scale comprised of eight questions
Risk tolerance	Dummy equals one if the respondent is willing to open a business that can give plenty profit, even if there is a chance to lose money anytime
Optimism	Step on the Cantril ladder respondent believes they will be on in five years' time

Notes: Follow-up survey instrument in Tanzania.
IGA stands for income generating activity.

Table A.8: Primary and secondary variable descriptions (cont.)

Variable name	Indicator definition
Social-Index	
Family support	Dummy equals one if respondent feels support from family about employment decisions
Family involvement	Dummy equals one if family takes respondent into account for major decisions
Group participation	Number of groups currently a member of, participate in or volunteer for
Group leadership	Dummy equals one if respondent holds a leadership position in any of these groups
Household Decision Making	
Involvement	Mean indicating the respondent's involvement in five categories How to spend a small amount of money, or consume money, which respondent earned How to spend a large amount of money, which respondent earned How to invest money into respondent's business Savings decisions - for example, how much and where to save respondent's money How to allocate household chores
Aspirational-Index	
Income aspirations gap	Difference between the aspired income value and the current income value, normalized by the current income value
Set up a new business	Dummy equals one if respondent aspired to either set up a new business or expand a current business
Employ more people	Dummy equals one if respondent aspires to employ any or more people
Achieve further education	Dummy equals one if respondent aspired to achieve further education
Self-control	
Self-control	Standardized mean of three questions indicating whether the respondent Is good in resisting temptation Sometimes is not able to stop themselves from doing something they think is wrong Thinks it is important to take warnings about negative outcomes seriously even if the negative outcome will not occur for many years
Life satisfaction	
Life satisfaction	Step on the Cantril ladder respondent believes they are currently on
Intimate Partner Violence (IPV)-Attitude	
A man has good reason to hit his wife if:	Dummy equals one if respondent agrees to one or more reasons: She disobeys her husband She spends time gossiping with neighbors He finds out that she has been unfaithful She neglects taking care of the children She does not complete her duties at home A wife should tolerate getting a slap from her husband in order to keep the family together
Controlling behavior	
Controlling behavior	At least one instance of the following categories: Tries to keep her from seeing her friends Tries to restrict contact with her family of birth Insists on knowing where she is at all times Ignores her and treats her indifferently Gets angry if she speaks with another man Is often suspicious that she is unfaithful? Or accuses her of being unfaithful? Expects respondent to ask partner's permission before seeking healthcare for herself?

Notes: Follow-up survey instrument in Tanzania.

Table A.8: Primary and secondary variable descriptions (cont.)

Variable name	Indicator definition
Sexual violence	
Current sexual violence	At least one act of sexual violence during the 12 months prior to the interview: Partner physically forced her to have sexual intercourse when she did not want to Respondent had sexual intercourse she did not want because she was afraid of what her partner might do Partner forced her to do something sexual that she found degrading or humiliating
Physical violence	
Current physical violence	At least one act of physical violence during the 12 months prior to the interview: Partner slapped her or thrown something at her that could hurt her Partner pushed her or shoved her Partner hit her with his fist or with something else that could hurt her Partner kicked her, dragged her or beaten her up Partner choked or burnt her on purpose Partner threatened to use or actually used a gun, knife or other weapon against her
Emotional abuse	
Current emotional abuse	At least one act of emotional abuse during the 12 months prior to the interview: Partner insulted her or made her feel bad about herself Partner belittled or humiliated her in front of other people Partner did things to scare or intimidate her on purpose Partner threatened to hurt her or someone she cares about

Notes: Follow-up survey instrument in Tanzania.

Table A.9: Primary ITT effects, dropping students

	Labor force participation β / SE	Employment Quality -Index β / SE	Economic -Index β / SE
STRYDE training	0.022 (0.014)	0.116** (0.047)	0.071 (0.051)
Observations	1903	1902	1903
Control Mean	0.89	-0.11	-0.05
Control SD	0.32	1.04	1.04
R-squared	0.055	0.025	0.029
P-WYoung	0.320	0.130	0.320
Female X Training	0.044 (0.029)	0.191** (0.084)	0.127** (0.058)
Male X Training	0.007 (0.015)	0.058 (0.061)	0.038 (0.080)
Observations	1903	1902	1903
R-squared	0.103	0.039	0.078
Female treated = Male treated	0.286	0.234	0.371

Notes: Standard errors in parentheses are clustered by ward / village. We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.10: Spillover analysis

	Far from treatment observations	Close to treatment observations	Diff.	Std. Error	Obs
Labor force participation	0.9011	0.8810	-0.0201	0.0230	846
Employment Quality-Index	-0.1260	-0.1005	0.0255	0.0768	846
Economic-Index	-0.0134	-0.0454	-0.0320	0.0768	846

Notes: Standard errors in parentheses are clustered by ward / village. We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group (Kling et al., 2007). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance. Monetary values are top-censored at the 99th percentile to contain outliers.

Table A.11: Employment Quality-Index: Intention to treat and treatment on the treated effects

	Employment Quality - Index β / SE	Permanent work β / SE	Working hrs last month β / SE	Work satisfaction β / SE
ITT - STRYDE training	0.122** (0.047)	0.126** (0.051)	0.035 (0.044)	0.096** (0.046)
Observations	1907	1908	1908	1907
Control Mean	-0.12	-0.11	-0.04	-0.11
Control SD	1.05	1.02	1.02	1.06
R-squared	0.025	0.040	0.029	0.024
P-WYoung	0.150	0.240	0.700	0.350
Female X Training	0.200** (0.084)	0.106 (0.081)	0.123 (0.079)	0.191** (0.080)
Male X Training	0.059 (0.060)	0.147** (0.068)	-0.032 (0.061)	0.011 (0.060)
Observations	1907	1908	1908	1907
R-squared	0.040	0.042	0.064	0.027
Female treated = Male treated	0.202	0.707	0.157	0.092
TOT - STRYDE training (all)	0.265** (0.100)	0.274** (0.111)	0.076 (0.093)	0.207** (0.096)
Observations	1907	1908	1908	1907
R-squared	0.022	0.034	0.029	0.023
F-Statistic	561.557	558.591	558.591	561.557
TOT - STRYDE training (women)	0.346** (0.148)	0.172 (0.143)	0.199 (0.142)	0.354** (0.139)
Observations	901	902	902	901
R-squared	0.049	0.060	0.062	0.045
F-Statistic	368.220	366.582	366.582	368.220
TOT - STRYDE training (men)	0.186 (0.128)	0.390** (0.148)	-0.050 (0.133)	0.054 (0.121)
Observations	1006	1006	1006	1006
R-squared	0.062	0.080	0.045	0.073
F-Statistic	340.175	340.175	340.175	340.175

