Do revolving funds generate self-employment and increase incomes for the poor? Experimental evidence from Uganda's Youth Livelihood Programme

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Grantee Final Report

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Note to readers

This final impact evaluation grantee report has been submitted in partial fulfilment of the requirements of grant UPW.03 awarded under the Uganda Policy Window. 3ie is making it available to the public in this final report version as it was received. The key issue with the study was programme implementation delay. Many treatment youth groups received the money very late, and as much as 40 per cent of the control groups also received the treatment. Further, the programme did not deliver on the supportive trainings which was originally planned to accompany the start-up capital.

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The 3ie technical quality assurance team comprises Francis Rathinam, Radhika Menon, an anonymous external impact evaluation design expert reviewer and an anonymous external sector expert reviewer, with overall technical supervision by Marie Gaarder.

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Executive Summary

This study evaluates the impact of Uganda's Youth Livelihood Programme (YLP). YLP is designed to help the poor and unemployed youth aged 18 to 30 years become self-employed, increase incomes, and promote positive behavioural change. Youth from all the districts are invited to form groups (of 10 – 15 members) and submit grant proposals detailing how they would use the loan to start own businesses. YLP is guided by a revolving fund principle whereby the money paid back is ploughed back into the programme to help more youth groups. Successful proposals received grants worth UGX 9.2 million ($2,500) on average. For the current study, funding was randomly assigned among youth in 402 screened and eligible applicant groups from sixteen (16) randomly selected districts.

Context

Many developing countries are grappling with the challenge of finding employment for their bulging youth population. While Uganda has witnessed positive economic growth over the last two decades, it has not translated into employment opportunities enough for the youth. The government has invested in youth funds as alternative strategies to facilitate the youth to create their own employment. However, limited evidence exists about the efficacy of such programmes. Indeed, since its inception in 2013/14, Uganda's flagship the Youth Livelihood Programme has not been evaluated for this purpose.

Research Question

The current evaluation answers the question: What is the impact of YLP on economic outcomes (such as income and employment) and does the programme improve social outcomes (drinking, smoking, violence, etc.)?

Study Methodology

This evaluation involved a mixed-methods approach, drawing on both qualitative and quantitative data collected through baseline and endline survey on selected youth groups to evaluate the short- and medium-term impacts of YLP.

Theory of Change

Most young people aged 18-30 years in Uganda are unemployed. While they desire to work, they lack skills and access to start-up capital. This evaluation seeks to establish whether provision of low interest credit via a group-approach enables the youth to create employment, increase their incomes and adopt positive behaviours.

Data

We collected both baseline and endline data. Baseline data was collected on 402 youth groups (201 groups being treatment and 201 as comparison groups). At baseline 1,875 youth (41% female) participated in the survey. Endline data was collected a year after the rollout of the intervention among the study group on 1,556 youth (39% female). The attrition rate (17%) from the baseline through the endline data collection was within tolerable limits.

Estimation

This study used intention-to-treat (ITT) and treatment-on-the treated (ToT) analyses.

Findings

Overall, after 12 months of implementation, YLP had no statistically significant effect on socio-economic outcomes of the intervention group compared to the control group. In terms of employment, evidence shows that YLP beneficiaries are moving from unskilled to skilled, and unpaid to paid occupations, and they report enhanced ability to access credit facilities. While measures of direct income show that youth in the intervention group lag behind their counterparts in the control group, the former's asset portfolio increased faster than the latter's. The youth in the intervention group have more access to financial services as seen in having more loans and possession of accounts in formal financial institutions. The YLP intervention also positively impacted on employment for people outside the programme: youth in the intervention group employ more people (both relatives and non-family members) in their businesses compared to the youth in the control group. On lifestyle and behavioural change, the intervention reduced both tobacco and alcohol consumption among the youth in the intervention group although we noted a slight increase in domestic violence among YLP beneficiaries.

Conclusions

While the impact is not statistically significant on many outcomes, there are grounds for optimism about the prospects of the Youth Livelihood Programme. Targeting the *unbankable* youth is clearly a bold move by government but it comes with major challenges: Poor youth tend to first divert their revolving funds to consumptive expenditures to meet basic needs as opposed to doing the planned investments. The study found evidence that the youth in the intervention group increased their expenditures on health and education soon after receiving YLP funds.

Most youth choose to invest in fast earning livelihood projects, which do not require acquisition of technical skills. While these seem easier to operate, they have associated disadvantages such stiff competition since the general population too invests in similar ventures. Relatedly, majority of the youth prefer agro-based activities, which are vulnerable to weather vagaries and price fluctuations among other risks.

Qualitative information and evidence from the process evaluation shows that implementers focused a lot on disbursement and recovery of funds while downplaying complementary activities to support the novice entrepreneurs through the entire business cycle. Therefore, the statistically insignificant impact of YLP so far suggests that the youth do not just need money. They need guidance and nurturing for their investments to be productive.

Recommendations

To reduce on the proportion of youth focusing on the less profitable livelihood projects, government needs to make investment in skills-based projects that are appealing to the youth. This can be done by giving more incentives to groups that apply for skills-based funding (e.g. more funding allocation, longer gestation period for repayment, lower interest, etc.).

There is need to de-politicise the programme. YLP needs to be delinked from the prevailing perception that it is an initiative for supporters of some politicians as opposed to being a government programme for all the youth in the country. MGLSD needs to intensify its awareness raising campaigns about the aims and objectives, and implementation modalities of the programme in all parts of the country.

Government should insist on supporting the youth with complementary services beyond the revolving fund. This will enable them learn business ethics such as balancing consumption and investment expenditure.

Given the short period between baseline and endline data collection, there is need that a follow up study should be commissioned to measure the impact of YLP at 2-3 years.

Contents

List of figures and tables

Abbreviations and Acronyms

ACDO:	Assistant Community Development Officer
ATEs:	Average Treatment Effects
C-group:	Comparison/control group
CDO:	Community Development Officer
DFID:	Department for International Development
EEF:	Economic Empowerment Fund
EPRC:	Economic Policy Research Centre
FTE:	Full-time Equivalent
FWER:	Family Wise Error Rate
HH:	Household
IGA:	Income Generating Activity
ILO:	International Labour Organisation
ITT:	Intent-to-Treat
KMs:	Kilometres
M&E:	Monitoring and Evaluation
MGLSD:	Ministry of Gender, Labour and Social Development
NGO:	Non-governmental Organisation
NPHC:	National Population and Housing Census
NUSAF:	Northern Uganda Social Action Fund
NYF:	National Youth Funds
OPM:	Office of the Prime Minister
PAP:	Pre-Analysis Plan
PDAs:	Personal Digital Assistants
RCT:	Randomized Controlled Trial
S4YE:	Solutions for Youth Employment
SD:	Skills Development
SDGs:	Sustainable Development Goals
T-group:	Treatment group
ToC:	Theory of Change
ToT:	Treatment-on-the-Treated
TST:	Technical Support Team
UBOS:	Uganda Bureau of Statistics
UBOS:	Uganda Bureau of Statistics
UDHS:	Uganda Demographic and Health Survey
UDHS:	Uganda Demographic Health Survey
UNHS:	Uganda National Household Survey
UNHS:	Uganda National Household Survey
UNPF:	United Nations Population Fund
USD:	United States Dollars
UYDEL:	Uganda Youth Development Link
YDF:	Youth Development Fund
YEDF:	Youth Enterprise Development Fund
YIG:	Youth Interest Group
YLP:	Youth Livelihood Programme
YOP:	Youth Opportunities Programme
YPMCs:	Youth Project Management Committees
YVCF:	Youth Venture Capital Fund

1. Introduction

The Youth Livelihood Programme (YLP) is a Government of Uganda programme which targets poor and unemployed youth aged 18-30 years throughout the country. YLP is implemented in all the Local Governments and Municipal Councils in Uganda overseen by the Ministry of Gender, Labour and Social Development (MGLSD). This report presents findings of the impact evaluation of YLP conducted from 2017 to 2018 by researchers from Makerere University and University of California, Los Angeles coordinated by a local NGO called Uganda Youth Development Link (UYDEL). A Randomised Controlled Trial (RCT) design has been used to evaluate the immediate impact of YLP – one-year effects of programme implementation. The purpose of this evaluation is to establish whether the treatment (youth who received YLP loan) and comparison group are now different on key performance indicators such as incomes, employment and others against which the impact of YLP is being measured.

Endline findings reveal that the differences between individuals randomized to treatment and those in control groups are not statistically significant on most variables of interest. As summarised in Appendix Y, we do not reject any of the null hypotheses at 5% level of significance. However, given the short one-year interval within which baseline and endline data were collected, we suggest that further studies should be conducted to rule out the time effect.

1.1 Uganda's Youth Challenge

Uganda has a youthful population by world standards. According to the National Population and Housing Census of 2014 (Census Report, 2016), 75.7 per cent of the population is under 30 years. With a median age of 15.7 years, Uganda is in second position in Africa and third in the world for having the youngest population. Uganda's young population structure is attributed to high fertility rate, currently standing at 5.4 children per woman (UDHS, 2016). With a growth rate of 3 per cent per annum the situation is expected to worsen before it improves.

Although Uganda has maintained positive economic growth rates over the last two decades, the pace of economic advancement has not been matched with growth in new employment opportunities especially for the youth. Thousands of youth are released annually into the job market to compete for the meagre jobs. Ahaibwe and Kasirye (2015:1) argue that in the last decade, "the labour force in Uganda grew at an annual rate of 3.4 per cent resulting in 390,000 new job seekers and yet only 8,120 jobs were being created each year." Statistics further indicate that unemployment in Uganda has steadily been increasing; from 1.9 per cent in 2009/10, 3.0 per cent in 2010/11 to 9.4 per cent in 2016 (UNHS, 2017). Majority of the unemployed are the youth, "at least 64 per cent of the total unemployed persons are youth aged 18-30 years" (Ahaibwe and Kasirye, 2015:4). Youth unemployment systematically increased from 13.3 per cent in 2013 to 18.6 per cent in 2015 (SWTS, 2015). The female youth

are in particular vulnerable to unemployment (22.4 per cent) compared to males (14 per cent).

Poor labour quality indicators compound the unemployment problem in Uganda. In particular, the country has a huge challenge of labour underutilisation with more than 27 per cent of working population being not exploited in relation to time, inappropriate skills and low pay. In addition, informal employment is the order of the day since about 92 per cent of young workers are engaged in this (UBOS, 2015). The proportion of the labour force in paid employment was only 38 per cent in 2017 (UNHS, 2017). This means that approximately 62 per cent of the Ugandan workforce worked for free, mostly contributing to family labour. The School to Work Transition Survey (UBOS, 2015) suggested that the over 28 per cent young people who contribute to family labour (unpaid) remain in this category for a long time and are unlikely to subsequently attain stable employment or satisfactory self-employment.

While significant strides have been made by the government to improve access to formal education and vocational training among the youth, major bottlenecks still remain. The government policy of Universal Primary Education (UPE) has been in operation since 1997 but the proportion of young people who drop out of school before completing primary is as high as 44 per cent and 12.5 per cent of children in school going age do not attend school at all (UBOS, 2017). With a fast-growing population with lower levels of education, Uganda's labour market is being filled with large numbers of low-skilled labour every year. Due to these issues, it is feared that Uganda may fail to harness "the demographic dividend" that comes if a large population is given education and skills and jobs – enabling it to actively contribute to economic growth.

Alongside the rising unemployment challenge, is the problem of limited access to credit with the situation once again being worse for the youth. Findings from the survey conducted by FINSCOPE showed that while about 5.7 per cent of the adult population in Uganda had access to credit from banks and other formal institutions, only about 4.1 per cent for the youth aged 18-30 years had gotten a similar chance (FINSCOPE III, EPRC, 2013). The youth are not considered as credit worthy by financial institutions as they often lack "collateral, verifiable credit history or steady employment," (Ahaibwe and Kasirye, 2015).

1.2 Addressing the unemployment challenge among the youth

The government of Uganda is cognisant of insufficient employment opportunities amidst a rapidly growing young labour force, lack of entrepreneurship and management skills, as well as limited access to financial capital. Government officials fear that if nothing is done about youth unemployment, the situation could spiral into organized crime, lawlessness, social unrest and political instability (MGLSD, 2014b; S4YE, 2015). Therefore, "increasing employment opportunities and reducing poverty

among the youth is a major challenge and a high priority for the Government of Uganda (GoU)" (MGLSD, 2014b:4). In an environment where economic growth has not generated sufficient and decent employment opportunities for the youth, governments have resorted to targeted short-term job creation interventions. According to the government:

> *"There is therefore need for pragmatic, integrated and comprehensive interventions that could empower young people with opportunities for creation of their own enterprises thus contributing to the social economic transformation of the country," (MGLSD, 2014b:4).*

Like the case is in several African countries, National Youth Funds (NYF)[1] have become the preferred interventions (ILO, 2012). In Africa, prominent examples of NYF include: Botswana's Youth Development Fund (YDF), Tanzania's Economic Empowerment Fund (EEF) and Youth Development Fund (YDF), and also the Youth Enterprise Development Fund in Kenya among others. On its part, Uganda has experimented the following: Northern Uganda Social Action Fund (NUSAF), Skilling Uganda, Youth Enterprise Scheme, the Youth Venture Capital Fund (YVCF) and the Youth Livelihood Programme (YLP) (MGLSD, 2014b:5). The defining characteristics of these youth funds are that they are a mixture of micro-finance and vocational training. They provide vocational and entrepreneurial skills and start-up capital to enable the youth to develop businesses and improve their economic outcomes. Few rigorous evaluations have been undertaken to assess their performance.

Blattman, et al (2014) longitudinal assessment of one of these programmes in northern Uganda (the Youth Opportunities Programme - YOP), reported more positive economic outcomes in terms of increases in investment, work, and income. They observed that:

> *"After four years, groups assigned to grants were more than twice as likely to practice a skilled trade — typically a self-employed artisan in carpentry, metalworking, tailoring, or hairstyling. After four years the treatment group had 57% greater capital stocks, 38% higher earnings, and 17% more hours of work than did the control group. Treatment group members also became more ''firm-like'' in that they were 40–50% more likely to keep records, register their business, and pay taxes. They also used significantly more unpaid family labour in agriculture and, for every four people treated, a part-time employee was hired and paid," (Blattman et al, 2014:699).*

An assessment by FAO on 23 public and private programmes targeting the youth in Uganda claimed, "youth beneficiaries have not yet started earning decent incomes from their investments and often remain trapped in informal occupations after graduating from the programmes," (Kasamani, 2017).

[1] According to ILO (2012:2) youth funds relate to "financial resources that are allocated and reflected in national budgets by governments, either as grants or loans for young people to start new businesses or expand existing businesses".

Programmes handled by formal financial institutions such as the Youth Venture Capital Fund are reportedly underutilized. This is attributed to the strict requirements of Commercial banks such as the need for collateral and experience in business, which many youth fail to produce (Ahaibwe and Kasirye, 2015).

National Youth Funds are programmes with varied methods for supporting youth enterprises including skills building, revolving fund, no/low interest loans, collateral free loans, cost sharing, and guarantee schemes. It is not clear which packaging or combination of services is effective for the youth. According to Fiala (2014), evidence from a randomised controlled experiment in Uganda has attempted to provide answers on what novice entrepreneurs need. Its study suggests that young entrepreneurs who receive financial help coupled with training perform better than those that receive only the financial intervention.

Furthermore, some literature suggests a positive relationship between business assistance and sustainability of business among the young people (Schoof, 2006). The argument is that those ventures that receive business development services support in terms of mentoring, networks and advisory services are likely to grow their business over time. This line of argument is extended to suggest that supervised and in-kind grants or those that have a strict eligibility criteria like approval of business plan for business use are more likely to be successful than unconditional grants (Blattman et al, 2014).

While many of the youth funds have emerged as an antidote to the looming social unrest from the unemployed youth, few studies have analysed the extent to which they promote positive behaviours among the beneficiaries. Blattman and colleagues have investigated this in the Youth Opportunity Programme. They find that YOP had little to no effect on “measures of individual community integration, local and national collective action, antisocial behaviour, or violent protest … [and] little change in support for the government,” (Blattman et al, 2014:699).

Overall, while micro-finance support is seen as a key developmental tool for the youth and continues to grow in sub-Saharan Africa, there continues to be a need for rigorous impact evaluation and systematic reviews of the evidence to ascertain its efficacy. Available evidence is not focused on those programmes targeting the youth. According to a systematic review by van Rooyen et al (2012), micro-finance in sub-Saharan Africa has modest, but not uniform positive impact. Micro-finance studies from South Africa Kim et al (2007) found strong evidence that such intervention both have a positive impact on women’s empowerment and the reduction of intimate partner violence. Rankin et al (2015) found support for a number of educational activities, but there is clear need for further rigorous research on particular outcomes that are related to jobs and income-earning potential.

