MAKERERE UNIVERSITY

Assessing the

Impact of Luwero Rwenzori Development Programme

to Economic Welfare of the People in Luwero Triangle and Rwenzori Sub-Region

THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

Foreign, Commonwealth & Development Office

ASSESSING THE **IMPACT OF LUWERO RWENZORI DEVELOPMENT PROGRAMME** TO ECONOMIC WELFARE OF THE PEOPLE IN LUWERO TRIANGLE AND RWENZORI SUB-REGION[1]

[1] *Acknowledgement: We acknowledge the support provided by Ministry of Finance, Planning and Economic Development of the Republic of Uganda and World Bank.*

CONDUCTED BY:

Public Investment Management Systems (PIMS) Centre of Excellence
School of Economics (SoE) Makerere University

RESEARCH TEAM:

- **DR. JOHN SSERUYANGE** School of Economics, Makerere University, Kampala and Excellence for Public Infrastructure Management, Makerere University.
- **DR. WILLY KAGARURA** School of Economics, Makerere University, Kampala and Excellence for Public Infrastructure Management, Makerere University.
- **DR. IBRAHIM MUKISA** School of Economics, Makerere University, Kampala and Excellence for Public Infrastructure Management, Makerere University.
- **ROSELYNE KYARISIIMA** Ministry of Finance, Planning and Economic Development.
- **SUFIAN KABAGAMBE** National Planning Authority.

FUNDED BY:

The World Bank

DESIGN & LAYOUT:
Dinah Amoding

ABSTRACT

Ever since its independence, Uganda has experienced a number of political unrests including civil upheavals, rebel insurgencies and a war. The most recent ones are the National Resistance bush war of 1981- 1986 and the Allied Democratic Forces insurgency of 1996 – 2003 that affected the socio-economic welfare of the people in Luwero triangle and Rwenzori sub-region. Those political disturbances caused voluminous effects inter alia, loss of lives, destruction of property and social infrastructure, psycho-social disorders, displacement of settlements and disruptions in educational opportunities. Per se, the government implemented the Luwero Rwenzori Development Programme with an aim of reviving the socio-economic status of the people in those areas through enhancing household incomes, boosting their economic activities (overall economic empowerment) and social mobilisation.

Although Luwero Rwenzori Development Programme focused on enhancing household incomes, economic empowerment and social mobilization through programmes like infrastructure development, water and sanitation projects, expansion of energy supply, this study investigates the impact of the programme to household incomes and their overall economic empowerment.

We use T-test inferential statistical technique and Ordinary Least Squares (OLS) estimator on retrospective data, collected from Luwero Rwenzori Development Programme beneficiaries and non-beneficiaries in Kiboga and Mubende districts. Generally, our main results suggest that the programme has a positive impact on household asset holding, food security and household expenditure on social services particularly, education and health. We also document more loan defaulters amongst programme beneficiaries compared to non-beneficiaries. From a policy perspective, our results suggest that the design and contents of any support programmes are key ingredients to leverage the economic empowerment and self-reliance of the beneficiaries and also suggest for increased monitoring of government loan schemes to ensure recovery.

Contents

Appendix

List of Tables

List of Figures

1.0 INTRODUCTION

Ever since its independence, Uganda has experienced a number of political distresses including civil conflicts, rebel insurgencies and a commonly known National Resistance bush war of 1981- 1986. Many of such distresses have been caused by some governments becoming authoritarian during their reign in power resulting into politically motivated riots and revolts (Deininger, 2003).

Intrinsically, the persistence of such revolts resulte in numerous deaths and loss of property. Klugman et al., (1999) reports that from 1970 to 1986 under the governments of Idi Amin (1971-79) and Milton Obote (1980-1985) between 800,000 and 1,000,000 lives were lost in state terror, civil strife and ethnically motivated assaults. The Lord's Resistance Army (LRA) that is believed to have started in 1987 in the northern part of the country also caused a number deaths, loss of property and abduction of over 25,000 children who were either forced into fighting, sexual buddies or domestic servants (Pham et al., 2008). Many of the abductees became deformed due to horrific injuries caused by the rebel leaders e.g. through cutting off of their ears, noses and lips (see Pham et al., 2008).