Notes: The TOT coefficients correspond to instrumental variable regressions where the dummy variable taking the value of 1 if the respondent joined a minimum of 1 session of the training is instrumented by the treatment assignment (lottery) variable. Standard errors in parentheses are clustered by ward / village. We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group (Kling et al., 2007). * p < 0.10, ** p < 0.05, *** p < 0.01 denote statistical significance.

Table A.12: Economic-Index: Intention to treat and treatment on the treated

	Economic-Index (imp) β / SE	Earnings (total) β / SE	Savings (total) β / SE	Asset index β / SE
ITT - STRYDE training	0.070 (0.052)	0.010 (0.048)	0.076* (0.042)	0.077 (0.067)
Observations	1908	1908	1908	1908
Control Mean	-0.05	-0.01	-0.05	-0.05
Control SD	1.04	1.00	1.01	1.34
R-squared	0.027	0.036	0.033	0.036
P-WYoung	0.600	0.880	0.410	0.700
Female X Training	0.123** (0.058)	0.089 (0.055)	0.074 (0.045)	0.121 (0.089)
Male X Training	0.039 (0.081)	-0.050 (0.079)	0.091 (0.073)	0.049 (0.108)
Observations	1908	1908	1908	1908
R-squared	0.078	0.065	0.069	0.054
Female treated = Male treated	0.395	0.160	0.852	0.631
TOT - STRYDE training (all)	0.152 (0.110)	0.021 (0.104)	0.164* (0.090)	0.166 (0.141)
Observations	1908	1908	1908	1908
R-squared	0.032	0.037	0.036	0.040
F-Statistic	558.591	558.591	558.591	558.591
TOT - STRYDE training (women)	0.261** (0.097)	0.165* (0.092)	0.204** (0.066)	0.233 (0.156)
Observations	902	902	902	902
R-squared	0.062	0.055	0.065	0.083
F-Statistic	366.582	366.582	366.582	366.582
TOT - STRYDE training (men)	0.097 (0.181)	-0.128 (0.177)	0.228 (0.166)	0.124 (0.247)
Observations	1006	1006	1006	1006
R-squared	0.051	0.049	0.059	0.066
F-Statistic	340.175	340.175	340.175	340.175

Notes: The TOT coefficients correspond to instrumental variable regressions where the dummy variable taking the value of 1 if the respondent joined a minimum of 1 session of the training is instrumented by the treatment assignment (lottery) variable. Standard errors in parentheses are clustered by ward / village. We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group (Kling et al., 2007). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance. Monetary values are top-censored at the 99th percentile to contain outliers.

Table A.13: Additional labor market outcomes

	Self-employed β / SE	Formal contract β / SE	Predict earnings β / SE
STRYDE training	0.024 (0.021)	0.013 (0.012)	0.184*** (0.047)
Observations	1908	1908	1908
Control Mean	0.74	0.07	2.09
Control SD	0.44	0.26	0.95
R-squared	0.046	0.032	0.037
P-WYoung	0.570	0.570	0.000
Female X Training	0.052 (0.035)	0.009 (0.018)	0.134** (0.066)
Male X Training	0.001 (0.029)	0.018 (0.020)	0.229** (0.073)
Observations	1908	1908	1908
R-squared	0.051	0.036	0.038
Female treated = Male treated	0.279	0.738	0.358

Notes: Standard errors in parentheses are clustered by ward / village. We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group (Kling et al., 2007). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.14: Additional labor market outcomes - BPC sample

	Self-employed β / SE	Formal contract β / SE	Predict earnings β / SE
Exp. winner	0.041 (0.026)	0.001 (0.016)	0.103* (0.062)
Observations	1278	1278	1278
Control Mean	0.80	0.06	2.34
Control SD	0.40	0.24	0.96
R-squared	0.101	0.088	0.097
P-WYoung	0.230	0.900	0.230
Female X Grant	0.059* (0.034)	0.026 (0.022)	0.111 (0.082)
Male X Grant	0.018 (0.041)	-0.034 (0.024)	0.089 (0.094)
Observations	1278	1278	1278
R-squared	0.102	0.097	0.097
Female treated = Male treated	0.448	0.073	0.859

Notes: Standard errors in parentheses are clustered by ward / village. We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group (Kling et al., 2007). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.15: Primary ITT effects - BPC sample - Empl-Index: subcomponents

	Employment Quality - Index β / SE	Permanent work β / SE	Working hrs last month β / SE	Work satisfaction β / SE
Exp. winner	0.116* (0.065)	0.061 (0.064)	0.093 (0.066)	0.093 (0.065)
Observations	1278	1278	1278	1278
Control Mean	-0.03	-0.02	-0.03	-0.03
Control SD	1.01	1.00	0.99	1.02
R-squared	0.084	0.104	0.083	0.065
P-WYoung	0.370	0.590	0.530	0.530
Female X Grant	0.089 (0.090)	0.002 (0.085)	0.109 (0.093)	0.077 (0.091)
Male X Grant	0.143 (0.094)	0.130 (0.097)	0.057 (0.095)	0.118 (0.089)
Observations	1278	1278	1278	1278
R-squared	0.087	0.106	0.093	0.065
Female treated = Male treated	0.674	0.322	0.702	0.750