2. Background to the Impact Evaluation

Over the past decade, the Government of Uganda has made improvements in public sector performance measurement and financial management, while strengthening scrutiny and oversight of public funds. It has worked with independent investigators to conduct impact evaluations to ascertain whether government programmes are achieving their stated objectives and what improvements, if any, are needed to enhance performance. In order to achieve this, the government established a National Monitoring and Evaluation Strategy in 2004, followed by a national policy on monitoring and evaluation in 2013. This policy provides a clear framework for strengthening coverage, quality and utility of evaluations of public policies and investments. The Office of the Prime Minister (OPM) is mandated to coordinate and monitor the Government Evaluation Facility, the entity that conducts evaluations of public policies and major public investments. A national evaluation agenda with a rolling thematic focus is outlined and approved by the government every three years.

During the Government Annual Performance Review Cabinet Retreat of 2015, the President identified Youth Livelihood Programme as one of the key themes of national importance where rigorous evaluation is required for critical and better development programming. Against this backdrop, a process evaluation of YLP was commissioned in FY 2015/16 and carried out by a consortium of independent consultants from the University of California, Los Angeles and Makerere University. This consultancy was contracted by OPM in collaboration with the International initiative for Impact Evaluation (3ie) under the Uganda Policy Window financed by the Department for International Development (DFID). The process evaluation revealed that the programme largely operated as planned. All districts studied in Uganda had been able to form and fund Youth Interest Groups (YIGs), programme implementers understand the YLP guidelines and successfully trained youth in basic business principles and group dynamics. Appropriate membership in YIGs being formed was documented, including clear representation of females. Among the 29 YIGs in existence for at least six months and asked about earnings, 34% reported that earnings had improved their lives. Similarly, 30% of the groups were feeling empowered by the experience. Of 40 groups, 37 had plans to continue working and expanding their enterprises.

Following these promising findings, the process evaluation recommended that a study to investigate the outcomes of YLP should be undertaken using rigorous methodology. It suggested using the randomized methodology to investigate the economic status of youth receiving the loans versus those without. It was envisaged that such a study would document information about the impact of YLP on self-employment, incomes of the youth, and social changes such as decreasing substance abuse for men or reduction of domestic violence for women.

2.1 YLP – Programme Description

The Youth Livelihood Programme (YLP) is a Government of Uganda flagship five-year development programme targeting poor and unemployed youth aged 18 and 30 years through the provision of affordable start-up credit. Its initial planning period of five years ran from FY 2013/14 to 2017/18 with a total budget of UGX 265 billion. The responsibility for implementing YLP lies in the Ministry of Gender, Labour and Social Development (MGLSD). However, by design, YLP is a streamlined programme whose activities are integrated in Uganda's decentralised government structures (Miranda et al, 2016). The programme is fully financed from government's own internally generated resources.

Under YLP, support is given to youth aged 18 – 30 years in groups called Youth Interest Groups (YIGs) of 10 to 15 members. MGLSD (2014b: 13) defines YIGs as *"voluntary groups of individual youth that come together in pursuit of solutions to their common economic and wellbeing needs"*. The programme targets the following categories of youth: those who dropout from school and training institutions; youth living in slums, city streets, high risk and impoverished communities; youth who have not had the opportunity to attend formal education; single parent youth; youth with disability; youth Living with HIV/AIDS; youth who have completed secondary school or tertiary education (including university). Special consideration is accorded to the female youth with a mandatory requirement that all YIGs should constitute at least 30% female members. Since its inception in 2014, the youth projects funded are concentrated in three sectors namely; agriculture (35%), trade (29%) and service (20%) (MGLSD, 2018).

2.1.1 Beneficiary selection

The application process commences when youth organised in a group (YIG) express their interest for YLP support by filling Project Interest Forms (PIFs) that are distributed free of charge at sub-counties (or urban equivalents). The distribution of PIFs is the responsibility of the Sub-County Chief, Community Development Officer (CDO) and/or Assistant Community Development Officer (ACDO) or their equivalent in urban centres. Districts and lower Local Governments disseminate information about the availability of YLP funds via community meetings, media briefs, and radio and TV programmes among others (Miranda et al, 2016). A facilitator is sent by the sub-county to help groups generate an application with a viable enterprise. Due to overwhelming numbers of interested applicants, no clear criteria was followed and it was up to the judgement of the facilitator to consider the project viable.

However, to ensure transparency, the selection of the youth to benefit under YLP is done through community participatory mechanisms facilitated by the sub-county YLP selection committee. The committee is comprised of the Sub-County Chief as the Chairperson with other members including the Chairperson of the Sub-County Youth Council, CDO/ACDO, village or Local Council One Chairperson (LC I) and an eminent community member. Being members of the target community, the Chairperson of the

Youth Council and LC1 confirm that the selected youth are bona fide Ugandans who reside within the respective communities. In addition, this community-based targeting mechanism takes into account local knowledge on the socio-economic status of individual youth e.g. present income source, period out of employment, number of children, and any other support that the youth may have received under other existing programmes, etc. in the selection process to ensure that the most deserving are chosen.

Once YIGs are selected for funding, the Local Government is expected to build their capacity so as to manage their selected enterprises. The training is particularly central, given the fact that some of the groups are new with very little previous background of managing businesses or even working together. According to the process evaluation done in 2016, YIGs receive orientation on financial management, bookkeeping, group dynamics, and procurement through a standardized two-day training workshop.

2.1.2 Fund access by Youth Interest Groups (YIGs)

YIGs project funds are disbursed directly from the District Projects Fund Account to the individual YIGs project accounts managed by the Youth Project Management Committees (YPMCs). Successful YIGs can receive up to USD3,470[2]. Project proposals with such amounts are approved by the District Technical Planning Committees. However, proposals with higher figures can also be funded. Projects above USD3,470 but not exceeding USD6,940 are sent to the MGLSD headquarters for approval. Findings from the endline survey revealed that YLP beneficiaries received an average of USD2,583 (see Section 4). While the programme had an overall target of funding 19,080 projects between 2014 and 2018 as indicated in MGLSD (2014), by the end of 2018, about 16,169 projects had been funded (MGLSD, 2018).

2.1.3 Repayment and revolving mechanisms

Funded YIGs are expected to repay the money disbursed to them. As older groups pay back their YLP obligations, money is ploughed back into the programme to enable new youth groups to benefit (MGLSD, 2013). This revolving principle is an important pillar that underpins the continuity of the YLP. YIGs make repayment plans detailing how they will be paying back based on the projected maturity of enterprises. Repayment plans are submitted as part of the project proposals. Generally, YIGs are expected to pay back the funds in a period not exceeding three years as follows: loans are interest free in the first 12 months, while unpaid funds after one year attract a service fee of 5% per year. There is no requirement for physical assets/collateral; instead members of the YIGs co-guarantee each other (MGLSD, 2013). Therefore loan recovery depends on the internal pressure on every member to meet his/her obligations within the group.

[2] Exchange rate of 1 USD for UGX 3,600.

YLP (2013) details an elaborate process for recovering funds from defaulting groups. However, the reluctance of youth in the earlier years compelled programme implementers to adopt harsh mechanisms to send a warning to the youth that government is serious. Qualitative evidence indicates that in some areas youth who fail to pay have been taken to police, imprisoned while others are obliged to sell off their assets.

2.1.4 YLP development objective

The overall objective of the programme is to empower the youth in Uganda to harness their socio-economic potential and increase self-employment opportunities and income levels.

YLP Specific objectives

i) To provide youth with marketable vocational skills and tool kits for self-employment and job creation.
ii) To provide financial support to enable the youth to establish income generating activities.
iii) To provide the youth with entrepreneurship and life skills training as an integral part of their livelihoods.
iv) To provide youth with relevant knowledge and information for attitudinal change (positive mind-set change).

Findings of the process evaluation done in 2016 and qualitative data collected during follow-ups revealed that in most Local Governments YLP implementation put a lot of emphasis on objective two compared to the other three. For example, delivery on objectives three and four were bundled in a two-days training organised by all groups in the district (Miranda et al, 2016).

2.2 Policy Relevance of the Intervention

The Youth Livelihood Programme (YLP) is informed and premised on a number of relevant National, Regional and International legal and policy frameworks including: the 1995 Constitution of the Republic of Uganda. Article 32 of the Constitution states that, “the state shall take affirmative action in favour of groups marginalized on the basis of age and any other reason created for purposes of redressing imbalances, which exist against them.” In addition, YLP is responsive to Uganda’s Vision 2040 whose mission is to realise “a Transformed Uganda Society from a Peasant to a Modern and Prosperous country within 30 years.” At the time of its development, YLP was informed by the theme of the National Development Plan (2010/11-2014/15), “Growth, Employment and Social-Economic Transformation for Prosperity.” The latest National Development Plan (NDP II 2015/16 – 2019/20) acknowledges YLP, indicating that the Government initiated the programme as one of its interventions in response to the high unemployment rate and poverty among the youth. According to NDP II, YLP is one of the government’s strategies for ensuring inclusive growth for the youth population segment in the country.

The Programme is in line with the second Social Development Investment Plan (SDIP II - 2011/12 – 2015/16) of the MGLSD. Part of SDIP II aimed at promoting employment among marginalized groups as a means of achieving social transformation. YLP is also in line with the National Youth Policy that recognizes productive employment as a measure of ensuring effective participation of the youth in economic growth and development. In particular, the 2001 National Youth Policy (NYP) recommends the implementation of specific youth employment interventions. The National Resistance Movement (NRM) Manifesto 2016-2021 is another policy document that commits to the aspirations of the YLP. It indicates that YLP is a deliberate government strategy to enable the youth to create their own employment and also employ others through the provision of affordable start-up credit.

At the regional level, Uganda has endorsed the Livingstone Call to Action (2006), which obliges African states to put in place costed plans for the implementation of direct income support programmes especially to marginalized groups. Uganda as a member state of the United Nations (UN), African Union (AU), and the Commonwealth, is obliged to implement youth programmes as stipulated in the UN Actions on Youth, the African Youth Charter, and Commonwealth Action Plan for Youth. At the global level, the YLP is in line with the Sustainable Development Goals (SDGs). SDG eight commits Member States to *"promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all,"* and urges all governments to address the global challenge of youth unemployment. Uganda is also a signatory to the Universal Declaration of Human Rights, 1948, which guarantees everyone the right to social security in the event of unemployment or lack of livelihood in circumstances beyond his/her control.

2.3 Programme Theory of Change

YLP starts by acknowledging the dire situation that majority of the youth in Uganda find themselves. A lot of young people aged 18-30 years are unemployed. While many desire to work, few jobs are available. At the same time, the youth lack both the skills to create and run own businesses as well as access to start-up capital. Therefore, the YLP intervention seeks to address these challenges through the following:

- Provide low interest credit to enable the youth to create own employment.
- Deliver the fund in a group-approach for the youth to co-guarantee each other. This approach helps to advance credit not only to more youth but also to those that most financial institutions find unbankable for lack of collateral.
- Before funding is advanced, undertake preparatory activities to ensure that young people are organized in groups and have the requisite skills to start and run businesses.
- To guarantee the continuity of YLP, streamline the programme in existing Local Government structures thereby avoiding expenditures on extra staff.
- Once YIGs access funding, they should invest in profitable enterprises and begin their own businesses. To ensure that the enterprises are successful, an

effective monitoring and evaluation system should be operational, and the technical team provides technical support to YIGs, as well as implementers of the programme.

- When the enterprises are profitable, loans will be repaid in the period ranging between one to three years. The YLP is underpinned by the principle of a revolving fund. This means that once the YIGs repay their credit, there is a feedback loop into the funding available for the programme, replenishing the funding and continuing the cycle for the other youth to access the same.

The outputs of the programme include:

i) Youth mobilised to form YIGS
ii) YIGs equipped with entrepreneurial skills for self-employment
iii) YIGs funded to start income generating projects/businesses
iv) YIGs given support-supervision for effective implementation of their projects.

Once properly implemented, the expected outcomes of YLP include:

(i) Youth in YIGs operating own businesses and investing in productive ventures.
(ii) Increase in the earnings/incomes of beneficiary youth.
(iii) Businesses of beneficiary youth create jobs in the community.
(iv) Beneficiary youth use exposure from the programme as a springboard for creating relationships with formal financial institutions.
(v) Arising from productive use of their time, beneficiary youth adopt positive behaviours and becoming responsible citizens (e.g. reduce on smoking, alcohol consumption, avoid gangs and violence)
(vi) Overall, beneficiary youth empowered to improve their wellbeing (with investments in feeding, education and health).

Several assumptions underlie this Theory of Change. First is that funds will be available and released in a timely manner. The Local Governments have the staff, space and capacity to carry out this programme. Local politicians/leaders are expected to appropriately mobilize youth to take part in these programmes. Uganda remains peaceful so that youth are available (not recruited into war activities) and enterprises can start and run successfully without interruption. The model assumes that a market for the goods the youth develop within their enterprises exists. Finally, the model assumes that general facilities, like roads and water, are available to support the youth and their enterprises and that youth issues continue being top priority of government.

However, evidence from the process evaluation and rounds of qualitative studies undertaken during the course of the evaluation shows that many of the assumptions are not met. For example, programme funding is often delayed; many Local Governments lack personnel to support YIGs in their preferred enterprises; in some places politicians misinform beneficiaries about the programme (e.g. in relation to

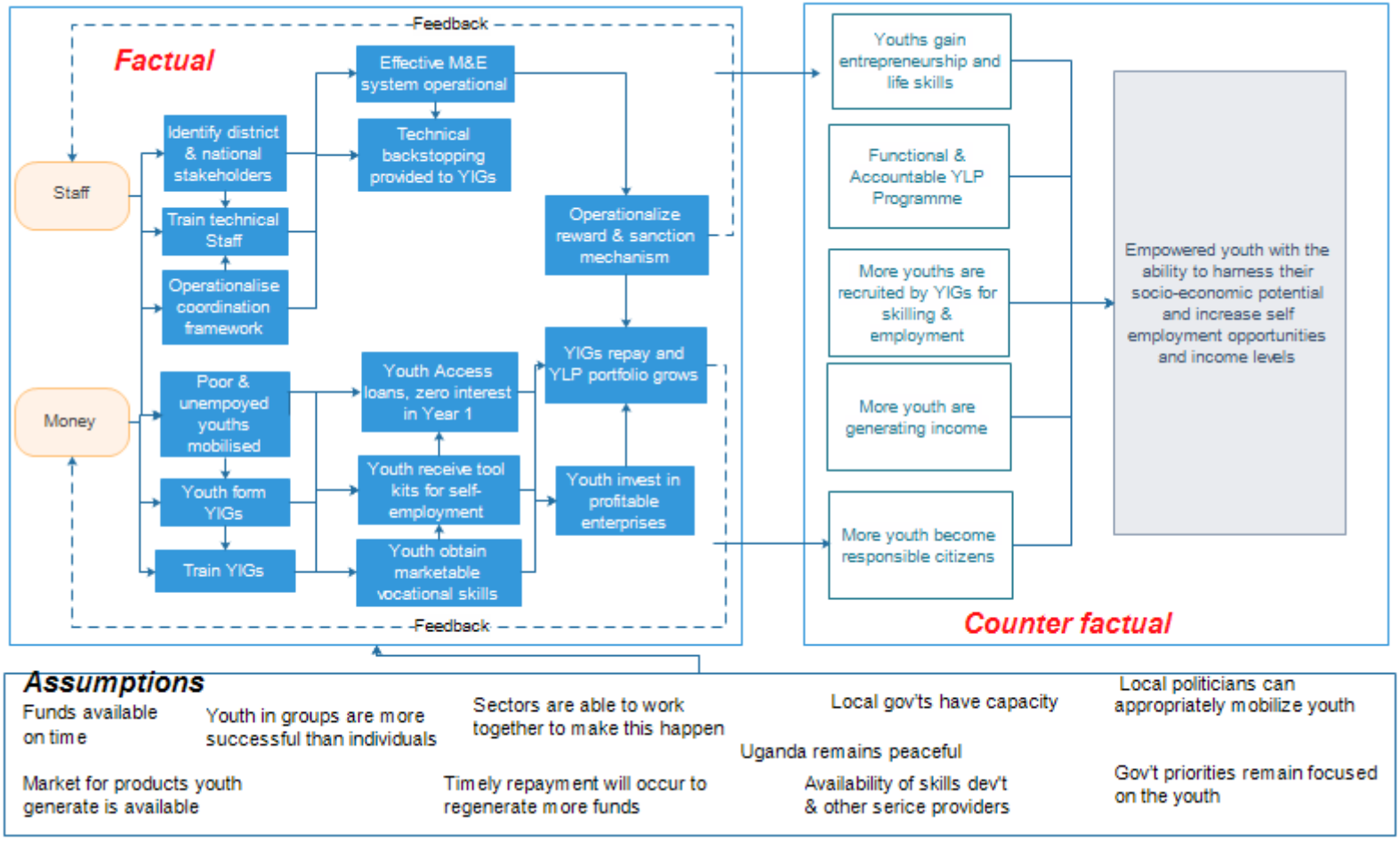
paying back the funds); goods produced by YIGs are often affected by price fluctuations. That said, Uganda has remained largely peaceful and the government is committed to improving the environment for doing business and funding the programme.