The bush war of 1981 – 1986 (National Resistance bush war) was fought between then, the ruling government and the National Resistance Army (NRA). The war was fought in Luwero triangle and in some parts of Rwenzori sub-region causing socio-economic destabilization and destruction of livelihoods and lives. Rwenzori sub region was later, also affected by the Allied Democratic forces (ADF) insurgency that also terrorized the region.

To counteract, the socio-economic destructions that were caused by National Resistance bush war (1981 – 1986) and the Allied Democratic forces insurgences (1996 – 2003), the government launched the Luwero Rwenzori Development Program (LRDP) in 2010 to improve the livelihoods of the people in Luwero triangle and Rwenzori sub-region. Precisely, the LRDP was introduced as a special development programme to address the adverse effects caused by the bush war and ADF insurgency. Although, LRDP involved a number of interventions that were aimed at enhancing household incomes and their overall economic empowerment combined with social mobilisation of the communities, this study explicitly investigates the impact of LRDP to household incomes and their overall economic empowerment.

2.0 LUWERO RWENZORI DEVELOPMENT PROGRAMME IN DETAIL

2.1 What is Luwero Rwenzori Development Programme?

Luwero Rwenzori Development Program (LRDP) was a comprehensive development programme designed by the Office of the Prime Minister (OPM) to revive the socio-economic status of the people in Luwero Triangle and Rwenzori sub-region. Luwero triangle and Rwenzori sub-region were greatly affected by the National Resistance bush war of 1981- 1986 and the Allied Democratic Forces (ADF) insurgency of 1996 – 2003. The two insurgencies led to loss of lives, destruction of property, psycho-social disorders, disruptions in economic activity and family care, losses in educational opportunities, displacement of settlements and destruction of socio-economic infrastructure.

To revert such disruptions, the Government of Uganda has for years implemented a number of programmes aimed at improving the socio-economic conditions of the people not only in Luwero triangle and Rwenzori sub-region but across the country. Such programmes include e.g.

- Entandikwa Scheme,
- Prosperity for All,
- Operation Wealth Creation (OWC),
- National Agricultural Advisory Services (NAADS),
- Construction of social infrastructure among others.

In 2007, the government observed that all aforementioned programmes were not comprehensive enough to address the catastrophic effects caused by the two wars in Luwero triangle and Rwenzori sub-region. Thus, Cabinet, directed the Office of the Prime Minister (OPM) to design a development programme specificially for the two regions. The implication for this was to implement a special development recovery programme to address the effects of the bush war and ADF insurgency. This far, the programme was designed as an affirmative action programme to improve the livelihoods of the people those areas (Luwero Triangle and Rwenzori sub-region).

2.2 Luwero Rwenzori Development Programme implementation and its contents

Guided by the overall goal of the programme "to redress the adverse socio-economic effects of the NRA liberation war (1981-86) and ADF insurgency (1996-2003), the programmes was implemented in 39 districts of Central and Western Uganda that suffered the effects of the NRA liberation war of 1981- 86 and the ADF insurgency of 1996 – 2003. These districts include Buliisa, Bundibugyo, Ntoroko, Ibanda, Isingiro, Kabarole, Kalangala, Kampala, Kamwenge, Kasese, Kayunga, Kiboga, Kyakwanzi, Kiruhura, Kyenjojo, Kyegegwa, Luwero, Lyantonde, Masaka, Bukomansimbi, Kalungu, Lwengo, Mbarara, Mityana, Mpigi, Gomba, Butambala, Mubende, Mukono, Buikwe, Buvuma, Nakaseke, Nakasongola, Wakiso, Rakai, Bunyagabu, Buhweju, Rubirizi, and Sembabule (GoU, 2020).

The programme aimed to enhance household incomes and their overall economic empowerment combined with social mobilisation of the people in Luwero triangle and Rwenzori sub-region. It was implemented to benefit the common population, veterans and ex-combatants, orphans, widows/widowers, elderly, the unemployed youth, people with disabilities, people living with HIV/AIDS, child headed households, artisans and micro entrepreneurs.