Notes: We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group (Kling et al., 2007). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.16: Primary ITT effects - BPC sample - Econ-Index: subcomponents

	Economic-Index (imp) β / SE	Earnings (total) β / SE	Savings (total) β / SE	Asset index β / SE
Exp. winner	0.115* (0.066)	0.068 (0.062)	0.120* (0.067)	0.071 (0.084)
Observations	1278	1278	1278	1278
Control Mean	-0.03	-0.01	-0.03	-0.02
Control SD	0.97	0.96	0.96	1.23
R-squared	0.080	0.054	0.096	0.090
P-WYoung	0.370	0.590	0.370	0.590
Female X Grant	0.100 (0.079)	0.111 (0.076)	0.057 (0.070)	0.057 (0.108)
Male X Grant	0.096 (0.108)	-0.021 (0.107)	0.170 (0.118)	0.065 (0.136)
Observations	1278	1278	1278	1278
R-squared	0.139	0.098	0.137	0.104
Female treated = Male treated	0.971	0.329	0.410	0.963

Notes: We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group (Kling et al., 2007). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance. Monetary values are top-censored at the 99th percentile to contain outliers.

Table A.17: Saving effects

	Has a formal savings account β / SE	Number savings accounts β / SE	Savings (total) β / SE	Formal savings β / SE	Informal savings β / SE
STRYDE training	0.063** (0.022)	0.097** (0.040)	0.076* (0.042)	0.135** (0.050)	0.005 (0.043)
Observations	1908	1908	1908	1908	1908
Control Mean	0.42	1.53	-0.05	-0.10	-0.01
Control SD	0.49	0.78	1.01	0.92	1.04
R-squared	0.056	0.093	0.033	0.046	0.041
P-WYoung	0.070	0.090	0.210	0.070	0.900
Female X Training	0.019 (0.031)	0.088 (0.064)	0.074 (0.045)	0.112** (0.045)	0.034 (0.051)
Male X Training	0.108** (0.032)	0.101* (0.054)	0.091 (0.073)	0.168** (0.083)	-0.012 (0.076)
Observations	1908	1908	1908	1908	1908
R-squared	0.085	0.096	0.069	0.073	0.058
Female treated = Male treated	0.055	0.885	0.852	0.538	0.633

Notes: Standard errors in parentheses are clustered by ward / village. We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group. Monetary values are top-censored at the 99th percentile to contain outliers. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.18: Saving effects - BPC sample

	Has a formal savings account β / SE	Number savings accounts β / SE	Savings (total) β / SE	Formal savings β / SE	Informal savings β / SE
Exp. winner	0.012 (0.031)	-0.074 (0.054)	0.120* (0.067)	0.146** (0.066)	0.042 (0.067)
Observations	1278	1278	1278	1278	1278
Control Mean	0.50	1.73	-0.03	-0.04	-0.01
Control SD	0.50	0.87	0.96	0.95	0.95
R-squared	0.133	0.201	0.096	0.100	0.082
P-WYoung	0.800	0.450	0.190	0.090	0.800
Female X Grant	-0.010 (0.041)	-0.080 (0.071)	0.057 (0.070)	0.101 (0.073)	0.001 (0.066)
Male X Grant	0.025 (0.045)	-0.063 (0.086)	0.170 (0.118)	0.177 (0.113)	0.077 (0.126)
Observations	1278	1278	1278	1278	1278
R-squared	0.174	0.202	0.137	0.132	0.096
Female treated = Male treated	0.563	0.887	0.410	0.571	0.593

Notes: We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group. Monetary values are top-censored at the 99th percentile to contain outliers. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.19: Borrowing effects

	Number of loans β / SE	Loan amount (total) β / SE	Formal loan amount β / SE	Informal loan amount β / SE
STRYDE training	0.029 (0.042)	0.089* (0.046)	0.114** (0.036)	0.033 (0.049)
Observations	1908	1908	1908	1908
Control Mean	0.46	-0.07	-0.07	-0.03
Control SD	0.85	0.85	0.70	0.94
R-squared	0.050	0.033	0.032	0.043
P-WYoung	0.690	0.150	0.000	0.690
Female X Training	-0.021 (0.061)	0.056 (0.061)	0.108** (0.054)	-0.006 (0.064)
Male X Training	0.074 (0.062)	0.122* (0.069)	0.123* (0.064)	0.071 (0.074)
Observations	1908	1908	1908	1908
R-squared	0.050	0.038	0.034	0.047
Female treated = Male treated	0.287	0.479	0.872	0.425

Notes: Standard errors in parentheses are clustered by ward / village. We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group. Monetary values are top-censored at the 99th percentile to contain outliers. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.20: Borrowing effects - BPC sample

	Number of loans β / SE	Loan amount (total) β / SE	Formal loan amount β / SE	Informal loan amount β / SE
Exp. winner	0.002 (0.052) 1278	0.088 (0.065) 1278	0.043 (0.060) 1278	0.065 (0.068) 1278
Observations				
Control Mean	0.49	-0.02	-0.01	-0.02
Control SD	0.82	0.94	0.99	0.93
R-squared	0.122	0.107	0.120	0.098
P-WYoung	1.000	0.360	0.700	0.640
Female X Grant	-0.024 (0.065)	0.067 (0.085)	-0.042 (0.077)	0.073 (0.091)
Male X Grant	0.025 (0.089)	0.098 (0.109)	0.146 (0.104)	0.039 (0.115)
Observations	1278	1278	1278	1278
R-squared	0.127	0.118	0.122	0.109
Female treated = Male treated	0.663	0.830	0.173	0.826

Notes: We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group. Monetary values are top-censored at the 99th percentile to contain outliers. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.21: Assets effects