2.6 Evaluation Questions

To ascertain whether or not YLP improves the lives of the targeted young women and men compared to those not benefiting from it, this evaluation set out to address the following specific questions:

1. What is the influence of YLP on the incomes of the targeted youth of Uganda?
2. Does YLP contribute to employment among the targeted youth of Uganda?
3. What is the impact of the programme on social/behavioural outcomes of the beneficiary youth (drinking, smoking, and violence etc.)?

Figure 1: Youth Livelihood Programme Theory of Change



3. Impact Evaluation Design

3.1 Experimental Design

To establish a causal relationship between the programme and changes in outcomes, this study uses a Randomized Comparison Trial (RCT). The intervention and comparison groups were obtained from groups applying for micro-finance loans from Government of Uganda Youth Livelihood Programme who have applications that qualify for funding. Random assignment to intervention or comparison group was done at MGLSD's YLP coordinating centre in Kampala with the Technical Support Team (TST). To develop experimental intervention and comparison groups, the team looked at a pool of applicants per district and selected loan now versus comparison group of loan received later using computer generated random numbers (also see 3.3).

3.2 Externalities

Experimental interventions may generate spill over effects whenever untreated individuals are affected by the treatment programme. In a village, for instance, the introduction of more than a few newly trained tailors or construction workers may lower the price of these services, and thus adversely impact the well-being of other tailors in the village. On the other hand, if production increases in the village due to the new influx of skills, it could create a multiplier effect that benefits non-recipients (Autant-Bernard and LeSage, 2011; Blattman et al., 2013)[3,4].

The study is cognizant of spill over and recognizes the difficulty of its quantification from the attempts of Blattman et al (2013). However, every attempt was made to ensure that selected YIGs within a district are not from the same village to minimize possibilities of spill overs.

3.3 Sample Size Determination

The sample size is calculated taking into consideration of the following assumptions:

1. Required: The numbers of youth, n_1 and n_2, required in Groups 1 and 2 to detect a percentage change Δ (effect size) in mean incomes with significance level α and power $1-\beta$.
2. Randomized trial to assess a difference in youth livelihoods as a result of a Youth Livelihood Programme
3. Primary outcome is change in mean income. That is to say the study will compare two means, namely mean income for Comparison and mean income for Intervention.

[3] Autant-Bernard, C., & LeSage, J. P. (2011). Quantifying knowledge spillovers using spatial econometric models. *Journal of regional Science*, *51*(3), 471-496.

[4] Blattman, C., Fiala, N., & Martinez, S. (2013). Generating skilled self-employment in developing countries: Experimental evidence from Uganda. *The Quarterly Journal of Economics*, *129*(2), 697-752.

4. Income in intervention group changes by 3%, 6% and 14% by end of years 1, 2, and 3 respectively (YLP M&E strategy). As such, effect size at the end of year 3 is 14%.
5. Expected range of change in average household income in UGX is from $\mu_0 = 303{,}700$ to $\mu_1 =$ 346,218.
6. Assuming standard deviations in the two populations are equal, namely $\sigma_1 = \sigma_2 =$ UGX. 256,350
7. Level of significance 95%
8. Statistical power 80%
9. Sample size computed for a two sided t-test (type of test)
10. Consider a drop-out rate of 10%
11. Balance design, $n_1 = n_2$

Therefore, the sample size n for each group is given by:

$$n = \frac{\left(Z_{\alpha/2} + Z_{\beta}\right)^2 \times \left(\sigma_1^2 + \sigma_2^2\right)}{\left(\mu_1 - \mu_0\right)^2}$$

where $Z_{\alpha/2}$: This depends on level of significance, for 5% this is 1.96

Z_{β}: This depends on power, for 80% this is 0.84.

Then $$n = \frac{\left(1.96 + 0.84\right)^2 \times 2 \times 256350^2}{\left(346218 - 300700\right)^2} = 569.99 \approx 570.$$

To reach the required level of statistical power under cluster randomization the sample size per group was inflated by the design effect, $DE = 1 + \rho(m-1)$. Assuming an intracluster correlation coefficient ρ = 0.15 and cluster size $m = 5$, we have:

$$n = 570\left[1 + 0.15(5-1)\right] = 911.98 \approx 912$$

as the minimum sample size required per arm. Taking 10% attrition rate into account results into 1,003 youth or 201 clusters per arm.

3.3 Randomisation and Sample Identification Strategy

Because there are many more applications accepted for funding than can be funded in a year, the evaluation team worked with MGLSD to randomly assign YIGs into the *treatment* arm that receive funding immediately or the *comparison arm* that will receive funding a year later. Sample selection followed a stratified three-stage cluster procedure. To ensure representativeness across the different sub-regions in Uganda, stratification was first by the 15 sub-regions with at least one district picked per sub-region and Kampala, being the capital city, was chosen by default to make 16 districts in total. In the second stage, 25 YIGs were selected from 14 districts and 26 YIGs from

2 districts. Lastly, within each group, we randomly chose five (5) participants to follow over the study period.

3.3.1 Selection procedure

The study targeted 402 YIGs with 201 groups being *treatment* and 201 as comparison. Each YIG had between 10 and 15 members. But within each YIG, five (5) members were randomly selected at baseline and were to be followed over the study period. By and large, YIGs have either females only or are composed of both males and females. There wasn't a group of males only. Slight oversampling of females was made to ensure that the sample size is adequate to study gender effects of the programme.

How the 5 youth from a youth group of only females were selected

Fifteen rolled[5] pieces of paper bearing concealed numbers 1-15 were used as a lottery device. Suppose a youth group of 15 female members turned up on the survey day, then the enumerator assigned them numbers 1-15. To select 5 members to be interviewed, the enumerator shuffled the 15 rolled pieces of paper and then selected 5 pieces without replacement. The numbers on the selected 5 pieces of paper were read out to identify the 5 selected youth. The same procedure would be applied if 6 – 14 females showed up. In the special cases where less than or equal to 5 females turned up then all were interviewed.

How the 5 youth from a youth group composed of both females and males were selected

Where we had a youth group of both females and males, selection was done separately for females and males. The basic principle here was that at least 2 females must be randomly selected as part of the 5 youth to be interviewed. In particular, where we had less than a half of the group members as females we selected 2 females and 3 males. Also, each time we had half or more than a half of the group members as females, we selected 3 females as part of 5 and then select 2 males.

3.4 Validity of the Sample

Balance of tests of the study variables are presented in Table 1. Since YIGs were sampled at the district level, regression analyses are appropriate for testing the balance between treatment and control samples. The balance test then is a regression on the desired variable with treatment and district dummies and the standard errors clustered at the YIG level.

Table 1 presents the descriptive statistics about individual and household level pre-intervention characteristics of the sample, disaggregated by treatment arm. Column (5) shows the p-values of the balance test on the above-mentioned baseline covariates. According to Table 1, at baseline, individual and household level characteristics of the treatment and control groups were well balanced with only one difference, ownership of land, being significant at the 95% level. Based on their

[5] Rolled to conceal the identity of the numbers.

theoretical importance, baseline values of such variables have been included in the final analysis as covariates to help improve effect size estimation. However, we also show results without the covariates.

Table 1: Balance test for sample individual and household characteristics at baseline

Individual and Household covariates at baseline level	(1) Mean Control	(2) Mean Treated	(3) Diff.	(4) t	(5) Pr(T>t)
Age of youth	25.198	25.139	-0.059	0.31	0.7536
Rural residence	0.776	0.801	0.025	0.70	0.4830
Female dummy	0.420	0.402	-0.018	0.81	0.4158
Youth being head of household	0.423	0.435	0.012	0.48	0.6340
Number of HH members	5.330	5.413	0.083	0.47	0.6380
Number of dependent children	2.061	2.165	0.103	1.01	0.3151
Highest Grade of education	8.808	8.688	-0.120	0.48	0.6287
Number of rooms for sleeping	2.699	2.669	-0.031	0.30	0.7665
Distance to the nearest water source	2.065	2.131	0.067	1.58	0.1159
HH owns a plot of land	0.800	0.747	-0.053	2.17	0.0309**
Youth is married	0.644	0.628	-0.016	0.56	0.5744
Number of biological children	1.570	1.523	-0.048	0.55	0.5800
Number of substantial meals per day	2.478	2.426	-0.053	1.37	0.1710

*** p<0.01; ** p<0.05; * p<0.1

According to Table 1, the youth were on average 25 years old and majority (79%) of them resided in rural areas. Most (43%) youth were heads of households that comprised of an average of 5.4 members, 2.1 dependent children below 15 years, and 1.5 biological children. The households were on average having 2.5 substantial meals per day, and 2.7 rooms for sleeping. Almost two thirds (64%) of the youth were married or living with a partner. More than three quarters (77%) of the households owned a plot of land. Households are close enough to the water sources with most being generally less than 2 km.

3.4.1 Internal validity

The evaluation team included in the questionnaire an item that could help to check on whether respondents, during the evaluation phase benefited from similar programmes, and specifically whether they ever received transfers: cash, business assets, tools and materials that they were not expected to repay. These transfers could have been from: government (non-YLP); foreign government; non-governmental organizations; Churches; or other sources. A look into the evaluation results shows that, only 2.8% of the endline respondents (2.6% of control and 2.9% of treatment) received such transfers. These proportions are small, relatively similar (for the 2 treatment arms) and therefore signal an internally valid sample.

The evaluation team is cognisant of the Hawthorne effects – which relates to the tendency of respondents to change their behaviours simply because they are being studied; and the John Henry effects – which relates to the tendency of respondents in

the control group to take the experimental situation as a challenge and exert more effort than they otherwise would. To help minimise these effects, research assistants before beginning any interview fully explained to the respondents the purpose of the study and also emphasised the fact that participation in the survey was voluntary and would not affect the youth's chances of getting funding from YLP. Furthermore, respondents were not informed of which arm (control or treatment) they belonged to, but rather as participants who would represent the views of other youth. This also helped to control for John Henry effects. Also noted is that every attempt was made to ensure that selected YIGs within a district are not from the same village to minimize these effects.

3.5 Data Collection Methods and Tools

Both quantitative and qualitative methods were used to collect data. Quantitative data was obtained using individual interviews with the youth regarding their socio-economic circumstances before the YLP intervention. A comprehensive questionnaire was developed basing on tools recently used in the impact evaluation of the Youth Opportunities Programme (YOP) in northern Uganda (Blattman[6] et al, 2014) and the Uganda national labour force and child activities survey (UBOS, 2013). The resultant tool was subjected to a series of revisions following feedback from different stakeholders as well as on the basis of a pre-test exercise. Quantitative baseline data was collected by properly trained research assistants using Personal Digital Assistants (PDAs) or mobile devices. At endline, 74 key informant interviews with the local stakeholders of the YLP – Community Development Officers, district officials, and the local leaders as well as 60 Focus Group Discussions (FGDs) with beneficiaries were conducted to provide qualitative information on outcomes such as group structure, cohesion, experience of working together, expanding/training others, experiences with YLP officials, and loan disbursement and debt collection processes.

3.6 Ethical Considerations

To ensure that this evaluation was compliant to principles of good research, we obtained ethical approval from Uganda National Council for Science and Technology accredited institution called The AIDS Support Organisation (TASO). All our field staff (Research Assistants [RAs]) were given thorough methodological and ethics training prior to data collection. There were clear guidelines followed by Research Assistants (RAs) to ensure that study participants obtained sufficient information to enable them make informed decisions regarding their involvement in the study. RAs also highlighted the key elements of the consent form and allowed participants to ask questions. Verbal informed consent was obtained from all study participants using their local language. Participants were also informed of their unquestionable right to terminate interviews or participation in activities.

[6] Blattman, C., Fiala, N., and Martinez, S. (2014). Northern Uganda Social Action Fund - Youth Opportunities Program", doi:10.7910/DVN/27898

In conducting the fieldwork, we aimed to minimize the potential costs to participants, by making the demands upon them (in terms of time and inconvenience) as minimal as possible while eliciting the information needed for the study. We compensated study participants with UGX 10,000 to cater for their transport and meal. Data collected in the course of the evaluation was anonymized; quantitative data was collected using electronic gadgets so the Research Assistants could not refer back to the submitted data. All data was transmitted to a secure server at evaluation secretariat in UYDEL.

4. Socio-Demographics and Descriptive Statistics

At baseline, 1,875 youth (41% female) aged 18-30 years participated in the survey. However, at endline, some youth were unreachable and therefore led to a sample of 1,556 youth (39% female). It is important to note from the outset, and as discussed in section 8, this attrition did not significantly alter the composition of the treatment and control groups.

Table 2: Respondent's characteristics at Baseline and Endline

	Endline		
	C-group	T-group	**All**
	N= 697	**N= 859**	**N= 1556**
Gender/Sex of the child			
Male	58.5%	63.3%	61.2%
Female	41.5%	36.7%	38.8%
Average age (yrs) (mean ± SD)	26.4	26.3	26.3
Average rooms / huts are there for sleeping	2.59	2.71	2.66
Area of residence (Rural)	81.64%	79.74%	80.59%
Nationality (Ugandan)	100.00%	100.00%	100.00%

4.1 Funding Status

This sub-section answers the question of what is the proportion of youth that was treated in the sample? Out of the 1,556 youth surveyed at endline, 66.7% (41.6% control; 87.1% treatment) of them affirmed their groups to have received the YLP funding (see Table 3).

Table 3: Funding status as reported by respondents

Receipt of funding	Control	Treatment	Total
Yes	290(41.61)	748(87.08)	1038(66.71)
No	407(58.39)	111(12.92)	518(33.29)
Total	**697(44.79)**	**859(55.21)**	**1,556(100.00)**
Average receipts from YLP (UGX)	9,250,751	9,306,361	9,290,894
Average amount applied for (UGX)	10,626,517	11,467,449	11,226,787
Year when funding was received			

2017	53(5.5)	479(50)	532(55.5)
2018	212(22.1)	214(22.3)	426(44.5)

According to Table 3, on average, groups received UGX 9,200,000 having applied for UGX 11,200,000. Around 55% of those respondents who received YLP funding report that they got the money during 2017 and 45 per cent got it during the course of 2018.

Having received YLP funding, 68.3% (181 control; 528 treatment) of the 1,038 youth stated themselves or their group to have received technical support from the Sub-county/Municipal authorities. The support provided is summarised in Table 4.

Table 4: Technical Support from YLP officials

Support provided	**N (%)**
Advised in reviewing and adjusting the group's budget	604(85.19)
Provided business advice and/or linked the group with sector specialists	585(82.51)
Advised on and assisted with book keeping and accounting	634(89.42)
Advised on and assisted with procurement of needed tools and assets	588(82.93)
Assisted with group monthly and quarterly reports to sub-county	590(83.22)
Assisted with conflict resolution and monitoring of group dynamics	606(85.47)
Advised on and monitored profit sharing within the group	565(79.69)
Advised on operations and maintenance of tools and assets	586(82.65)
Monitored and supervised group performance	627(88.43)
Total	**709(68.30)**

On a scale of 1 (*very poor*) to 10 (*excellent*), an average performance score of 7.6 was realized by the 709 youth at endline who affirmed to have received technical support from the Sub-county/Municipal authorities.

4.2 Management of Contamination

Given the fact that the MGLSD inadvertently released funds to the respondents randomised for comparison/control, use of the Intent-to-Treat (ITT) approach will apply in the final analysis. The decision for this analysis method was based on the following facts:

- That a proportion (40%) of the control groups received the treatment.
- The treatment for control groups was given at varied points during the course of the year (i.e. not all groups received the treatment at the same time). When respondents were asked to indicate when the funding was received, 34.2% and 27.4% of the endline participants declared their groups to have received the funds in 2017 and 2018, respectively.
- That even 12.9% of the treatment/intervention respondents did not receive the treatment.
- The high mobility of young people leading to some selected individuals to drop-off from the programme, thereby leaving high rates of incomplete endline data.

According to Ten Have, et al (2008:772) "Intent-to-treat analysis aims to estimate the effect of treatment *as offered*, or *as assigned*" (original emphasis). ITT stipulates that all participants who are randomized must be included in the statistical analysis and

analyzed according to the treatment group to which they were randomly assigned, regardless of what treatment, if any, they actually received (Sainani, 2010: 209). The survey was cognisant of the fact that dropping some of the youth from either arm of the study would disturb the prognostic balance afforded by randomization (Gupta, 2011). While the ITT analysis is biased towards zero (null hypothesis) so that the efficacy of the treatment is being under-estimated, this is also its major strength. If the findings reject the null hypothesis based on ITT analysis, one can feel confident that the treatment effect of YLP is larger in participants that actually take the treatment.