A number of support programmes were implemented including:

1) procurement and distribution of farm inputs like farm seeds and seedlings (e.g. coffee seedlings, pineapple suckers, banana suckers, cassava cuttings, mango seedlings etc.), poultry, goats, heifers, bulls;
2) support to income generating activities e.g. supporting brick making projects, provision of saloon equipment, milling machines, provision of milk coolers, hatcheries, coffee huller and pulpers, support for carpentry workshops, treadle pumps for on farm irrigation, ox-ploughs etc.)
3) infrastructural development e.g. roads, schools (through construction of classrooms, staff houses, dormitory blocks etc.) and health facilities (through construction of maternity blocks, outpatient building, staff houses; etc.);
4) Water and sanitation projects e.g. drilling of bore holes and construction of valley tanks and
5) energy supply (e.g. through extension of power lines, solar power installations etc.) in those areas.

Although, LRDP involved a number of interventions aimed at enhancing household incomes and their overall economic empowerment combined with social mobilisation of the communities, this study explicitly investigates the impact of LRDP to household incomes and their overall economic empowerment. Precisely, we investigate whether LRDP has a positive impact on the socio-economic wellbeing of the people in Luwero triangle and Rwenzori sub-region. We test for this through comparing of the mean outcomes of the LRDP beneficiaries to the mean outcomes of the non-beneficiaries. We use retrospective data collected from both groups (beneficiaries and non-beneficiaries) from Kiboga and Mubende districts.

2.3 Distribution channels for Luwero Rwenzori Development Programme Support

Basing on the information obtained from the district programme focal persons, it was revealed that LRDP support was distributed through two channels:

(1) direct transfer (LRDP support was delivered to intended beneficiaries directly — to individuals

(2) groups (LRDP support was delivered to intended beneficiaries through self-help formed groups). We also learnt that groups were mainly formed to guide the transfer of funds.

In other words, cash transfers required intending beneficiaries to form groups or SACCOs through which funds could passed to group members.

3.0 METHODOLOGY

3.1 Data and Experimental design

To test whether LRDP had a positive impact on socio-economic welfare of the people in Luwero - Rwenzori sub-regions we conducted a retrospective evaluation and compare the mean outcomes of the programme beneficiaries to mean outcomes of non-beneficiaries. Retrospective evaluations are conducted after the program implementation phase.

Retrospective evaluation has been applied in medical science to test the effectiveness of a certain treatment (see Martin et al., 2007). In medical science, retrospective evaluation is normally applied in comparing the severity of health hazards before and after administering the treatment.

In economics, it is normally applied in absence of baseline data. We are pretty aware that when using retrospective evaluation, it is important for the investigator to address two important issues: (1) the comparability of the treatment group to control group (this we test and report results in table 1) and (2) contamination arising from members in the treatment arm and/or control arm having access to other interventions that can influence the intended outcome (the possible discrepancy in accessing other government programmes is tested and results are presented in table 1 but, we also control for access to other government support programmes in our regression analysis).

As earlier mentioned, LRDP was implemented in 39 districts (Buliisa, Bundibugyo, Ntoroko, Ibanda, Isingiro, Kabarole, Kalangala, Kampala, Kamwenge, Kasese, Kayunga, Kiboga, Kyakwanzi, Kiruhura, Kyenjojo, Kyegegwa, Luwero, Lyantonde, Masaka, Bukomansimbi, Kalungu, Lwengo, Mbarara, Mityana, Mpigi, Gomba, Butambala, Mubende, Mukono, Buikwe, Buvuma, Nakaseke, Nakasongola, Wakiso, Rakai, Bunyagabu, Buhweju, Rubirizi, and Sembabule). However, due to logical reasons, this study was conducted in two randomly selected districts (Kiboga and Mubende). Through a collaboration with the district programme focal persons, we obtained information that LRDP was implemented in three sub-countries of Kiboga (Bukomero, Dwaniro and Muwanga) and in seven sub-countries of Mubende (Butoloogo, Madudu, Nabingola, Kibalinga, Kiruuma, Kyeeza and Kyomya).