	Asset-Index β / SE	Animal-Index β / SE	Transportation-Index β / SE	Hh items-Index β / SE	Electricity β / SE	Agricultural land β / SE
STRYDE training	0.077 (0.067)	0.103* (0.059)	-0.002 (0.058)	0.002 (0.055)	0.008 (0.026)	0.021 (0.020)
Observations	1908	1908	1908	1908	1908	1908
Control Mean	-0.05	-0.05	-0.01	-0.02	0.32	0.60
Control SD	1.34	1.17	1.12	1.19	0.47	0.49
R-squared	0.036	0.051	0.067	0.048	0.129	0.094
P-WYoung	0.860	0.460	1.000	1.000	0.990	0.860
Female X Training	0.121 (0.089)	0.174** (0.078)	-0.080 (0.080)	0.057 (0.095)	-0.004 (0.042)	0.061* (0.037)
Male X Training	0.049 (0.108)	0.050 (0.095)	0.071 (0.083)	-0.046 (0.079)	0.019 (0.030)	-0.012 (0.030)
Observations	1908	1908	1908	1908	1908	1908
R-squared	0.054	0.068	0.068	0.048	0.129	0.105
Female treated = Male treated	0.631	0.350	0.179	0.445	0.640	0.168

Notes: Standard errors in parentheses are clustered by ward / village. We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.22: Assets effects - BPC sample

	Asset-Index β / SE	Animal-Index β / SE	Transportation-Index β / SE	Hh items-Index β / SE	Electricity β / SE	Agricultural land β / SE
Exp. winner	0.071 (0.084)	0.075 (0.068)	-0.099 (0.067)	-0.013 (0.065)	0.012 (0.029)	-0.010 (0.029)
Observations	1278	1278	1278	1278	1278	1278
Control Mean	-0.02	-0.01	0.04	-0.00	0.34	0.61
Control SD	1.23	1.19	1.02	1.25	0.47	0.49
R-squared	0.090	0.134	0.176	0.101	0.222	0.219
P-WYoung	0.760	0.620	0.440	0.940	0.940	0.940
Female X Grant	0.057 (0.108)	0.026 (0.079)	-0.112 (0.082)	0.027 (0.092)	0.037 (0.042)	0.013 (0.041)
Male X Grant	0.065 (0.136)	0.120 (0.115)	-0.096 (0.113)	-0.072 (0.102)	-0.016 (0.040)	-0.045 (0.042)
Observations	1278	1278	1278	1278	1278	1278
R-squared	0.104	0.144	0.182	0.103	0.227	0.224
Female treated = Male treated	0.963	0.499	0.911	0.486	0.364	0.317

Notes: We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.23: Business skills effects

	Has written account for business β / SE	Adheres to written account β / SE	Sets sales target β / SE	Has written business plan β / SE	Business practices score (out of 4) β / SE
STRYDE training	0.134*** (0.024) 1489	0.141*** (0.024) 1489	0.048** (0.018) 1489	0.139*** (0.020) 1489	0.115*** (0.016) 1489
Observations					
Control Mean	0.29	0.27	0.80	0.13	0.37
Control SD	0.45	0.45	0.40	0.34	0.30
R-squared	0.059	0.063	0.049	0.077	0.075
P-WYoung	0.000	0.000	0.010	0.000	0.000
Female X Training	0.101** (0.037)	0.101** (0.036)	0.030 (0.033)	0.144*** (0.030)	0.094*** (0.026)
Male X Training	0.164*** (0.034)	0.176*** (0.034)	0.070** (0.023)	0.138*** (0.031)	0.137*** (0.023)
Observations	1489	1489	1489	1489	1489
R-squared	0.063	0.067	0.069	0.083	0.087
Female treated = Male treated	0.227	0.143	0.358	0.903	0.247

Notes: Standard errors in parentheses are clustered by ward / village. We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group. * p < 0.10, ** p < 0.05, *** p < 0.01 denote statistical significance.

Table A.24: Business skills effects - BPC sample

	Has written account for business	Adheres to written account	Sets sales target	Has written business plan	Business practices score (out of 4)
Exp. winner	0.034 (0.035) 1058	0.041 (0.035) 1058	-0.004 (0.025) 1058	0.034 (0.034) 1058	0.026 (0.026) 1058
Observations					
Control Mean	0.47	0.46	0.85	0.31	0.52
Control SD	0.50	0.50	0.36	0.46	0.36
R-squared	0.143	0.143	0.103	0.099	0.137
P-WYoung	0.600	0.520	0.860	0.600	0.600
Female X Grant	0.033 (0.047) 1058	0.050 (0.046) 1058	0.008 (0.038) 1058	0.009 (0.042) 1058	0.025 (0.034) 1058
Male X Grant	0.028 (0.051) 1058	0.021 (0.052) 1058	-0.025 (0.030) 1058	0.057 (0.054) 1058	0.020 (0.037) 1058
Observations					
R-squared	0.160	0.163	0.130	0.128	0.173
Female treated = Male treated	0.942	0.677	0.488	0.483	0.925

Notes: We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.25: Business-Index effects

	Profits β / SE	Employees β / SE	Location β / SE	Reinvestment β / SE	Innovation β / SE	Motivation β / SE
STRYDE training	-0.067 (0.056) 1489	0.022 (0.055) 1489	0.133** (0.049) 1489	0.105** (0.051) 1489	0.079 (0.048) 1489	0.121** (0.053) 1489
Observations	0.04	-0.06	-0.08	-0.14	-0.09	-0.07
Control Mean	1.09	0.97	1.06	1.02	0.93	1.04
Control SD	0.034	0.064	0.059	0.057	0.040	0.074
R-squared	0.470	0.760	0.080	0.210	0.300	0.160
P-WYoung						
Female X Training	0.026 (0.057)	0.052 (0.072)	0.259** (0.097)	0.045 (0.088)	0.040 (0.087)	0.119 (0.082)
Male X Training	-0.115 (0.082)	0.016 (0.074)	0.043 (0.069)	0.168** (0.068)	0.098 (0.061)	0.124 (0.075)
Observations	1489	1489	1489	1489	1489	1489
R-squared	0.082	0.091	0.072	0.072	0.051	0.074
Female treated = Male treated	0.158	0.721	0.110	0.298	0.610	0.964