Therefore, all youth seen at baseline were included in the analysis even if they never received or never started the treatment, discontinued it, or didn't implement as planned (adhered inadequately).

In addition to ITT analysis, however, the study also calculates the treatment-on-the-treated (ToT). ToT is described by Ten Have, et al (2008:772) as "estimate[ing] the effect of treatment *as delivered or as received* (original emphasis). In the current study, ToT analysis considers youth in the control group who received the treatment as belonging to the intervention group and those in the intervention who didn't receive the treatment as control. The aim here was to estimate the efficacy of the YLP treatment on those who actually received it.

5. Results and Discussion

For all the outcomes of interest, the analysis proceeds as follows:

(i) We display both the intent-to-treat (ITT) and treatment-on-treated (ToT) estimates of the impact of the programme without covariates (see Pane 1 and Panel 3). Each ITT is calculated through a difference in differences approach of the dependent variables on: treated (treatment vs control) and period (baseline vs endline). Furthermore, each ToT was estimated using instrumental variable (IV) methods whereby the IV estimator is produced using the two-stage least squares (2sls).

(ii) We display (ITT) with covariates (Panel 2). The baseline covariates include: age of youth; rural residence; female dummy; youth being head of household; number of HH members; number of dependent children; highest grade of education; number of rooms for sleeping; distance to the nearest water source; HH owns a plot of land; youth is married; number of biological children; number of substantial meals per day.

(iii) Cognisant of the differential timing of the treatment our regression model controls this via Panel 4. The covariate in Panel 4 is the length of time in possession of the funding (*categorical variable*) where 0 was assigned to endline youth who didn't receive the funding; 1 to endline youth who declared their groups to have received the funding in 2017; while 2 was assigned to endline youth who declared their groups to have received the funding in 2018.

(iv) We estimate the gender impact of the programme using an interaction term approach. A regression that considers the interaction of treatment and female

dummies was used to help the study ascertain whether, for each of the outcome variables, the difference between males and females was statistically significant. This was conducted on only the endline sample, without considering any covariates. For purposes of having tidy tables, gender impacts are given as appendices.

5.1 The Influence of YLP on the Incomes of Targeted Youth

The YLP impact evaluation analysis plan stipulates two primary outcomes of interest namely: (i) the change in beneficiaries' earnings and (ii) change in durable assets, as caused by YLP.

5.1.1 YLP one year impact on income

YLP has so far achieved moderate changes among key economic outcomes for the studied programme beneficiaries. Table 5 displays the intent-to-treat and treatment-on-treated estimates of the impact of the programme on the total earnings and durable assets. Each ITT is calculated through a difference in differences approach of the dependent variables (total weekly cash as stated by the youth; sum of weekly cash earnings across the 35 occupations; number of assets owned; composite index of durable assets) on: treated (treatment vs control), period (baseline vs endline). Furthermore, each ToT was estimated using instrumental variable (IV) methods whereby the IV estimator is produced using the two-stage least squares (2sls). The question: *"Has your group received funding from YLP?"* constituted the treatment receipt variable in the 2sls IV analysis, and the ToT analysis was restricted to only the endline sample. Note that, cash earnings were top-censored at the 99th percentile so as to contain outliers.

Table 5: Intent-to-treat and treatment-on-treated estimates of programme impact on total earnings and durable assets

	(1)	(2)	(3)	(4)
	Total weekly cash as stated by the youth	Sum of weekly cash earnings across the 35 occupations	Number of assets owned	Composite index of durable assets
Panel 1: ITT without covariates				
Full sample ITT	-7709.1	-5382.6	0.455	0.0895
P-value	(0.283)	(0.556)	(0.238)	(0.179)
Control Mean (T0)	63507.7	70199.0	14.73	0.124
Treatment Mean (T0)	66150.9	66001.0	14.27	0.0530
Panel 2: ITT with covariates				
Full sample ITT	-10472.5	-7997.6	0.180	0.0344
P-value	(0.137)	(0.380)	(0.630)	(0.556)
Observations	2991	3393	3431	3431
Adj. R-squared	0.060	0.044	0.194	0.187
Panel 3: ToT without covariates				

Endline sample ToT	-11,458	-21,362	-0.00640	0.0412
Standard Errors	(15,265)	(18,564)	(0.845)	(0.103)
Panel 4: ToT with covariate				
Endline sample ToT	-86,657	-137,247*	-2.417	-0.783*
Standard Errors	(63,949)	(82,018)	(3.717)	(0.429)
Observations	1,417	1,529	1,556	1,556

Notes: Columns (1) to (4) report the intent-to-treat and treatment-on-treated estimates of programme impact. Standard errors are clustered at group level. The mean level of the dependent variable in the control and treatment groups at baseline is also reported. The ITT is based on the baseline and endline samples while the ToT is based on only the endline sample. The baseline covariates in Panel 2 include: age of youth; rural residence; female dummy; youth being head of household; number of HH members; number of dependent children; highest grade of education; number of rooms for sleeping; distance to the nearest water source; HH owns a plot of land; youth is married; number of biological children; number of substantial meals per day. The covariate in Panel 4 is the length of time in possession of the funding (*categorical variable*) where 0 was assigned to endline youth who didn't receive the funding; 1 to endline youth who declared their groups to have received the funding in 2017; while 2 was assigned to endline youth who declared their groups to have received the funding in 2018. The cash earnings in (1) and (2) were top-censored at the 99th percentile to contain outliers. *** p<0.01, ** p<0.05, * p<0.1

The results in Table 5 show that, after one year the programme had not yet significantly increased youth weekly cash earnings as expected, either as reported by the youth themselves or as a sum of earnings across the 35 occupations. The cash earnings of the treatment youth decreased as compared to the control, though the decrease is not statistically significant (ATEs= UGX -10,473 and UGX -7,998, for the 2 scales of incomes). At endline, the treatment and control youth earned (across the 35 occupations) on average UGX 77,552 and UGX 87,133, respectively. The females and males earnings also decreased (see Appendix A).

Having controlled for the length of time in possession of the funding (Panel 4), the programme did not significantly change the outcomes (total weekly cash as stated by the youth; sum of weekly cash earnings across the 35 occupations; number of assets owned; composite index of durable assets) at 5% level of significance, among a subset of youth who actually received the funding. The effects of the outcomes: sum of weekly cash earnings across the 35 occupations and composite index of durable assets, are negative and only significant at 10% level.

Explaining why incomes in the control group appeared to grow faster than treatment group is neither simple nor straightforward. One group line of argument could be that the youth did not witness a reduction in income. Instead the programme could have created pervasive incentives in which the beneficiaries underreport their earnings to the research team with the view of obtaining sympathy from the programme implementers when handling repayment. According to Plan Peru (2011:14) such a bias "typically affects income reporting more than expenditure reporting". As seen in section 5.2, this line of argument seems to have traction given the evidence showing increased expenditure on health and education for the treatment group. However, the risk of over- or under-reporting was minimal for this study for two main reasons: The

evaluation and implementation teams were separate. Secondly, the evaluation team clearly stated to the respondents that it was not linked to any government programme and that the information gathered was for research purposes only. Indeed, our analysis did not find evidence to suggest systematic over- or under-reporting (see section 3.4.1).

Therefore, other alternative explanations were explored. Qualitative information from focus group discussions (FGDs) with YLP beneficiaries provided hints on why incomes growth was slow. Several groups stated that the gestation period for their projects was long and therefore required more time before income could be realised. YIGs that identified this factor were those involved in agro-based projects such as bull fattening and poultry. Excerpts from FGDs captured these sentiments:

> *“Our group is dealing in piggery which takes long to mature coupled with many challenges and inputs required… Our project needs patience and commitment…," (FGD Piggery group, Kabalore).*

> *"We bought the cows when they were small [young] but we have to keep them till when they grow big… What shows that we are succeeding is that our animals are healthy and they are growing very well... though they are young, we just need time and then we are sure of profits" (FGD with cattle trading group, Ngora).*

District and national-level key informants also fronted various reasons to explain why youth in the treatment arm might have witnessed low-income growth during the first year of implementation. Majority of the key informants opined that some groups mismanaged the resources given to them. That upon receiving the money on their group accounts, some youth chose to share it among themselves with members deciding how to privately invest thereby diverting from the group goals. This line of argument was captured well by one of the key informants from Apac district:

> *“One of the key factors is deviation from the original plans. Some groups got money and shared it among themselves to do individual business. In most cases it is not easy to do individual businesses which can earn them enough money to even repay the loan…” (District Official, Apac).*

In the same spirit, other KIs reasoned that some groups were let down by their own leadership:

> *“You find that group leaders after receiving the money form a clique of a few members and use the money for their own endeavours against the majority members of the group and earlier proposed group strategies during application for YLP funding. Sometimes they can invest it in the original project but still exclude other group members from knowing about their affairs, earnings, expenditures and other financial whereabouts of the group enterprise,” (District Official, Bundibugyo).*

Another KI from Apac reiterated the same point:

> *"We have witnessed situations where the chairpersons with few individuals decided to deny other group members vital information and decided to do the business alone and later on the business did not do well," (District Official, Apac).*

However, other key informants stated that the groups could have been misled by political leaders:

> *"Some of the political leaders instead of encouraging those groups to use the money properly, they instead take some of their money promising to defend them during the repayment period" (District Official Kamuli).*

Like the case was during the process evaluation in 2016, key informants reported that some youth thought that YLP is a political programme

> *"Youth in Kampala thought it was a hand shake from the President," (KCCA, official).*

It was also reported that some of the groups, especially those engaged in agro-based businesses, suffered losses. Their businesses depend on good weather, are vulnerable to natural calamities like prolonged dry spells, pests and diseases and affected by price fluctuations particularly in a liberalized economy. Indeed, in the FY 2017/18, Ugandan farmers had a bumper harvest for grains and beans. This pushed the prices to a record low.

5.1.2 YLP one-year impact on assets

Table 5 (columns 3 & 4) measures the influence of YLP on the assets of studied beneficiaries. To make use of the numerous asset data, a principal components method was used to construct an asset index. Each variable is first normalized by its mean and standard deviation, and then, for the first principal component, a linear combination of all the variables is found that maximizes the variance. This procedure then produces an index of assets with zero mean that is very robust to the specification of what assets are included.

This study finds that YLP impact on assets is positive but not yet statistically significant. After one year of the programme, asset index in the treatment group slightly increased (ATE= 0.034) as compared to the control group. However, while the asset index for males increased (ATE= 0.062), that of females decreased (ATE= -0.005) relative to the control group.

Qualitative information from FGDs with YLP beneficiaries illustrates how the project has impacted on the assets base of the beneficiaries.

"We started our project with UGX 5 million but now we have capital of UGX 23 million so this shows that we are progressing… we have used part of the money to start our own sugarcane plantation, I hope this plantation is going to give us an extra source of income," (FGD Produce buying and selling, Kamuli).

"As a group we have bought so far two plots of land in the trading centre and we hope that when we get capital we shall start to construct a vocational institute that will help to skill a number of youth that are unemployed in this area," (FGD Metal fabrication group, Kamuli).

Researchers also asked the youth to estimate the value of tools they own in their businesses. According to Table 6, the youth in the treatment arm reported that the value of tools owned increased relative to those in the control arm. Male respondents in the treatment group reported a higher value for the tools relative to their counterparts in the control arm compared to female beneficiaries (see Appendix L). While the all differences between the treatment and control group are positive, they are not statistically significant except for Panel 3 – among a subset of youth who actually received the funding (see Table 6).

Table 6 displays the intent-to-treat and treatment-on-treated estimates of the impact of the programme on cash value of all the tools owned. Each ITT is calculated through a difference in differences approach of the dependent variables (cash value of all the tools owned; cash value of all the tools given for free by Government or NGO) on: treated (treatment vs control), period (baseline vs endline). Furthermore, each ToT was estimated using instrumental variable (IV) methods whereby the IV estimator is produced using the two-stage least squares (2sls). The question: *"Has your group received funding from YLP?"* constituted the treatment receipt variable in the 2sls IV analysis, and the ToT analysis was restricted to only the endline sample. Note that, all the cash values were top-censored at the 99th percentile so as to contain the outliers.

Table 6: Approximate cash value of all the tools owned

	(1)	(2)
	Cash value of all the tools owned	Cash value of all the tools given for free by Gov't or NGO
Panel 1: ITT without covariates		
Full sample ITT	270,344.7	-32,886.4
P-value	(0.174)	(0.963)
Control Mean (T0)	989,672.1	987,850
Treatment Mean (T0)	1,171,210.3	2,310,556.0
Panel 2: ITT with covariates		
Full sample ITT	173,400.0	68,006.0
P-value	(0.362)	(0.925)
Observations	2139	205
Adj. R-squared	0.070	0.189
Panel 3: ToT without covariates		
Endline sample ToT	973,200***	7,542,000
Standard Errors	(357,439)	-4,829,000
Panel 4: ToT with covariate		

Endline sample ToT	2,075,000	13,890,000
Standard Errors	-1,836,000	-9,273,000
Observations	953	89

Notes: Columns (1) to (2) report the intent-to-treat and treatment-on-treated estimates of programme impact. Standard errors are clustered at group level. The mean level of the dependent variable in the control and treatment groups at baseline is also reported. The ITT is based on the baseline and endline samples while the ToT is based on only the endline sample. The baseline covariates in Panel 2 include: age of youth; rural residence; female dummy; youth being head of household; number of HH members; number of dependent children; highest grade of education; number of rooms for sleeping; distance to the nearest water source; HH owns a plot of land; youth is married; number of biological children; number of substantial meals per day. All the cash values were top-censored at the 99th percentile to contain outliers. The covariate in Panel 4 is the length of time in possession of the funding (*categorical variable*) where 0 was assigned to endline youth who didn't receive the funding; 1 to endline youth who declared their groups to have received the funding in 2017; while 2 was assigned to endline youth who declared their groups to have received the funding in 2018. *** p<0.01, ** p<0.05, * p<0.1

5.2 Programme Impact on Education and Health Expenditures

Cash transfer programmes are known for boosting the consumption capacity of their recipients [7] . Similarly, literature on micro-finance programmes has found that beneficiaries tend to increase their investment/expenditure on education and health for themselves, immediate family members and perhaps other non-family members (Kabeer, 2005). In the sub-sections below, the study explored whether YLP had similar outcomes.

5.2.1 Impact on education expenditures

Table 7 displays the intent-to-treat estimates of the impact of the programme on educational expenditures. Each ITT is calculated through a difference in differences approach of the dependent variables (educational expenses for children and family members; educational expenses for non-family members; own educational expenses) on: treated (treatment vs control), period (baseline vs endline). Furthermore, each ToT was estimated using instrumental variable (IV) methods whereby the IV estimator is produced using the two-stage least squares (2sls). The question: *"Has your group received funding from YLP?"* constituted the treatment receipt variable in the 2sls IV analysis, and the ToT analysis was restricted to only the endline sample. Note that, all the educational expenses were top-censored at the 99th percentile so as to contain outliers.

Table 7: Intent-to-treat and treatment-on-treated estimates of programme impact on educational expenditures

	(1)	(2)	(3)
	Educational	Educational	Own

[7] BUKULUKI, P. & WATSON, C. 2012. Transforming Cash Transfers: Beneficiary and community perspectives on the Senior Citizen Grant (SCG) in Uganda. London: Overseas Development Institute (ODI).

	expenses for children and family members	expenses for non-family members	educational expenses
Panel 1: ITT without covariates			
Full sample ITT	47892.9	-74461.3	302088.7
P-value	(0.058)	(0.439)	(0.264)
Control Mean (T0)	187230.3	221937.5	588575.8
Treatment Mean (T0)	179709.3	401152.1	524446.4
Panel 2: ITT with covariates			
Full sample ITT	41432.5	-83072.6	381177.9
P-value	(0.072)	(0.391)	(0.102)
Observations	3389	293	198
Adj. R-squared	0.189	0.078	0.161
Panel 3: ToT without covariates			
Endline sample ToT	89,115*	238,935	585,872
Standard Errors	(49,353)	(160,653)	(588,410)
Panel 4: ToT with covariate			
Endline sample ToT	-142,616	1,075,000	4,581,000
Standard Errors	(186,861)	-1,192,000	-4,943,000
Observations	1,530	142	76

Notes: Columns (1) to (3) report the intent-to-treat and treatment-on-treated estimates of programme impact. Standard errors are clustered at group level. The mean level of the dependent variable in the control and treatment groups at baseline is also reported. The ITT is based on the baseline and endline samples while the ToT is based on only the endline sample. The baseline covariates in Panel 2 include: age of youth; rural residence; female dummy; youth being head of household; number of HH members; number of dependent children; highest grade of education; number of rooms for sleeping; distance to the nearest water source; HH owns a plot of land; youth is married; number of biological children; number of substantial meals per day. All the educational expenses were top-censored at the 99th percentile to contain outliers. The covariate in Panel 4 is the length of time in possession of the funding (*categorical variable*) where 0 was assigned to endline youth who didn't receive the funding; 1 to endline youth who declared their groups to have received the funding in 2017; while 2 was assigned to endline youth who declared their groups to have received the funding in 2018. *** p<0.01, ** p<0.05, * p<0.1

The results in Table 7 show that, the programme increased the educational expenses for children and family members of youth in the treatment than control groups. The effect is however, only statistically significant at 10% level in Panel 3 – among a subset of youth who actually received the funding. At endline, the treatment and control youth expenses for children and family members were on average UGX 260,627 and UGX 220,255, respectively. Both the females and males average expenses also increased (see Appendix I). Note that only the effect of males was statistically significant.

Qualitative data from FGDs illustrate how and why YLP beneficiaries are providing for their families:

> *"Most times your family expects you to provide for them especially when you are doing something productive. Ever since we started this project there is a way I feel loved in my family because I am always providing for them," (FGD Motor Spares Group, Apac Municipality).*

> *"I have benefited because my children go to school because of the group. Even when they chase my child I call the teacher and they trust me because they know I am in a group and I won't betray them," (FGD Coffee Produce group, Buhweju).*

"I can now buy a kilo of sugar for mother at home, I even pay my sister's school requirements, every beginning of term now mother calls me to remind me of the sister, first it makes me happy because I am being responsible and two, I feel valued at home," (FGD Bakery Project, Kawempe).

However, as depicted in Table 7 (column 2), the programme decreased the educational expenses for non-family members of youth in the treatment than control groups (ATE= UGX -83,073). The effect is however, not statistically significant. At endline, the treatment and control youth expenses for non-family members were on average UGX 361,515 and UGX 256,762 respectively. Both the females and males average expenses also decreased (ATEs= UGX -22,767 and UGX -126,962 respectively), though not significantly.

Qualitative information suggests that this trend could be attributed to the financial discipline that YLP beneficiaries have been introduced to.

"I learnt financial discipline and I no longer spend uselessly like how I used to do before the YLP money," (FGD Produce buying and selling, Kamuli).

Looking at data in Table 7 (column 3), the programme increased own educational expenses for youth in the treatment than control groups (ATE= UGX 381,178). The effect is however, not statistically significant. At endline, the treatment and control youth expenses for own educational expenses were on average UGX 998,912 and UGX 760,952 respectively. Both the females and males average expenses also increased (ATEs= UGX 397,323 and UGX 216,046 respectively).

"YLP has really been good in my life because I had dropped out of school due to lack of school fees but since I joined this group I can access soft loans that have enabled me go back to school and this is a good thing," (FGD Soft drinks wholesalers, Agago).

5.2.2 Impact on health expenditures

Table 8 displays the intent-to-treat estimates of the impact of the programme on health expenditures. Each ITT is calculated through a difference in differences approach of the dependent variables (health expenses for children and family members; health expenses for non-family members; own health expenses) on: treated (treatment vs control), period (baseline vs endline). Furthermore, each ToT was estimated using instrumental variable (IV) methods whereby the IV estimator is produced using the two-stage least squares (2sls). The question: *"Has your group received funding from YLP?"* constituted the treatment receipt variable in the 2sls IV analysis, and the ToT analysis was restricted to only the endline sample. Note that, all the health expenses were top-censored at the 99th percentile so as to contain outliers.

Table 8: Intent-to-treat and treatment-on-treated estimates of programme impact on health expenditures

	(1)	(2)	(3)
	Health expenses	Health expenses	Own health

	for children and family members	for non-family members	expenses
Panel 1: ITT without covariates			
Full sample ITT	3317.5	-22021.8	6245.9
P-value	(0.219)	(0.284)	(0.397)
Control Mean (T0)	19332.1	44774.1	38870.8
Treatment Mean (T0)	20496.1	37125	43666.1
Panel 2: ITT with covariates			
Full sample ITT	2969.4	-21825.9	5113.6
P-value	(0.262)	(0.383)	(0.490)
Observations	3384	175	1325
Adj. R-squared	0.063	0.064	0.047
Panel 3: ToT without covariates			
Endline sample ToT	10,007*	-51,270*	23,735*
Standard Errors	(5,260)	(29,221)	(13,484)
Panel 4: ToT with covariate			
Endline sample ToT	594.3	-80,925*	14,943
Standard Errors	(18,484)	(41,742)	(43,702)
Observations	1,531	77	590

Notes: Columns (1) to (3) report the intent-to-treat and treatment-on-treated estimates of programme impact. Standard errors are clustered at group level. The mean level of the dependent variable in the control and treatment groups at baseline is also reported. The ITT is based on the baseline and endline samples while the ToT is based on only the endline sample. The baseline covariates in Panel 2 include: age of youth; rural residence; female dummy; youth being head of household; number of HH members; number of dependent children; highest grade of education; number of rooms for sleeping; distance to the nearest water source; HH owns a plot of land; youth is married; number of biological children; number of substantial meals per day. All the health expenses were top-censored at the 99th percentile to contain outliers. The covariate in Panel 4 is the length of time in possession of the funding (*categorical variable*) where 0 was assigned to endline youth who didn't receive the funding; 1 to endline youth who declared their groups to have received the funding in 2017; while 2 was assigned to endline youth who declared their groups to have received the funding in 2018. *** p<0.01, ** p<0.05, * p<0.1

The results in Table 8 (column 1) show that, the programme increased health expenses for children and family members of youth in the treatment than control groups (ATE= UGX 2,969). The effect is however, not statistically significant. At endline, the treatment and control youth health expenses for children and family members were on average UGX 25,870 and UGX 21,389 respectively. The females average expenses however, decreased (see Appendix J) while that of the males increased (ATE= UGX 5,485). These effects are however, not statistically significant.

According to Table 8 (column 2), the programme decreased the health expenses for non-family members of youth in the treatment than control groups (ATE= UGX -21826). The effect is however, not statistically significant. At endline, the treatment and control youth medical expenses for non-family members were on average UGX 33,096 and UGX 62,767 respectively. The females average expenses however, increased (ATE= UGX 17,039) while that of the males decreased (see Appendix J). These effects are however, not statistically significant.

From Table 8 (column 3), the programme increased own health expenses for youth in the treatment than control groups (ATE= UGX 5,114). The effect is however, not

statistically significant. At endline, the treatment and control youth expenses for own health expenses were on average UGX 54,894 and UGX 43,852 respectively. Both the females and males average expenses also increased (see Appendix J).

It should be noted however, that there was a downside of increased expenditure on education and health if they depended on young businesses. In other words, beneficiaries could be using resources meant to (re)invest business on this. This gives further insights into why the earnings of the youth in the intervention group have not improved after a year of programme implementation. Key informants in Local Governments gave several instances of groups that shared part of their revolving funds (rather than investing in the proposed project). Meeting the immediate needs of their households could have been part of this.

5.3 Programme Impact on Access and Use of Financial Services

YLP intends to provide the participating youth with entrepreneurship skills. Therefore, the study expected differences between the intervention and control groups in relation to their access and use of financial resources. Specifically, researchers hoped that participating youth would fair in the following areas:

i. Overall HH financial situation,
ii. Ability to obtain loan from other sources,
iii. Loan possession, source and average amount borrowed,
iv. Possession of a bank account, and
v. Personal plus group savings; percent participating in group saving

Table 9 displays the intent-to-treat estimates of the impact of the programme on access and use of financial services. Each ITT is calculated through a difference in differences approach of the dependent variables (overall HH financial situation; ability to obtain another loan; where the loan of UGX 1M could be obtained from; loan possession; average amount of loan borrowed) on: treated (treatment vs control), period (baseline vs endline). Furthermore, each ToT was estimated using instrumental variable (IV) methods whereby the IV estimator is produced using the two-stage least squares (2sls). The question: *"Has your group received funding from YLP?"* constituted the treatment receipt variable in the 2sls IV analysis, and the ToT analysis was restricted to only the endline sample.

Table 9: Intent-to-treat and treatment-on-treated estimates of programme impact on access and use of financial services

	(1)	(2)	(3)	(4)	(5)
	Overall HH financial situation	Ability to obtain another loan	Source of loan	Loan possession	Average amount of loan borrowed
Panel 1: ITT without covariates					
Full sample ITT	0.0483	0.0119	0.0528	0.0451	316,558.2
P-value	(0.470)	(0.704)	(0.577)	(0.104)	(0.629)
Control Mean (T0)	3.275	0.804	2.762	0.166	538,344.2
Treatment Mean (T0)	3.269	0.797	2.665	0.224	1,231,513.7

Panel 2: ITT with covariates					
Full sample ITT	0.0904	0.00397	0.0658	0.0503*	338,009.5
P-value	(0.160)	(0.898)	(0.487)	(0.070)	(0.608)
Observations	3431	3431	1961	3431	733
Adj. R-squared	0.110	0.042	0.010	0.031	0.045
Panel 3: ToT without covariates					
Endline sample ToT	0.0924	0.00977	-0.0853	0.226***	3,381,000
Standard Errors	(0.136)	(0.0564)	(0.135)	(0.0531)	-2,193,000
Panel 4: ToT with covariate					
Endline sample ToT	1.025*	-0.277	-0.0197	0.602**	14,430,000
Standard Errors	(0.611)	(0.264)	(0.862)	(0.261)	-9,968,000
Observations	1,556	1,556	838	1,556	378

Notes: Columns (1) to (5) report the intent-to-treat and treatment-on-treated estimates of programme impact. Standard errors are clustered at group level. The mean level of the dependent variable in the control and treatment groups at baseline is also reported. The ITT is based on the baseline and endline samples while the ToT is based on only the endline sample. The baseline covariates in Panel 2 include: age of youth; rural residence; female dummy; youth being head of household; number of HH members; number of dependent children; highest grade of education; number of rooms for sleeping; distance to the nearest water source; HH owns a plot of land; youth is married; number of biological children; number of substantial meals per day. The covariate in Panel 4 is the length of time in possession of the funding (*categorical variable*) where 0 was assigned to endline youth who didn't receive the funding; 1 to endline youth who declared their groups to have received the funding in 2017; while 2 was assigned to endline youth who declared their groups to have received the funding in 2018. *** p<0.01, ** p<0.05, * p<0.1

The results in Table 9 show that, after one year of the programme, the level at which the treatment group youth described their household's overall financial situation on a scale of 1 (well off) to 5 (poor) slightly increased as compared to the control group (ATE= 0.090) – suggesting a worse off situation compared to the control group. The effect is however, not statistically significant. At endline, the treatment and control groups average ratings were; 3.29 and 3.25 respectively. Both the females and males ratings worsened (see Appendix C).

An investigation of whether youth had any loans that they had not yet repaid (column 4) shows that, as expected, the programme increased the proportion of youth in the treatment groups who had outstanding loans as compared to youth in the control groups (ATE=0.050). The effect is however, only statistically significant at 10% level but strongly significant in Panels 3 & 4 – among a subset of youth who actually received the funding. At endline, the proportion of treatment and control group youth with outstanding loans was; 29.9% and 19.7% respectively. The female proportion with loans decreased while that of the males statistically increased (see Appendix C).

Column 5 suggests that the programme increased the amount of loans borrowed by the treatment youth as compared to the control youth though the effect is not statistically significant in all the panels. At endline, the treatment and control group average loans borrowed were; UGX 2,673,671 and UGX 1,663,944 respectively (Panel 2). Further disaggregation however, revealed that while the females' average loan increased, that of the males decreased (see Appendix C).

Ability to obtain a loan was investigated by asking respondents whether if they had to obtain a loan of UGX 1 million and/or UGX 100,000 within the next month, they could

obtain such loans. After one year of the programme, the proportion of youth in the treatment group who asserted they would get such loans slightly increased as compared to the control group (see panels 1-3). The effect is however, not statistically significant. At endline, the treatment and control group percentages were; 76.5% and 76.0% respectively.

Qualitative data provided insights on how YLP enables participating youth to access credit services from other sources.

> *"For us now it is actually easy to get a loan from our area because people see that we are established and are seeing our success so they can be confident in giving us loans if we needed," (FGD Soft drinks depot, Agago).*

> *"As a group we have security which is our business, someone can just look at that group and become convinced that we shall be in position to repay the loan… recently Centenary bank approached us and they wanted to give us a loan; that is an indication that we can easily get a loan at any time we need it," (FGD Produce buying and selling group, Kamuli).*

Further enquiries on where they would obtain such loans and more specifically that of UGX 1 million, Table 9 (column 3) revealed that the effect of the programme on this indicator was not statistically significant (ATE= 0.066). At endline, the treatment and control group averages on where the loans could be obtained from were; 2.7 and 2.8 respectively pointing towards Commercial banks and Saving groups/cash boxes.

The research also sought to establish if membership in YLP groups had an effect on beneficiaries' ability to own a bank account and participation in saving groups. Table 10 summarises the intent-to-treat estimates of YLP impact on these two variables.
The results in Table 10 show that, after one year, the programme increased the proportion of youth who possess a bank account in the treatment group as compared to the control group (ATE= 0.015). The effect is however, not statistically significant except for Panel 3 – among a subset of youth who actually received the funding. At endline, the proportion of youth in the treatment and control groups who owned bank accounts were; 24.7% and 20.4% respectively. The female proportion decreased (see Appendix D).

Table 10: Intent-to-treat and treatment-on-treated estimates of programme impact on access and use of financial services

	(1) Possession of bank account	(2) Participation in group savings
Panel 1: ITT without covariates		
Full sample ITT	0.0334	-0.0205
P-value	(0.195)	(0.520)
Control Mean (T0)	0.200	0.677
Treatment Mean (T0)	0.210	0.673
Panel 2: ITT with covariates		
Full sample ITT	0.0150	-0.0163
P-value	(0.533)	(0.598)

Observations	3431	3431
Adj. R-squared	0.160	0.040
Panel 3: ToT without covariates		
Endline sample ToT	0.0947*	-0.0541
Standard Errors	(0.0549)	(0.0583)
Panel 4: ToT with covariate		
Endline sample ToT	-0.200	-0.326
Standard Errors	(0.232)	(0.246)
Observations	1,556	1,556

Notes: Columns (1) to (2) report the intent-to-treat and treatment-on-treated estimates of programme impact. Standard errors are clustered at group level. The mean level of the dependent variable in the control and treatment groups at baseline is also reported. The ITT is based on the baseline and endline samples while the ToT is based on only the endline sample. The baseline covariates in Panel 2 include: age of youth; rural residence; female dummy; youth being head of household; number of HH members; number of dependent children; highest grade of education; number of rooms for sleeping; distance to the nearest water source; HH owns a plot of land; youth is married; number of biological children; number of substantial meals per day. The covariate in Panel 4 is the length of time in possession of the funding (*categorical variable*) where 0 was assigned to endline youth who didn't receive the funding; 1 to endline youth who declared their groups to have received the funding in 2017; while 2 was assigned to endline youth who declared their groups to have received the funding in 2018. *** p<0.01, ** p<0.05, * p<0.1

The programme decreased the proportion of youth who participate in saving groups in the treatment as compared to the control group (in all Panels). The effect is however, not statistically significant. At endline, the proportions of youth in the treatment and control groups who participated in saving groups were; 69.8% and 72.3% respectively. The female proportion however, increased while that of the males decreased (see Appendix D).

6. Influence of YLP on Employment

The second objective of this impact evaluation study was to establish the influence of YLP on the employment status of the participating youth. The following sub-sections discuss findings on this aspect.

6.1 Impact on Occupational Choice

YLP is meant to increase earnings by helping young people engaged in agriculture and petty trade to develop skilled occupations, to add to their mix of existing occupations. Thus, an outcome of interest for this study was the number of hours respondents worked and how they distributed their working hours across different occupations. The study anticipated that the groups assigned to the revolving fund worked more hours and that they practiced a skilled trade compared to the comparison group.

Table 11 displays the intent-to-treat estimates of the impact of the programme on occupational choice. Each ITT is calculated through a difference in differences approach of the dependent variables (number of hours worked per day; work throughout the year, or seasonally/once in a while; number of hours worked per day on skilled occupations; nature of payment: cash and/or in-kind, or not paid) on: treated

(treatment vs control), period (baseline vs endline). Furthermore, each ToT was estimated using instrumental variable (IV) methods whereby the IV estimator is produced using the two-stage least squares (2sls). The question: *"Has your group received funding from YLP?"* constituted the treatment receipt variable in the 2sls IV analysis, and the ToT analysis was restricted to only the endline sample.