Notes: Standard errors in parentheses are clustered by ward / village. We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.26: Business-Index effects - BPC sample

	Profits β / SE	Employees β / SE	Location β / SE	Reinvestment β / SE	Innovation β / SE	Motivation β / SE
Exp. winner	0.021 (0.069)	-0.028 (0.069)	-0.067 (0.073)	0.015 (0.070)	0.077 (0.070)	-0.082 (0.072)
Observations	1058	1058	1058	1058	1058	1058
Control Mean	-0.00	0.02	0.02	-0.00	-0.01	0.03
Control SD	1.00	1.00	0.98	0.99	0.99	0.98
R-squared	0.080	0.119	0.134	0.100	0.147	0.155
P-WYoung	0.950	0.950	0.870	0.950	0.870	0.870
Female X Grant	0.089 (0.075)	0.012 (0.090)	-0.012 (0.101)	0.048 (0.096)	0.121 (0.097)	0.015 (0.088)
Male X Grant	-0.096 (0.120)	-0.097 (0.112)	-0.148 (0.100)	-0.048 (0.096)	0.030 (0.100)	-0.203* (0.114)
Observations	1058	1058	1058	1058	1058	1058
R-squared	0.147	0.145	0.142	0.134	0.154	0.158
Female treated = Male treated	0.199	0.458	0.331	0.478	0.513	0.123

Notes: We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.27: Treatment effects, secondary outcomes - BPC sample

	Hard Skills-Index β / SE	Business-Index β / SE	Soft Skills-Index β / SE	Social-Index β / SE
Exp. winner	0.043 (0.065)	-0.022 (0.071)	0.048 (0.064)	-0.011 (0.065)
Observations	1278	1058	1278	1278
Control Mean	-0.01	0.02	-0.01	-0.00
Control SD	1.00	0.98	1.01	1.02
R-squared	0.137	0.120	0.106	0.126
P-WYoung	0.860	0.970	0.840	0.970
Female X Grant	-0.034 (0.094)	0.094 (0.091)	-0.035 (0.089)	-0.049 (0.096)
Male X Grant	0.106 (0.079)	-0.194* (0.112)	0.152 (0.093)	0.023 (0.082)
Observations	1278	1058	1278	1278
R-squared	0.190	0.162	0.108	0.135
Female treated = Male treated	0.253	0.047	0.155	0.568

Notes: We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group (Kling et al., 2007). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.28: Psycho-social effects

	Decision making involvement (out of 5) β / SE	Aspirational -Index β / SE	Self -control β / SE	Life satisfaction (0-10) β / SE
STRYDE training	0.026** (0.012)	0.077* (0.042)	0.038 (0.047)	0.241** (0.079)
Observations	1908	1908	1908	1908
Control Mean	0.89	-0.04	-0.03	4.52
Control SD	0.23	0.37	0.97	1.77
R-squared	0.028	0.014	0.033	0.049
P-WYoung	0.250	0.360	0.470	0.050
Female X Training	0.009 (0.013)	0.025 (0.036)	-0.027 (0.075)	0.376** (0.131)
Male X Training	0.041** (0.019)	0.127 (0.080)	0.101 (0.075)	0.104 (0.114)
Observations	1908	1908	1908	1908
R-squared	0.029	0.017	0.036	0.068
Female treated = Male treated	0.186	0.275	0.271	0.157

Notes: We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group (Kling et al., 2007). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.29: Psycho-social effects - BPC sample

	Decision making involvement (out of 5) β / SE	Aspirational -Index β / SE	Self -control β / SE	Life satisfaction (0-10) β / SE
Exp. winner	0.007 (0.014)	0.085 (0.061)	0.016 (0.061)	-0.067 (0.105)
Observations	1278	1278	1278	1278
Control Mean	0.91	-0.04	-0.00	4.87
Control SD	0.22	0.87	1.01	1.68
R-squared	0.113	0.064	0.137	0.083
P-WYoung	0.880	0.500	0.880	0.880
Female X Grant	-0.011 (0.018)	-0.035 (0.045)	-0.077 (0.083)	-0.070 (0.141)
Male X Grant	0.033 (0.022)	0.233 (0.149)	0.125 (0.087)	-0.038 (0.159)
Observations	1278	1278	1278	1278
R-squared	0.121	0.069	0.143	0.092
Female treated = Male treated	0.111	0.121	0.099	0.884

Notes: We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group (Kling et al., 2007). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.30: Social-Index effects

	Family supports employment decision β / SE	Family considers respondent's opinion β / SE	Group memberships β / SE	Group leadership positions β / SE
STRYDE training	0.095** (0.048)	0.011 (0.049)	0.134** (0.054)	0.055** (0.020)
Observations	1908	1908	1908	1908
Control Mean	-0.05	-0.02	0.88	0.22
Control SD	1.10	0.98	0.98	0.42
R-squared	0.036	0.043	0.063	0.059
P-WYoung	0.120	0.840	0.060	0.010
Female X Training	0.060 (0.081)	0.064 (0.081)	0.103 (0.075)	0.048* (0.027)
Male X Training	0.132* (0.067)	-0.029 (0.054)	0.161** (0.077)	0.060** (0.027)
Observations	1908	1908	1908	1908
R-squared	0.040	0.056	0.064	0.059
Female treated = Male treated	0.527	0.344	0.586	0.748

Notes: We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group (Kling et al., 2007). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.31: Social-Index effects - BPC sample