Respondents were interviewed about the nature of their work – whether they worked throughout the year or seasonally/once in a while. According to Table 11 (column 2) overall, the respondents who reported that they work throughout the year in the intervention arm improved by about 4% as compared to the control arm with the ATEs = -0.0524.

The results in Table 11 show that after one year, the programme decreased the number of hours worked per day of the treatment as compared to the control group (ATE= -0.723). The effect is statistically significant in Panels 1 & 2 at 5% level. At endline, the treatment and control groups' number of hours worked per day was on average; 9.15 and 9.33 respectively. Both the females and males average number of hours worked also decreased (see Appendix F).

Table 11: Intent-to-treat and treatment-on-treated estimates of programme impact on occupational choice

	(1)	(2)	(3)	(4)
	Number of hours worked per day	Work throughout the year, or seasonally/once in a while	Number of hours worked per day on skilled occupations	Nature of payment: cash and/or in-kind, or not paid
Panel 1: ITT without covariates				
Full sample ITT	-0.734*	0.0599	0.192	0.0265
P-value	(0.044)	(0.104)	(0.628)	(0.344)
Control Mean (T0)	9.142	0.593	7.578	0.844
Treatment Mean (T0)	9.701	0.588	7.534	0.841
Panel 2: ITT with covariates				
Full sample ITT	-0.723*	0.0524	0.184	0.0251
P-value	(0.046)	(0.146)	(0.641)	(0.362)
Observations	3127	3039	1305	3431
Adj. R-squared	0.013	0.045	0.020	0.036
Panel 3: ToT without covariates				
Endline sample ToT	-0.387	0.124*	0.340	0.0504
Standard Errors	(0.676)	(0.0677)	(0.753)	(0.0585)
Panel 4: ToT with covariate				
Endline sample ToT	-1.371	-0.0162	-0.940	-0.00459
Standard Errors	(3.147)	(0.280)	(4.254)	(0.266)
Observations	1,556	1,449	554	1,556

Notes: Columns (1) to (4) report the intent-to-treat and treatment-on-treated estimates of programme impact. Standard errors are clustered at group level. The mean level of the dependent variable in the control and treatment groups at baseline is also reported. The ITT is based on the baseline and endline samples while the ToT is based on only the endline sample. The baseline covariates in Panel 2 include: age of youth; rural residence; female dummy; youth being head of household; number of HH members; number of dependent children; highest grade of education; number of rooms for sleeping; distance to the nearest water source; HH owns a plot of land; youth

is married; number of biological children; number of substantial meals per day. The covariate in Panel 4 is the length of time in possession of the funding (*categorical variable*) where 0 was assigned to endline youth who didn't receive the funding; 1 to endline youth who declared their groups to have received the funding in 2017; while 2 was assigned to endline youth who declared their groups to have received the funding in 2018. *** p<0.01, ** p<0.05, * p<0.1

While there was a reduction in the number of hours worked per day and week among programme beneficiaries, the study sought to establish how the working time was distributed with regards to skilled/unskilled occupations.

The results in Table 11 (column 3) show that, the programme increased the number of hours worked per day on skilled occupations of the treatment group as compared to the control one (Panels 1-3). The effect is however, not statistically significant. At endline, the treatment and control groups' hours worked per day on skilled occupations were on average; 7.68 and 7.54 respectively. However, while the females average number of hours worked increased (ATE= 0.765), that of the males decreased (ATE= -0.104), although not statistically significant (see Appendix F).

The results in column 4 show how respondents were being paid (1 = cash and/or in-kind, and 0 = not paid). Findings indicate an increase in the number of youth paid in cash as a result of the intervention (ATEs=-0.096). Females in the intervention group benefited more from cash payments (ATEs=-0.27) compared to their male counterparts (see Appendix F).

6.2 Programme Impact on Employment Generation

Another important secondary outcome of interest for this impact evaluation study was to establish the extent to which YIG businesses are able to evolve into firms with employees. The survey collected data on the total number of FTE employees, and whether they are family or non-family members.

Table 12 displays the intent-to-treat estimates of the impact of the programme on employment generation for others. Each ITT is calculated through a difference in differences approach of the dependent variables (total number of FTE employees; number of FTE employees (family members); number of FTE employees (non-family members) on: treated (treatment vs control), period (baseline vs endline). Furthermore, each ToT was estimated using instrumental variable (IV) methods whereby the IV estimator is produced using the two-stage least squares (2sls). The question: *"Has your group received funding from YLP?"* constituted the treatment receipt variable in the 2sls IV analysis, and the ToT analysis was restricted to only the endline sample.

Table 12: Intent-to-treat and treatment-on-treated estimates of programme impact on employment generation for others

	(1)	(2)	(3)
	Total number of FTE employees	No. of FTE employees (family members)	No. of FTE employees (non-family members)
Panel 1: ITT without covariates			

Full sample ITT	0.0671	0.121	0.0884
P-value	(0.706)	(0.325)	(0.859)
Control Mean (T0)	1.328	0.752	0.879
Treatment Mean (T0)	1.416	0.832	0.922
Panel 2: ITT with covariates			
Full sample ITT	0.0307	0.115	0.0758
P-value	(0.862)	(0.339)	(0.876)
Observations	3431	2127	1823
Adj. R-squared	0.026	0.170	0.123
Panel 3: ToT without covariates			
Endline sample ToT	0.341	0.505*	0.359
Standard Errors	(0.316)	(0.281)	(1.321)
Panel 4: ToT with covariate			
Endline sample ToT	-0.290	2.159*	2.279
Standard Errors	(1.290)	(1.217)	(6.595)
Observations	1,556	593	314

Notes: Columns (1) to (3) report the intent-to-treat and treatment-on-treated estimates of programme impact. Standard errors are clustered at group level. The mean level of the dependent variable in the control and treatment groups at baseline is also reported. The ITT is based on the baseline and endline samples while the ToT is based on only the endline sample. The baseline covariates in Panel 2 include: age of youth; rural residence; female dummy; youth being head of household; number of HH members; number of dependent children; highest grade of education; number of rooms for sleeping; distance to the nearest water source; HH owns a plot of land; youth is married; number of biological children; number of substantial meals per day. The covariate in Panel 4 is the length of time in possession of the funding (*categorical variable*) where 0 was assigned to endline youth who didn't receive the funding; 1 to endline youth who declared their groups to have received the funding in 2017; while 2 was assigned to endline youth who declared their groups to have received the funding in 2018. *** p<0.01, ** p<0.05, * p<0.1

The results in Table 12 show that after one year, the programme increased the total number of FTE employees of the treatment as compared to the control group (ATE = 0.031). The effect is however, not statistically significant. At endline, the treatment and control groups' total number of FTE employees was on average; 1.4 and 1.3 respectively. The females average number of FTE employees decreased (ATE = -0.263), while that of the males increased (see Appendix G, Column 1).

The programme also increased the number of FTE employees (family members) of the treatment as compared to the control group (ATE = 0.115). The effect is however, only statistically significant in Panels 3 & 4 - among a subset of youth who actually received the funding. At endline, the treatment and control groups' number of FTE employees (family members) was on average; 1.8 and 1.6 respectively. Both the females and males average number of FTE employees (family members) also increased (see Appendix G, Column 2).

The programme increased the number of FTE employees (non-family members) of the treatment as compared to the control group (in all the Panels). The effect is however, not statistically significant. At endline, the treatment and control groups' number of FTE employees (non-family members) were on average; 3.5 and 3.4 respectively. The females average number of FTE employees (non-family members) decreased, while that of the males increased (see Appendix G, Column 2).

Qualitative data provides insights into the dynamics of work opportunities arising from YLP projects.

> *"We have created job opportunities for other young men in the community as they help us in the loading and off-loading of maize trucks, ...you find that someone has been able to make UGX 5000 in a day and this is really some good money for a person living in a rural setting like this one," (FGD, Produce buying and selling group, Kamuli).*

> *"We employ some of the community members to help us in drying and carrying the produce and then we give them some little money which help them also to support their families," (FGD, Produce buying and selling group, Kiryandongo).*

> *"It has created jobs for this community because every week we call upon the community to come and work on our farms... We pay them in cash and that has been helping to improve on the standards of living in this community," (Modern Farming Group, Nebbi).*

6.3 Programme Impact on Business Formalization

This outcome is of a descriptive nature to help understand the types of businesses YLP beneficiaries are generating. The aim is to understand how legitimate these businesses are, and whether they are registered with the state. It was anticipated that beneficiaries of YLP kept records, formally registered with regulatory authorities, and paid business taxes at higher rates compared to youth in the control group.

Table 13 displays the intent-to-treat estimates of the impact of the programme on business formalization. Each ITT is calculated through a difference in differences approach of the dependent variables (Keeping records; registering businesses; paying business taxes) on: treated (treatment vs control), period (baseline vs endline). Furthermore, each ToT was estimated using instrumental variable (IV) methods whereby the IV estimator is produced using the two-stage least squares (2sls). The question: *"Has your group received funding from YLP?"* constituted the treatment receipt variable in the 2sls IV analysis, and the ToT analysis was restricted to only the endline sample.

Table 13: Intent-to-treat and treatment-on-treated estimates of programme impact on business formalization

	(1)	(2)	(3)
	Keeping records	Registering businesses	Paying business taxes
Panel 1: ITT without covariates			
Full sample ITT	0.0278	0.0115	0.0394
P-value	(0.399)	(0.679)	(0.192)
Control Mean (T0)	0.382	0.149	0.258
Treatment Mean (T0)	0.355	0.172	0.247
Panel 2: ITT with covariates			
Full sample ITT	0.0117	0.0000504	0.0262
P-value	(0.722)	(0.999)	(0.380)

Observations	3431	3431	3431
Adj. R-squared	0.091	0.064	0.064
Panel 3: ToT without covariates			
Endline sample ToT	0.00128	0.0755	0.0626
Standard Errors	(0.0658)	(0.0552)	(0.0566)
Panel 4: ToT with covariate			
Endline sample ToT	-0.274	0.252	0.225
Standard Errors	(0.281)	(0.231)	(0.240)
Observations	1,556	1,556	1,556

Notes: Columns (1) to (3) report the intent-to-treat and treatment-on-treated estimates of programme impact. Standard errors are clustered at group level. The mean level of the dependent variable in the control and treatment groups at baseline is also reported. The ITT is based on the baseline and endline samples while the ToT is based on only the endline sample. The baseline covariates in Panel 2 include: age of youth; rural residence; female dummy; youth being head of household; number of HH members; number of dependent children; highest grade of education; number of rooms for sleeping; distance to the nearest water source; HH owns a plot of land; youth is married; number of biological children; number of substantial meals per day. The covariate in Panel 4 is the length of time in possession of the funding (*categorical variable*) where 0 was assigned to endline youth who didn't receive the funding; 1 to endline youth who declared their groups to have received the funding in 2017; while 2 was assigned to endline youth who declared their groups to have received the funding in 2018. *** p<0.01, ** p<0.05, * p<0.1

The results in Table 13 show that, the programme increased the proportion of youth who keep a log or record of expenses and revenues for their businesses in the treatment group as compared to the control group (ATE= 0.012). The effect is however, not statistically significant. At endline, the proportion of youth in the treatment and control groups who kept records or logs were; 36.8% and 36.7% respectively.

The programme neither increased nor decreased the proportion of youth who had formally registered their businesses with regulatory authorities in the treatment group as compared to the control one (ATE = 0.000). At endline, the proportion of youth in the treatment and control groups who have formally registered their businesses were; 21.7% and 18.2% respectively. The female proportion decreased (see Appendix H).

The programme increased the proportion of youth who pay business taxes in the treatment as compared to the control group (in all the 4 panels). The effect is however, not statistically significant. At endline, the proportion of youth in the treatment and control groups who pay business taxes were; 29.1% and 26.3% respectively. The female proportion who pay taxes however, decreased (see Appendix H, Column 3).

7. Programme Impact on Life Style and Behavioural Characteristics

The third objective of the study sought to investigate the life style and behavioural changes arising from participating in YLP. One of the key assumptions of the study was that participating YLP activities occupied the youth and provided them with relevant knowledge and information for good conduct. It was hoped that participating youth would have less time for engaging in anti-social behaviours compared to those

not participating. For this third objective, researchers collected information on the following activities of the youth:

i. Prevalence of youth on tobacco and alcohol consumption.
ii. Number and percentage of youth affected by domestic violence
iii. Citizenship.

Table 14 displays the intent-to-treat estimates of the impact of the programme on life style and behavioural characteristics. Each ITT is calculated through a difference in differences approach of the dependent variables (prevalence of youth on tobacco consumption; prevalence of youth on alcohol consumption; prevalence of violence in youth household) on: treated (treatment vs control), period (baseline vs endline). Furthermore, each ToT was estimated using instrumental variable (IV) methods whereby the IV estimator is produced using the two-stage least squares (2sls). The question: *"Has your group received funding from YLP?"* constituted the treatment receipt variable in the 2sls IV analysis, and the ToT analysis was restricted to only the endline sample.

Table 14: Intent-to-treat and treatment-on-treated estimates of programme impact on life style and behavioural characteristics

	(1)	(2)	(3)
	Prevalence of youth on tobacco consumption	Prevalence of youth on alcohol consumption	Prevalence of violence in youth household
Panel 1: ITT without covariates			
Full sample ITT	-0.00418	-0.0496*	0.00577
P-value	(0.458)	(0.045)	(0.742)
Control Mean (T0)	0.00847	0.160	0.0656
Treatment Mean (T0)	0.0108	0.198	0.0624
Panel 2: ITT with covariates			
Full sample ITT	-0.00416	-0.0444	0.00709
P-value	(0.443)	(0.062)	(0.684)
Observations	3431	3431	3431
Adj. R-squared	0.015	0.088	0.006
Panel 3: ToT without covariates			
Endline sample ToT	-0.00417	-0.0254	0.00555
Standard Errors	(0.0105)	(0.0649)	(0.0295)
Panel 4: ToT with covariate			
Endline sample ToT	-0.00843	0.247	-0.0409
Standard Errors	(0.0371)	(0.301)	(0.119)
Observations	1,556	1,556	1,556

Notes: Columns (1) to (3) report the intent-to-treat and treatment-on-treated estimates of programme impact. Standard errors are clustered at group level. The mean level of the dependent variable in the control and treatment groups at baseline is also reported. The ITT is based on the baseline and endline samples while the ToT is based on only the endline sample. The baseline covariates in Panel 2 include: age of youth; rural residence; female dummy; youth being head of household; number of HH members; number of dependent children; highest grade of education; number of rooms for sleeping; distance to the nearest water source; HH owns a plot of land; youth is married; number of biological children; number of substantial meals per day. The covariate in Panel 4 is the length of time in possession of the funding (*categorical variable*) where 0 was assigned to endline youth who didn't receive the funding; 1 to endline youth who declared their groups to have received the funding in 2017; while 2 was assigned to endline youth who declared their groups to have received the funding in 2018. *** p<0.01, ** p<0.05, * p<0.1

The results in Table 14 show that after one year of the programme, the prevalence of youth on tobacco consumption in the treatment group slightly decreased as compared to that in the control (in all the 4 panels). The effect is however, not statistically significant. At endline, the treatment and control groups youth prevalence of tobacco consumption were; 0.8% and 1.0% respectively. Both the females and males prevalence also decreased (see Appendix B column 1).

Table 14 (Column 2) further reveals that the prevalence of youth on alcohol consumption in the treatment group decreased as compared to the control group (ATE = -0.044). The effect is however, only statistically significant at 10% level. At endline, the treatment and control groups youth prevalence of alcohol consumption were; 19.8% and 20.9% respectively.

Qualitative information from the participating youth revealed how YLP influenced their behaviours.

> *"YLP has changed my life… before we had received this money for the project, we used to just sit and do nothing… we used to just think of taking alcohol to pass time. But now we hardly get time to sit because there is a lot of work to do. You have to be at the store or you have to go look for what to do in the field, there's no time to go for alcohol like we used to have. So I see a lot of changes in our lives. There's no time for evil thoughts because we are always busy," (FGD Produce buying and selling group, Apac).*

Table 14 (Column 3) shows that the prevalence of violence in youth households in the treatment group increased as compared to the control group (ATE= 0.007). The effect is however, not statistically significant. At endline, the treatment and control groups prevalence of violence in youth household were; 5.7% and 5.5% respectively. In particular, females reported more prevalence of violence (see Appendix B, Column 3).

7.1 Programme Impact on Citizen Participation

The study anticipated that increased earnings (and employment) could have consequences for citizenship. This evaluation was therefore interested in measuring the level of youth engagement in community activities such as participation in community organisations, local councils among others.

Table 15 displays the intent-to-treat estimates of the impact of the programme on citizen participation. Each ITT is calculated through a difference in differences approach of the dependent variables (youth participation in community organizations, councils, etc.; index of citizen participation) on: treated (treatment vs control), period (baseline vs endline). Furthermore, each ToT was estimated using instrumental variable (IV) methods whereby the IV estimator is produced using the two-stage least squares (2sls). The question: *"Has your group received funding from YLP?"* constituted the treatment receipt variable in the 2sls IV analysis, and the ToT analysis

was restricted to only the endline sample.

Table 15: Intent-to-treat and treatment-on-treated estimates of programme impact on citizen participation

	(1)	(2)
	Youth participation in community organizations, councils, etc	Index of citizen participation
Panel 1: ITT without covariates		
Full sample ITT	-0.0333	-0.0877
P-value	(0.061)	(0.159)
Control Mean (T0)	0.943	1.796
Treatment Mean (T0)	0.952	1.791
Panel 2: ITT with covariates		
Full sample ITT	-0.0288*	-0.0902
P-value	(0.095)	(0.142)
Observations	3431	3431
Adj. R-squared	0.020	0.067
Panel 3: ToT without covariates		
Endline sample ToT	-0.0540*	-0.203
Standard Errors	(0.0323)	(0.128)
Panel 4: ToT with covariate		
Endline sample ToT	-0.0582	-1.238**
Standard Errors	(0.128)	(0.618)
Observations	1,556	1,556

Notes: Columns (1) to (2) report the intent-to-treat and treatment-on-treated estimates of programme impact. Standard errors are clustered at group level. The mean level of the dependent variable in the control and treatment groups at baseline is also reported. The ITT is based on the baseline and endline samples while the ToT is based on only the endline sample. The baseline covariates in Panel 2 include: age of youth; rural residence; female dummy; youth being head of household; number of HH members; number of dependent children; highest grade of education; number of rooms for sleeping; distance to the nearest water source; HH owns a plot of land; youth is married; number of biological children; number of substantial meals per day. The covariate in Panel 4 is the length of time in possession of the funding (*categorical variable*) where 0 was assigned to endline youth who didn't receive the funding; 1 to endline youth who declared their groups to have received the funding in 2017; while 2 was assigned to endline youth who declared their groups to have received the funding in 2018. *** p<0.01, ** p<0.05, * p<0.1

The results in Table 15 show that after one year, rather than increasing, the programme decreased the proportion of youth who participate in community organizations, councils' activities such as meetings in the treatment group as compared to those in the control (in all the 4 panels). The effect is however, only statistically significant at 10% level. At endline, the proportion of youth in the treatment and control groups who attended a community meeting or if not, would do so in case they had the chance were; 92.7% and 95.1% respectively. The female proportion increased while that of the males significantly decreased (see Appendix E, Column 1).

The index of citizen participation was computed by summing the responses of the four questions, after recoding them into indicator variables of scores 0 and 1. These questions included: *Are you a member of the LC1 Committee? Are you currently a member of any committee that makes decisions that affect a large portion of the community, such as a farmers' forum, a water source committee, a parish*

development committee, or a school management committee? If nominated to become an LC1 by your community and you had the time, would you want to hold such a position? In the past 12 months, did you attend a community meeting? If not, would you do this if you had the chance? Therefore, the expected scores ranged from 0 to 4. After one year, the programme decreased the citizen participation of the treatment group as compared to the control group (ATE= -0.090). The effect is however, not statistically significant except for Panel 4 – among a subset of youth who actually received the funding. At endline, the treatment and control groups' citizen participation indices were on average; 1.8 and 1.9 respectively. Both the females and males indices also decreased (see Appendix E, Column 2).

Reduction in citizenship engagement could be explained by looking at existing literature. Kabeer, et al (2010) suggests that citizenship building through development programmes follows from systematic efforts of agencies to build up members' capacity to mobilise within the community and teach them about rights and how to challenge injustice. However, YLP put emphasis on managing projects. It is therefore plausible that youth withdraw their time from the other community activities to concentrate on their projects.

7.2 Programme Impact on Perceived Social Status Within the Community

Table 16 displays the intent-to-treat estimates of the impact of the programme on health expenditures. Each ITT is calculated through a difference in differences approach of the dependent variables (self-assessed wealth level, on a scale from 1 to 9; self-assessed respect level, on a scale from 1 to 9; self-assessed access to basic services such as education and health, on a scale from 1 to 9) on: treated (treatment vs control), period (baseline vs endline). Furthermore, each ToT was estimated using instrumental variable (IV) methods whereby the IV estimator is produced using the two-stage least squares (2sls). The question: *"Has your group received funding from YLP?"* constituted the treatment receipt variable in the 2sls IV analysis, and the ToT analysis was restricted to only the endline sample.

The results show that, the programme decreased treatment youth scores as compared to the control youth, on the way they rated themselves imagining a 9-step ladder where on the bottom (the first step) stand the poorest people while on the highest step (the 9th) stand the wealthiest people in their communities (on all the four panels). The effect is however, not statistically significant. At endline, the treatment and control youth self-assessed wealth levels were on average; 4.07 and 4.12 respectively. Both the females and males self-assessed wealth levels also decreased (see Appendix K, Column 1), though not significantly.

Table 16: Intent-to-treat and treatment-on-treated estimates of programme impact on perceived social status within the community

	(1)	(2)	(3)
	Self-assessed wealth level,	Self-assessed respect level,	Self-assessed access to basic services such as

	on a scale from 1 to 9	on a scale from 1 to 9	education and health, on a scale from 1 to 9
Panel 1: ITT without covariates			
Full sample ITT	-0.0179	-0.0317	0.148
P-value	(0.894)	(0.835)	(0.304)
Control Mean (T0)	3.710	4.629	4.752
Treatment Mean (T0)	3.676	4.655	4.735
Panel 2: ITT with covariates			
Full sample ITT	-0.0723	-0.0964	0.0899
P-value	(0.581)	(0.510)	(0.517)
Observations	3431	3431	3431
Adj. R-squared	0.070	0.085	0.071
Panel 3: ToT without covariates			
Endline sample ToT	-0.113	-0.0119	0.288
Standard Errors	(0.233)	(0.279)	(0.249)
Panel 4: ToT with covariate			
Endline sample ToT	-1.513	-1.697	-0.352
Standard Errors	(1.087)	(1.282)	(1.051)
Observations	1,556	1,556	1,556

Notes: Columns (1) to (3) report the intent-to-treat and treatment-on-treated estimates of programme impact. Standard errors are clustered at group level. The mean level of the dependent variable in the control and treatment groups at baseline is also reported. The ITT is based on the baseline and endline samples while the ToT is based on only the endline sample. The baseline covariates in Panel 2 include: age of youth; rural residence; female dummy; youth being head of household; number of HH members; number of dependent children; highest grade of education; number of rooms for sleeping; distance to the nearest water source; HH owns a plot of land; youth is married; number of biological children; number of substantial meals per day. The covariate in Panel 4 is the length of time in possession of the funding (*categorical variable*) where 0 was assigned to endline youth who didn't receive the funding; 1 to endline youth who declared their groups to have received the funding in 2017; while 2 was assigned to endline youth who declared their groups to have received the funding in 2018. *** p<0.01, ** p<0.05, * p<0.1

Similarly, the results in Table 16 show that the programme decreased treatment youth scores as compared to those in the control set up, on the way they rated their respect in the community – imagining a 9-step ladder where on the bottom (the first step) stand the least respected people while on the highest step (the 9th) stand the most respected people in their communities (in all the four panels). The effect is however, not statistically significant. At endline, the treatment and control youth self-assessed respect levels were on average; 5.08 and 5.09 respectively. The females self-assessed respect levels also decreased (see Appendix K, Column 2) though not significantly.

However, the revolving fund increased treatment youth scores as contrasted to the ones in the control, on the way they rated their access to social services. When asked to imagine a 9-step ladder where on the bottom (the first step) stand the people who have the least access to basic services (such as health and education) while on the highest step (the 9th) stand the people who have the most access to basic services in their communities, 1-3 of the panels were positive except for panel 4 – subset of youth who actually received the funding and controlled for period of funding receipt – where it was negative. The effect is however, not statistically significant. At endline, the

treatment and control youth self-assessed access to basic services levels were on average; 5.33 and 5.20 respectively. Both the females and males self-assessed access to basic services levels also increased (see Appendix K, Column 3), though not significantly.

8. Management of Attrition

In this section, the research seeks to establish if the attrition was systematic, i.e. missing are not so much different from those that are present (external validity). Considering 1,875 youth aged 18-30 years at the baseline level, and merging it with the endline data using "respondent's id" as a unique identifier, only 1,423 youth were matched. The 133 unmatched endline youth out of 1,556 didn't have unique ids. This therefore resulted into 452 baseline youth (214 control; 238 treatment) that were not found at endline, and extent of attrition analysis was conducted on them.

In order to assess the overall level of attrition among the youth sampled, a regression of "attrition" (where 1 was assigned to a youth who was at baseline but not found at endline, and 0 assigned to a youth found at both baseline and endline) was conducted on: "treated" (where 1 was assigned to a youth in the treatment group and 0 to a youth in a control group), as shown in the equation:

$$attrition = \alpha_0 + \alpha_1 treated + \varepsilon$$

The results of the above regression show that attrition is not so much different between the treatment and control groups ($t\text{-}value = 1.49$; $P\text{-}value = 0.136$). That is to say, on average the study had youth with identical characteristics missing in the two groups.

Table 17: Comparison of attrition across the study groups

Covariates	Mean Control	Mean Treatment	Diff.	t	Pr(T>t)
Age of youth	24.35	24.68	0.331	1.00	0.3185
Rural residence	0.69	0.76	0.069	1.65	0.1007
Female dummy	0.44	0.45	0.015	0.32	0.7492
Youth being head of household	0.32	0.39	0.069	1.53	0.1273
Number of HH members	5.48	5.73	0.250	0.80	0.4227
Number of dependent children	1.92	2.40	0.483	2.57	0.0106**
Highest grade of education	9.72	8.81	-0.908	3.26	0.0012***
Number of rooms for sleeping	2.71	2.69	-0.017	0.10	0.923
Distance to the nearest water source	1.94	2.10	0.157	2.44	0.0151**
HH owns a plot of land	0.77	0.75	-0.018	0.46	0.6489
Youth is married	0.48	0.58	0.107	2.29	0.0223**
Number of biological children	1.19	1.45	0.258	1.92	0.0555*
Number of substantial meals per day	2.51	2.40	-0.111	1.83	0.0674*

*** p<0.01; ** p<0.05; * p<0.1

These results in Table 17 suggest that youth who were missing did not so much differ from those that were present (external validity), indicating that *missingness* or attrition wouldn't significantly affect the estimation results. A little detailed look at the results of the balance between the study arms, it was observed that 9 out of 13 covariates showed no differences at 5% level. Those that showed statistical significance at 5% weren't economically substantial. To a greater extent therefore, these results suggests that missingness did not bias outcomes that is, similar individuals were missing from both treatment and control group (internal validity).

8.1 The Influence of Time on YLP Outcomes

In order to assess whether the length of time in possession of the funding influenced changes in outcomes, a regression of the "outcome variable of interest" was conducted on: "period of receiving the funding" (where 0 was assigned to 598 endline youth who declared their groups not to have received the funding or didn't state the period when the funds were received; 1 assigned to 532 endline youth who declared their groups to have received the funding in 2017; and 2 assigned to 426 endline youth who declared their groups to have received the funding in 2018, as shown in the equation:

$$\mathrm{Var}_i = \alpha_0 + \alpha_1 \mathrm{new\_time} + \varepsilon$$

The analyses considered 0 as the base level category and also catered for pair-wise comparisons of marginal means from the fitted model to ascertain the magnitude of the differences in the 3 defined groups. Results indicate that both the 2017 and 2018 groups had 11 variables with statistically significant results. This suggests that, in order to fully appreciate the impact of YLP, further follow-up studies at two or more implementation years may be required (see Appendix N to X). Fiala's longitudinal analysis of the youth opportunities programme in northern Uganda and Knowledge@Wharton (2009) analysis of evidence on micro-finance programmes, also suggest that programmes such as YLP require at least two years for their economic impact to be discerned.

9. Specific Findings for Policy and Practice

From the preceding analysis, after 12 months of implementation, YLP had no statistically significant effect on socio-economic outcomes of the intervention group compared to the control group. Several factors could explain this state of affairs. The study suspects that youth diverted their revolving funds from (re)investment to consumption on basic necessities such as health and education. The research found evidence that the youth in the intervention group increased their expenditures on health and education during the study period.

However, even for the youth who diligently invested the revolving fund, the study shows that low earnings could be due to time since project beneficiaries were in

possession of the YLP loans for a short time. Indeed, there is some evidence to suggest that the length of time in possession of the funding has an influence on the outcomes of interest (see 8.1).

Qualitative information and evidence from the process evaluation show that implementers focused a lot on disbursing loans and recovering funds. Complementary activities for capacity building of the beneficiaries before and after obtaining funding were given less emphasis. Therefore, the low impact of the YLP so far suggests that the novice entrepreneurs do not just need money. They need guidance and nurturing for their investments to be productive. The youth indicated that they needed training in marketing, value addition, price determination, financial management, bookkeeping and post-harvest handling.

Most youth choose to invest in fast income-earning projects, which do not require acquisition of technical skills. While they seem easier to operate they tend to be less profitable as the general population too invests in such ventures. Relatedly, majority of the youth prefer agro-based activities, which are vulnerable to weather vagaries and price fluctuations among other risks. Youth lack storage facilities and technologies to help in preserving produce.

The study captured several outcomes with gender implications. In terms of employment, there is evidence that female participants are moving from unskilled to skilled and unpaid to paid occupations, while they also report enhanced ability to access credit facilities. In addition, they reported reduced tendencies for alcohol consumption and smoking. However, on the flip side, there seemed to be more reports of gender-based violence (GBV) among female participants.

The Youth Livelihood Programme placed a lot of hopes in politicians seen in the responsibilities given to them to make the programme community driven and youth centred. The programme for example identified Youth Councils at all levels and tasked them to participate in mobilising, sensitizing and monitoring of the programme in their areas of jurisdiction. While these seem like realistic expectations, qualitative findings at baseline and endline and also the evidence from the process evaluation done in 2015-16 revealed that some politicians sought to advance their own political careers at the expense of the YLP effectiveness. For example, it was reported that in the process of mobilizing the youth in communities, politicians passed on false information that YLP was a non-repayable government grant.

While not an outcome that the study directly sought to explore, it was established that youth who benefited from the programme were easier to trace after one year. This suggests that the programme does well to keep youth together.

9.1 Recommendations

The absence of conclusive evidence on YLP impact suggests that further studies will be needed to ascertain the impact of the programme. Given the short period between baseline and endline data collection, there is need for a follow up study that should be commissioned after another 12 months or more to measure YLP impact at 2-3 years.

Encourage the youth to investment in skills-based projects. MGLSD needs to make investment in skills-based projects appealing to the youth. It could ring-fence the allocation for skills development. It could also give more incentives to groups that request for skills-based funding, e.g. more funding allocation, longer gestation period for repayment, lower interest, etc.

The salience of potentially harmful behavioural aspects related to GBV calls for an urgent action from the implementers of YLP to involve beneficiaries' partners and other household members in all the stages of project implementation. In other words, YLP should not target individual beneficiaries but households and perhaps the whole community where they live. The involvement of other members from beneficiary households is for purposes of providing moral support and having realistic expectations from their benefiting relatives.

There is need to de-politicise the YLP. YLP needs to be delinked from the prevailing perception that it is an initiative for supporters of some politicians as opposed to being a government programme for all the youth in the country. MGLSD needs to intensify its awareness raising campaigns about the aims and objectives, and implementation modalities of the programme in all parts of the country. There should be sanctions for politicians and other officials who misinform the youth about the programme.

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Appendices

A regression that considers the interaction of treatment and female dummies to help us ascertain whether, for each of the outcome variables, the difference between males and females is statistically significant. This was conducted on only the endline sample, without considering any covariates. Note also that the standard errors were clustered at YLP group level.