	Family supports employment decision β / SE	Family considers respondent's opinion β / SE	Group memberships β / SE	Group leadership positions β / SE
Exp. winner	-0.001 (0.074)	-0.055 (0.069)	-0.031 (0.064)	0.027 (0.030)
Observations	1278	1278	1278	1278
Control Mean	-0.01	0.01	1.15	0.34
Control SD	1.01	0.98	1.08	0.47
R-squared	0.072	0.095	0.132	0.128
P-WYoung	1.000	0.830	0.850	0.810
Female X Grant	-0.096 (0.113)	-0.080 (0.099)	-0.003 (0.091)	0.027 (0.039)
Male X Grant	0.109 (0.067)	-0.038 (0.092)	-0.064 (0.092)	0.023 (0.046)
Observations	1278	1278	1278	1278
R-squared	0.080	0.105	0.132	0.132
Female treated = Male treated	0.099	0.759	0.640	0.944

Notes: We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group (Kling et al., 2007). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.32: Treatment effects, intimate partner violence outcomes - BPC sample

	IPV attitude (at least one)	Any experience controlling behavior	Any experience sexual violence	Any experience physical violence	Any emotional abuse
	β / SE	β / SE	β / SE	β / SE	β / SE
Exp. winner (OLS)	-0.025 (0.031)	-0.003 (0.045)	-0.024 (0.022)	-0.031 (0.027)	-0.005 (0.042)
Observations	1278	683	683	683	683
Control Mean	0.64	0.60	0.07	0.11	0.31
Control SD	0.48	0.49	0.26	0.31	0.46
R-squared	0.110	0.149	0.163	0.158	0.157
P-WYoung	0.770	0.990	0.730	0.730	0.990
Female X Grant	-0.061 (0.041)				
Male X Grant	0.023 (0.046)				
Observations	1278				
R-squared	0.112				
Female treated =	0.169				
Male treated					

Notes: We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.33: TOT estimates subcomponents Economic-Index in Shillings

	Economic-Index β / SE	Earnings (total) β / SE	Savings (total) β / SE	Asset-Index β / SE
All baselined sample				
TOT - 1 session	0.152 (0.110)	7654.604 (38023.803)	46532.061* (25271.640)	0.166 (0.141)
Observations	1908	1729	1871	1908
R-squared	0.032	0.040	0.037	0.040
F-Statistic	558.591	475.537	551.107	558.591
Women only				
TOT - 1 session	0.261** (0.097)	60817.099* (32802.614)	55855.137** (18659.326)	0.233 (0.156)
Observations	902	818	886	902
R-squared	0.062	0.062	0.066	0.083
F-Statistic	366.582	352.597	349.724	366.582

Notes: TOT is a dummy variable taking the value of 1 if the respondent joined a minimum of 1 session of the training. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance. Monetary values are top-censored at the 99th percentile to contain outliers.

Table A.34: Primary ITT effects: Female vs male trainer

	Labor force participation β / SE	Employment Quality-Index β / SE	Economic-Index β / SE
All baselined sample			
Female trainer * Training	0.028 (0.023)	0.155** (0.065)	0.093 (0.071)
Male trainer * Training	0.020 (0.016)	0.087 (0.068)	0.045 (0.076)
Male trainer	0.004 (0.037)	0.101 (0.196)	-0.382 (0.256)
Observations	1908	1907	1908
R-squared	0.051	0.025	0.028
Female trainer = Male trainer	0.769	0.467	0.642
Men only			
Female trainer * Training	0.024 (0.018)	0.084 (0.080)	0.132 (0.113)
Male trainer * Training	-0.010 (0.014)	0.071 (0.076)	-0.047 (0.104)
Male trainer	0.014 (0.013)	-0.805*** (0.222)	-0.722 (0.776)
Observations	1006	1006	1006
R-squared	0.084	0.054	0.047
Female trainer = Male trainer	0.149	0.903	0.246
Women only			
Female trainer * Training	0.050 (0.042)	0.260** (0.111)	0.135** (0.057)
Male trainer * Training	0.036 (0.032)	0.080 (0.107)	0.135 (0.091)
Male trainer	-0.045 (0.074)	0.338 (0.221)	-0.123 (0.315)
Observations	902	901	902
R-squared	0.083	0.070	0.060
Female trainer = Male trainer	0.788	0.243	0.995

Notes: We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Table A.35: Secondary ITT effects: Female vs male trainer

	Hard Skills-Index β / SE	Business-Index β / SE	Soft Skills-Index β / SE	Social-Index β / SE
All baselined sample				
Female trainer * Training	0.216** (0.066)	0.116* (0.070)	0.267*** (0.060)	0.003 (0.065)
Male trainer * Training	0.343*** (0.066)	0.156** (0.075)	0.088 (0.069)	0.285*** (0.073)
Male trainer	0.258 (0.259)	0.339 (0.269)	-0.336** (0.134)	0.212 (0.234)
Observations	1908	1489	1908	1908
R-squared	0.061	0.066	0.051	0.064
Female trainer = Male trainer	0.173	0.700	0.054	0.005
Men only				
Female trainer * Training	0.282*** (0.083)	0.090 (0.088)	0.264*** (0.070)	0.133* (0.076)
Male trainer * Training	0.334*** (0.084)	0.151 (0.101)	0.071 (0.092)	0.181** (0.082)
Male trainer	0.087 (0.376)	0.264 (0.373)	-1.087** (0.359)	-0.417 (0.291)
Observations	1006	820	1006	1006
R-squared	0.091	0.088	0.074	0.067
Female trainer = Male trainer	0.657	0.649	0.097	0.672
Women only				
Female trainer * Training	0.214* (0.125)	0.181* (0.097)	0.275** (0.087)	-0.062 (0.097)
Male trainer * Training	0.288** (0.121)	0.178** (0.074)	0.084 (0.101)	0.432*** (0.116)
Male trainer	0.448 (0.355)	0.477** (0.221)	-0.070 (0.426)	0.660 (0.619)
Observations	902	669	902	902
R-squared	0.079	0.125	0.094	0.095
Female trainer = Male trainer	0.671	0.978	0.154	0.001

Notes: We impute missing values by setting them equal to the mean of the respective outcome variable for the relevant treatment group. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance.

Figure A.4: Main business activity, by gender



Graphs by Female

Figure A.5: Income, by business activities and gender - Treatment group

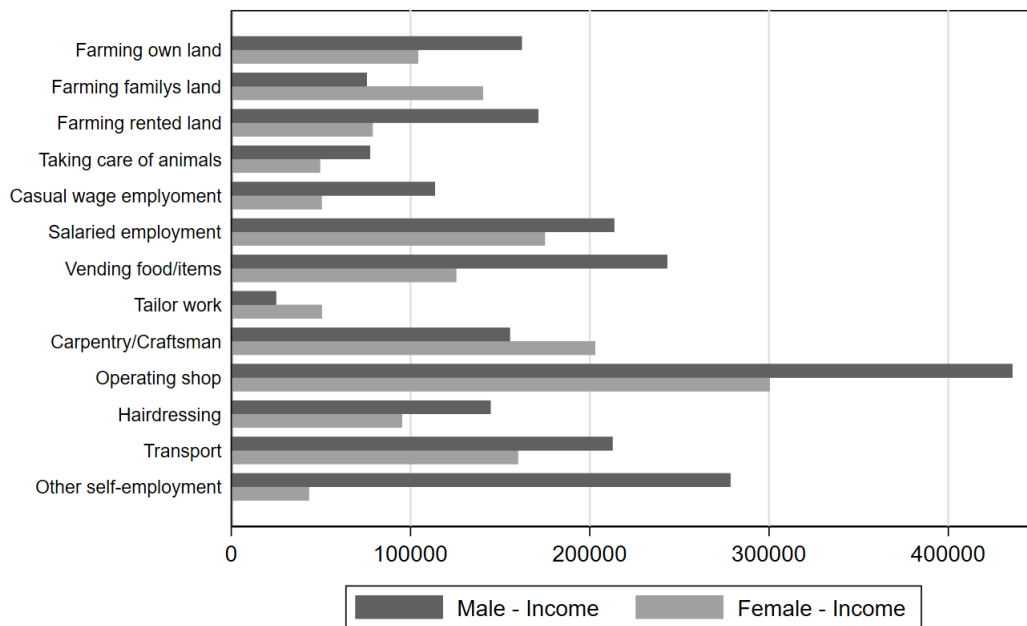


Figure A.6: Income, by business activities and gender - Control group

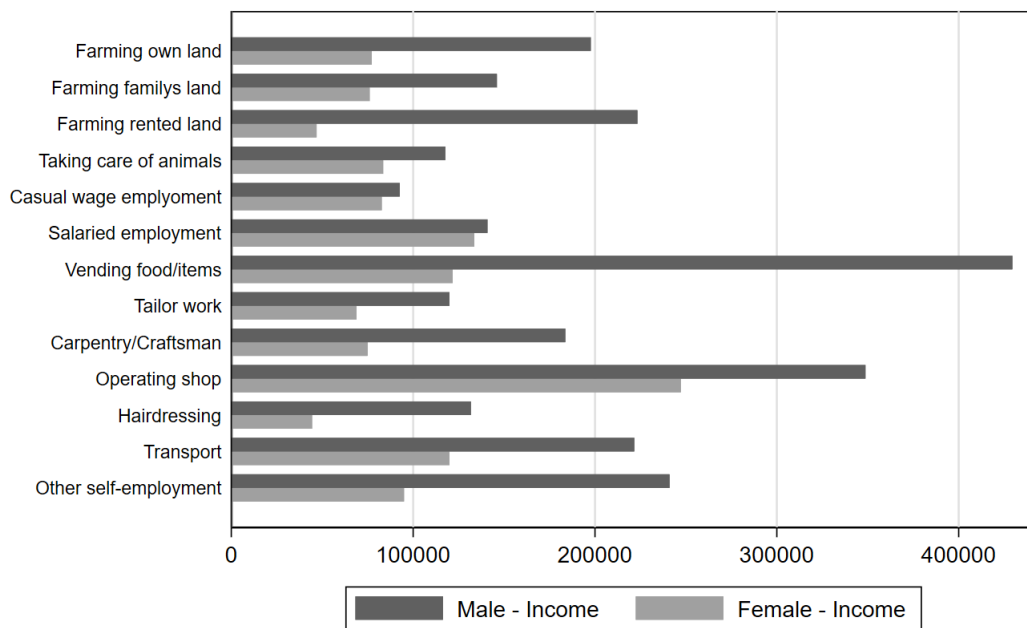


Figure A.7: Employment quality-Index, Kernel density plots for women



Figure A.8: Employment quality-Index, Kernel density plots for men

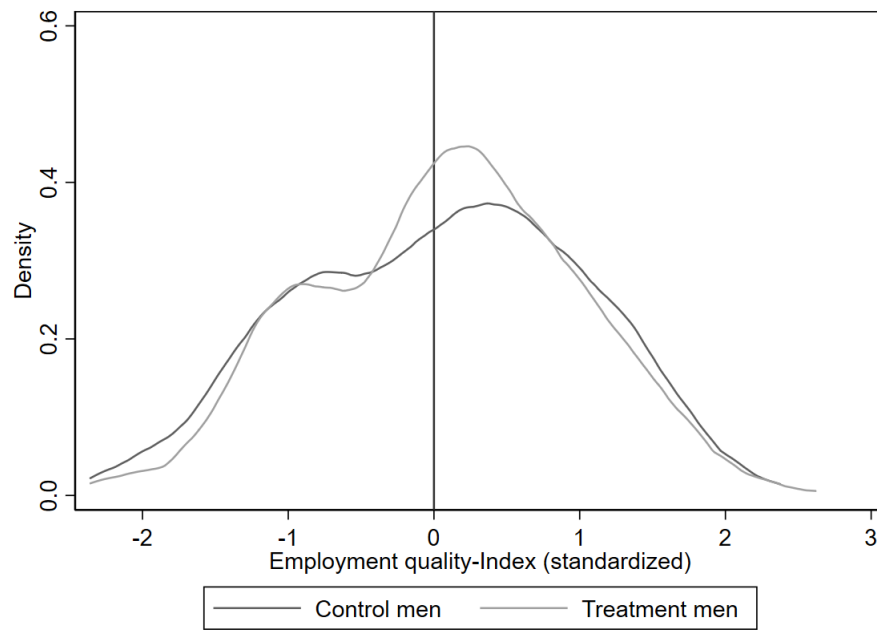


Figure A.9: Economic-Index, Kernel density plots for women

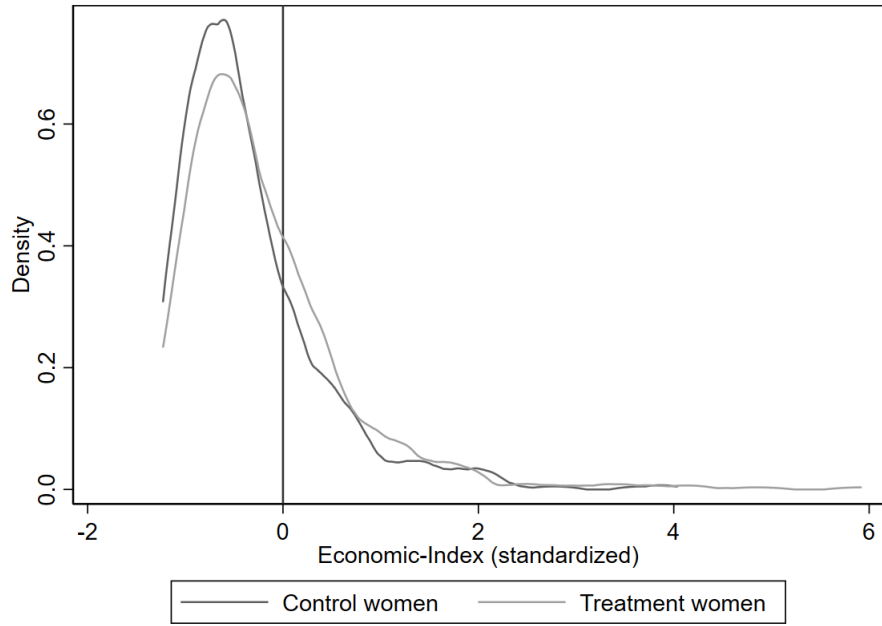


Figure A.10: Economic-Index, Kernel density plots for men

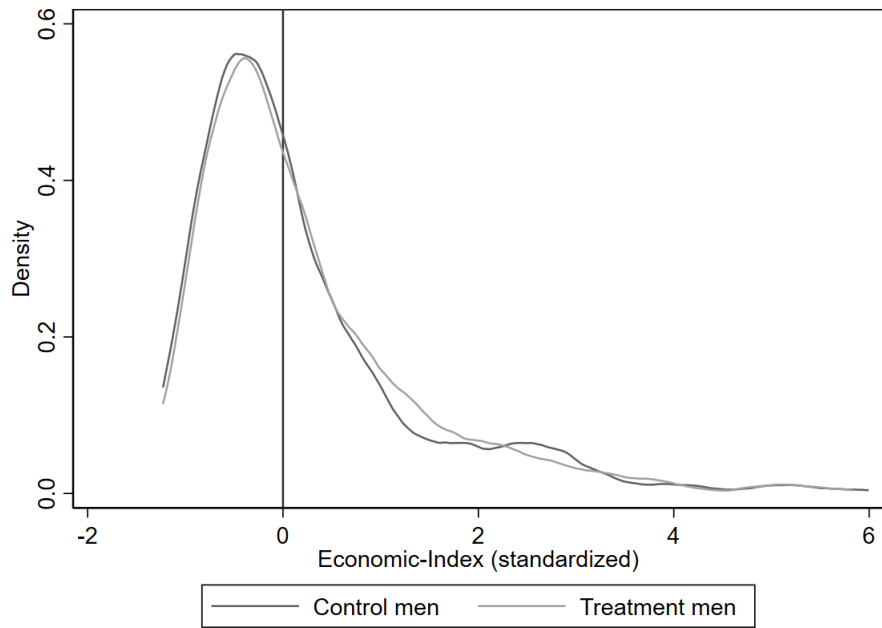


Table A.36: ITT estimates subcomponents Economic-Index in Shillings

	Economic-Index (imp) β / SE	Earnings (total) β / SE	Savings (total) β / SE	Asset index β / SE
STRYDE training	0.070 (0.052)	3435.997 (17327.257)	21420.058* (11877.857)	0.077 (0.067)
Observations	1908	1729	1871	1908
Control Mean	-0.05	209310.86	152671.14	-0.05
Control SD	1.04	340459.37	282532.64	1.34
R-squared	0.027	0.040	0.034	0.036
P-WYoung	0.440	0.890	0.310	0.510
Female X Training	0.123** (0.058)	32630.354* (19570.818)	20069.011 (12598.183)	0.121 (0.089)
Male X Training	0.039 (0.081)	-19886.420 (28066.559)	26077.534 (20842.307)	0.049 (0.108)
Observations	1908	1729	1871	1908
R-squared	0.078	0.071	0.070	0.054
Female treated = Male treated	0.395	0.136	0.813	0.631

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ denote statistical significance. Monetary values are top-censored at the 99th percentile to contain outliers.