Table A-L: Regressions of outcome variables, treatment and male interactions

Appendix A	(1) Total weekly cash as stated by the youths	(2) Sum of weekly cash earnings across the 35 occupations	(3) Number of assets owned	(4) Composite index of durable assets
Treatment	-14138.1	-12406.3	0.395	0.0795
P-value	(0.112)	(0.240)	(0.383)	(0.076)
Female	-33761.4***	-28509.7*	0.196	0.122
P-value	(0.000)	(0.016)	(0.708)	(0.120)
Treatment X Female	20772.6	3725.2	-1.060	-0.150
P-value	(0.087)	(0.804)	(0.104)	(0.106)
Constant	86267.2***	99101.8***	13.55***	-0.168***
P-value	(0.000)	(0.000)	(0.000)	(0.000)
Observations	1417	1529	1556	1556
Adjusted. R^2	0.009	0.007	0.001	0.001

Appendix B	(1) Prevalence of youth tobacco consumption	(2) Prevalence of youth alcohol consumption	(3) Prevalence of violence in youth household
Treatment	-0.00184	-0.0208	-0.00184
P-value	(0.810)	(0.562)	(0.913)
Female	-0.0112	-0.121***	0.00735
P-value	(0.107)	(0.000)	(0.661)
Treatment X Female	-0.00162	0.00941	0.0129
P-value	(0.848)	(0.843)	(0.589)
Constant	0.0147*	0.260***	0.0515***
P-value	(0.014)	(0.000)	(0.000)
Observations	1556	1556	1556
Adjusted. R^2	0.002	0.018	-0.001

Appendix C	(1) Overall HH financial situation	(2) Ability to obtain another loan	(3) Where the loan (1M) is obtained from	(4) Loan possession	(5) Average amount of loan borrowed
Treatment	0.0533	-0.0196	-0.114	0.135***	736772.9
P-value	(0.443)	(0.499)	(0.191)	(0.000)	(0.443)
Female	0.112	-0.111**	-0.0254	-0.0107	-1170950.4
P-value	(0.160)	(0.002)	(0.808)	(0.746)	(0.176)

Treatment X Female	-0.0161	0.0511	0.210	-0.0908*	462310.5
P-value	(0.869)	(0.271)	(0.131)	(0.049)	(0.664)
Constant	3.206***	0.806***	2.783***	0.201***	2139367.1*
P-value	(0.000)	(0.000)	(0.000)	(0.000)	(0.012)
Observations	1556	1556	838	1556	378
Adjusted. R^2	0.002	0.008	0.001	0.019	0.005

Appendix D	(1) Possession of bank account	(2) Participation in group savings
Treatment	0.0619	-0.0643*
P-value	(0.061)	(0.043)
Female	-0.118***	-0.0649
P-value	(0.000)	(0.058)
Treatment X Female	-0.0667	0.0999*
P-value	(0.099)	(0.031)
Constant	0.252***	0.750***
P-value	(0.000)	(0.000)
Observations	1556	1556
Adjusted. R^2	0.034	0.002

Appendix E	(1) Youth participation in community organizations, councils	(2) Index of citizen participation
Treatment	-0.0435**	-0.0980
P-value	(0.003)	(0.161)
Female	-0.0585**	-0.308***
P-value	(0.003)	(0.000)
Treatment X Female	0.0440	-0.0240
P-value	(0.117)	(0.809)
Constant	0.975***	2.017***
P-value	(0.000)	(0.000)
Observations	1556	1556
Adjusted. R^2	0.007	0.028

Appendix F	(1) Number of hours worked per day	(2) Work throughout the year, or seasonally/once in a while	(3) Number of hours worked per day on skilled occupations	(4) Nature of payment: cash and/or in-kind, or not paid
Treatment	-0.0456	0.0614	-0.161	-0.00735
P-value	(0.898)	(0.090)	(0.693)	(0.810)
Female	0.198	-0.0229	-0.795	-0.0761*
P-value	(0.615)	(0.564)	(0.149)	(0.021)
Treatment X Female	-0.329	-0.0225	0.923	0.0726

P-value	(0.508)	(0.674)	(0.187)	(0.083)
Constant	9.244***	0.576***	7.816***	0.824***
P-value	(0.000)	(0.000)	(0.000)	(0.000)
Observations	1556	1449	554	1556
Adjusted. R^2	-0.001	0.002	-0.000	0.003

Appendix G	(1) Total number of FTE employees	(2) No. of FTE employees (family members)	(3) No. of FTE employees (non-family members)
Treatment	0.284	0.200	0.457
P-value	(0.073)	(0.073)	(0.318)
Female	-0.0624	0.273*	0.595
P-value	(0.802)	(0.050)	(0.599)
Treatment X Female	-0.359	0.0548	-1.179
P-value	(0.216)	(0.829)	(0.354)
Constant	1.277***	1.447***	3.200***
P-value	(0.000)	(0.000)	(0.000)
Observations	1556	593	314
Adjusted. R^2	0.002	0.011	-0.006

Appendix H	(1) Keeping records	(2) Registering businesses	(3) Paying business taxes
Treatment	-0.00123	0.0362	0.0263
P-value	(0.974)	(0.245)	(0.428)
Female	-0.155***	-0.0985**	-0.0879*
P-value	(0.000)	(0.003)	(0.021)
Treatment X Female	-0.0153	-0.0179	-0.00567
P-value	(0.753)	(0.664)	(0.905)
Constant	0.431***	0.223***	0.299***
P-value	(0.000)	(0.000)	(0.000)
Observations	1556	1556	1556
Adjusted. R^2	0.025	0.017	0.009

Appendix I	(1) Educational expenses for children and family members	(2) Educational expenses for non-family members	(3) Own educational expenses
Treatment	60279.9*	122749.8	-1565.2
P-value	(0.021)	(0.221)	(0.995)
Female	81523.4*	-51658.0	-361670.5
P-value	(0.011)	(0.530)	(0.151)
Treatment X Female	-44363.9	-77756.2	560208.9
P-value	(0.341)	(0.520)	(0.275)

Constant	186742.6***	278081.1***	924565.2***
P-value	(0.000)	(0.000)	(0.000)
Observations	1530	142	76
Adjusted. R^2	0.006	0.005	-0.000

Appendix J	(1) Health expenses for children and family members	(2) Health expenses for non-family members	(3) Own health expenses
Treatment	4435.5	-24786.3	11962.7
P-value	(0.117)	(0.363)	(0.171)
Female	-3338.8	6732.1	-1135.1
P-value	(0.246)	(0.829)	(0.878)
Treatment X Female	-345.5	-11852.1	-2681.5
P-value	(0.936)	(0.725)	(0.820)
Constant	22783.8***	59625.0*	44402.3***
P-value	(0.000)	(0.018)	(0.000)
Observations	1531	77	590
Adjusted. R^2	0.002	0.014	0.001

Appendix K	(1) Self-assessed wealth level, on a scale from 1 to 9	(2) Self-assessed respect level, on a scale from 1 to 9	(3) Self-assessed access to basic services such as education and health, on a scale from 1 to 9
Treatment	-0.0294	0.0680	0.102
P-value	(0.803)	(0.642)	(0.444)
Female	0.0389	-0.101	-0.180
P-value	(0.772)	(0.527)	(0.236)
Treatment X Female	-0.0553	-0.213	0.0559
P-value	(0.746)	(0.319)	(0.777)
Constant	4.103***	5.132***	5.270***
P-value	(0.000)	(0.000)	(0.000)
Observations	1556	1556	1556
Adjusted. R^2	-0.002	0.002	0.001

Appendix L	(1) Cash value of all the tools owned	(2) Cash value of all the tools given for free by Gov't or NGO
Treatment	624,353.4**	1,705,847.8*
P-value	(0.004)	(0.017)
Female	-366,819.6*	-1,246,500.0*
P-value	(0.036)	(0.014)
Treatment X Female	-539,114.4*	-1,123,434.8
P-value	(0.043)	(0.155)

Constant	1,072,000.0***	1,356,000.0**
P-value	(0.000)	(0.008)
Observations	953	89
Adjusted. R^2	0.026	0.133

Appendix N

	(1) Total weekly cash as stated by the youth	(2) Sum of weekly cash earnings across the 35 occupations	(3) Number of assets owned	(4) Composite index of durable assets
Contrast (1 vs 0)	6296.3	6004.1	0.576	0.183***
P-value	(0.432)	(0.509)	(0.169)	(0.001)
Contrast (2 vs 0)	9099.2	15978.2	1.348**	0.0457
P-value	(0.254)	(0.115)	(0.007)	(0.402)
Mean (0)	65056.3	75409.0	13.07	-0.182
Observations	1417	1529	1556	1556
F-stat	0.694	1.246	3.714	7.229
Prob > F	0.500	0.289	0.0253	0.0008

p-values in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix O

	(1) Prevalence of youth tobacco consumption	(2) Prevalence of youth alcohol consumption	(3) Prevalence of violence in youth household
Contrast (1 vs 0)	-0.00251	-0.0706*	0.00935
P-value	(0.645)	(0.033)	(0.565)
Contrast (2 vs 0)	-0.000644	-0.0252	-0.0273
P-value	(0.917)	(0.510)	(0.088)
Mean (0)	0.0100	0.234	0.0602
Observations	1556	1556	1556
F-stat	0.115	2.518	3.024
Prob > F	0.892	0.0820	0.0498

p-values in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix P

	(1) HH financial situation	(2) Ability to obtain another loan	(3) Where the loan (1M) is obtained from	(4) Loan possession	(5) Average amount of loan borrowed
Contrast (1 vs 0)	-0.116	0.0541	-0.0832	0.123***	373525.8
P-value	(0.069)	(0.055)	(0.252)	(0.000)	(0.566)
Contrast (2 vs 0)	-0.192**	-0.0359	-0.0642	0.142***	138188.7
P-value	(0.008)	(0.265)	(0.513)	(0.000)	(0.837)
Mean (0)	3.368	0.754	2.796	0.172	2122024.5
Observations	1556	1556	838	1556	378
F-stat	3.761	4.752	0.679	14.86	0.165
Prob > F	0.0241	0.0092	0.508	0.0000	0.848

p-values in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix Q

	(1) Possession of bank account	(2) Participation in group savings
Contrast (1 vs 0)	0.134***	0.0138
P-value	(0.000)	(0.678)
Contrast (2 vs 0)	0.0829**	0.0639*
P-value	(0.005)	(0.049)
Mean (0)	0.159	0.687
Observations	1556	1556
F-stat	11.29	2.117
Prob > F	0.0000	0.122

p-values in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix R

	(1) Youth participation in community organizations, councils	(2) Index of citizen participation
Contrast (1 vs 0)	-0.0401*	0.0516
P-value	(0.029)	(0.429)
Contrast (2 vs 0)	0.00557	0.208**
P-value	(0.713)	(0.004)
Mean (0)	0.950	1.764
Observations	1556	1556
F-stat	3.225	4.240
Prob > F	0.0409	0.0151

p-values in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix S

	(1) Number of hours worked per day	(2) Number of days worked in a week
Contrast (1 vs 0)	-0.0503	0.166
P-value	(0.884)	(0.186)
Contrast (2 vs 0)	0.632	0.167
P-value	(0.068)	(0.195)
Mean (0)	9.073	4.684
Observations	1556	1556
F-stat	2.272	1.148
Prob > F	0.105	0.318

p-values in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix T

	(1) Total number of FTE employees	(2) No. of FTE employees (family members)	(3) No. of FTE employees (non-family members)
Contrast (1 vs 0)	0.388*	0.0644	-0.153
P-value	(0.022)	(0.686)	(0.811)

Contrast (2 vs 0)	0.123	-0.0269	-0.741
P-value	(0.494)	(0.818)	(0.301)
Mean (0)	1.171	1.660	3.729
Observations	1556	593	314
F-stat	2.714	0.166	0.859
Prob > F	0.0676	0.848	0.425

p-values in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix U

	(1) Keeping records	(2) Registering businesses	(3) Paying business taxes
Contrast (1 vs 0)	0.0605	0.0259	0.0202
P-value	(0.088)	(0.381)	(0.521)
Contrast (2 vs 0)	0.0944**	-0.00619	0.00776
P-value	(0.007)	(0.826)	(0.795)
Mean (0)	0.321	0.194	0.269
Observations	1556	1556	1556
F-stat	3.739	0.670	0.206
Prob > F	0.0247	0.512	0.814

p-values in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix V

	(1) Educational expenses for children and family members	(2) Educational expenses for non-family members	(3) Own educational expenses
Contrast (1 vs 0)	112758.4***	97677.5	21011.7
P-value	(0.000)	(0.220)	(0.933)
Contrast (2 vs 0)	26366.8	76599.0	348671.8
P-value	(0.335)	(0.404)	(0.253)
Mean (0)	196942.6	255239.1	755806.5
Observations	1530	142	76
F-stat	8.684	0.846	0.752
Prob > F	0.0002	0.432	0.475

p-values in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix W

	(1) Health expenses for children and family members	(2) Health expenses for non-family members	(3) Own health expenses
Contrast (1 vs 0)	8930.4**	-28696.5	16553.9*
P-value	(0.004)	(0.177)	(0.046)
Contrast (2 vs 0)	-2873.2	-39325.6*	-9091.9
P-value	(0.249)	(0.045)	(0.145)
Mean (0)	21610.5	66520	46152.0
Observations	1531	77	590
F-stat	7.788	2.342	6.829
Prob > F	0.0005	0.104	0.00125

p-values in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix X

	(1) Self-assessed wealth level, on a scale from 1 to 9	(2) Self-assessed respect level, on a scale from 1 to 9	(3) Self-assessed access to basic services such as education and health, on a scale from 1 to 9
Contrast (1 vs 0)	0.211	0.347*	0.361**
P-value	(0.059)	(0.014)	(0.004)
Contrast (2 vs 0)	0.440***	0.509***	0.238
P-value	(0.000)	(0.001)	(0.081)
Mean (0)	3.898	4.829	5.079
Observations	1556	1556	1556
F-stat	6.508	5.823	4.233
Prob > F	0.00166	0.00323	0.0152

p-values in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix Y: Multiple Hypothesis Testing

Family Wise Error Rate (FWER), the chance of a false positive in at least one hypothesis test was controlled by conducting a Holm-Bonferroni adjustment. A 5% level of significance was considered as a benchmark for rejecting or accepting the hypothesis under study.

The adjusted p-values are based on the following formula:

$P^*_i = P_i * (m - i + 1)$; where m=number of tests; i is the rank of the i^{th} hypothesis.

The table below shows the unadjusted and adjusted p-values of the ITT without covariates.

Alternative Hypotheses	Unadjusted p-values	Adjusted p-values
1. We anticipate that youth in the treatment group will exhibit significantly increased total earnings compared to those in the control group.	0.556	1.000
2. We anticipate that youth in the treatment group will exhibit significantly increased durable assets earnings compared to those in the control group.	0.179	1.000
3. We anticipate that fewer youth in the treatment group will smoke tobacco compared to those in the control group.	0.458	1.000
4. We anticipate that fewer youth in the treatment group will consume alcohol compared to those in the control group.	0.045**	0.990
5. We anticipate that fewer youth in the treatment group will have violence in their households compared to those in the control group.	0.742	1.000
6. We anticipate that youth in the treatment group will exhibit significantly better overall HH financial situation compared to those in the control group.	0.470	1.000
7. We anticipate that more youth in the treatment group will have higher ability to obtain another loan compared to those in the control group.	0.704	1.000
8. We anticipate that more youth in the treatment group will possess loans compared to those in the control group.	0.104	1.000
9. We anticipate that youth in the treatment group will exhibit significantly higher amounts of loans compared to those in the control group.	0.629	1.000
10. We anticipate that more youth in the treatment group will possess bank accounts compared to those in the control group.	0.195	1.000

11. We anticipate that more youth in the treatment group will participate in group savings compared to those in the control group.	0.520	1.000
12. We anticipate that more youth in the treatment group will participate in community organizations, councils compared to those in the control group.	0.061*	1.000
13. We anticipate that more youth in the treatment group will engage/volunteer in community activities compared to those in the control group.	0.159	1.000
14. We anticipate that youth in the treatment group will exhibit significantly increased number of hours worked per day compared to those in the control group.	0.044**	1.000
15. We anticipate that more youth in the treatment group will work throughout the year compared to those in the control group.	0.104	1.000
16. We anticipate that youth in the treatment group will exhibit significantly increased number of hours worked per day on skilled occupations compared to those in the control group.	0.628	1.000
17. We anticipate that more youth in the treatment group will work for cash and/or in-kind compared to those in the control group.	0.344	1.000
18. We anticipate that youth in the treatment group will have an increased number of FTE employees compared to those in the control group.	0.706	1.000
19. We anticipate that youth in the treatment group will have an increased number of FTE employees (family members) compared to those in the control group.	0.325	1.000
20. We anticipate that youth in the treatment group will have an increased number of FTE employees (non-family members) compared to those in the control group.	0.859	0.859
21. We anticipate that more youth in the treatment group will keep business records compared to those in the control group.	0.399	1.000
22. We anticipate that more youth in the treatment group will register their businesses compared to those in the control group.	0.679	1.000
23. We anticipate that more youth in the treatment group will pay business taxes compared to those in the control group.	0.192	1.000
*** p<0.01, ** p<0.05, * p<0.1		

From the above results, if FWER are controlled, we do not reject any of the null hypotheses at 5% level of significance.