For our evaluation, we selected two comparison groups i.e. beneficiaries (subjects that received LRDP support) and non- beneficiaries (subjects that did not receive LRDP support). From each programme focal person, we obtained lists of subjects who benefited from the programme per sub-county and lists of subjects who had registered for the programme but, never accessed LRDP support. From each list, we randomly selected subjects for each experimental arm and in total, the study involved 657 subjects (336 in the treatment arm — beneficiaries and 321 in the control arm — non-beneficiaries). Data was collected in September and October, 2021 from both groups.

The survey contained different modules including a module that captured information on demographic characteristics of the participants and their respective households, agricultural activities (crops grown, animal reared, poultry etc.) module, a market accessibility module, savings, financial accessibility and new investments module plus a food security and social service accessibility module.[2]

To measure the impact of LRDP on the socio-economic welfare of the people, we use a number of indicators including: (1) sales revenue resulting from farm sales; (2) sources of food for home consumption; (3) number of meals consumed per day; (4) number of times that a household changes meals per week; (5) number of times a household consumes milk or sugar; (6) education attainment and health care accessibility; (7) savings and financial accessibility behaviours and (8) the stock of assets owned by the household.

3.2 Identification strategy and empirical results

In Table 1 we summarize basic demographic information of our subjects, distinguishing between respondents from beneficiaries and non-beneficiaries groups. We observe no significant differences between the groups, except for first occupation (the occupation that is considered to be the main occupation of the household). To be more specific, we observe that 74.1 percent of respondents from the beneficiaries group consider farming as the first household occupation compared to 64.5 percent of their counterparts in the non-beneficiaries group. This result seems not surprising because LRDP support involved providing of seeds, seedlings and other farm inputs which might have triggered more investment in agriculture on the side of programme beneficiaries[3]. Additionally, on average, respondents are less than 43 years old, and majority of them are married or engaged. Over 80 percent of the respondents' households in both groups are headed by men, and over 60 percent completed primary level of education in both groups. Averagely, respondents have over five (own) children and each household has over six inhabitants. About 50 percent of the respondents in both groups have accessed other government programmes[4] like NAADs, Emyooga and Youth Livelihood Programs (YLP).

---

[2] *The data collection tool is presented in appendix 4.*

[3] *See figure 1 for the forms of support received by our respondents from LRDP beneficiaries*

[4] *In regression analysis, we include a dummy taking a value of 1 if the respondent/household received any other government support = 1, 0 otherwise and, a set of other controls from individual characteristics to increase the precision of our regression estimates.*

Table 1: Summary of respondents' demographics[5] .

Variables	Beneficiaries	N	Non-Beneficiaries	N	Differences	P-values
Age	42.8	336	41.5	321	1.285	0.220
Gender (Male)	0.571	336	0.545	321	0.026	0.499
Gender_HH_Head (Male)	0.830	336	0.807	321	0.024	0.435
Married_Engaged	0.795	336	0.769	321	0.025	0.435
Educ_Primary	0.601	336	0.636	321	-0.034	0.366
Own children	5.676	336	5.293	336	0.383	0.238
Household_size	6.506	336	6.380	321	0.126	0.602
Christians	0.780	336	0.735	321	0.045	0.183
First_Occup_farming	0.741	336	0.654	321	0.087	0.015
Second_Occup_farming	0.235	336	0.274	321	-0.039	0.252
Otherassist	0.536	336	0.486	321	0.050	0.203

[5] *Detailed variable definition is presented in appendix 1.*

4.0 EMPIRICAL RESULTS

Empirical results

Turning to analysis, first, we follow Sumner, (2008) to test whether access to LRDP has an impact on agricultural activities and farm sales. Sumner, (2008) found farm subsidies to have stimulated farm production for government favoured crops. This is supported by Wijetunga & Saito, (2017) who find fertiliser subsidy to have an effect on rice production in Sri Lanka. Moreover, Bezlepkina et al., (2005) find farm subsidies to positively influence farm profits. The key lesson from Bezlepkina et al., (2005), Sumner, (2008) and Wijetunga & Saito, (2017) is that providing of farm subsidies influences farm production and farm profitability. Because, LRDP involved provision of farm inputs, we hypothesise that LRDP beneficiaries produce more agricultural outputs and possibly, earn more revenue from farm sales compared to their counterparts who never received LRDP support. We test this using T-test inferential statistical technique to check whether there is a significant difference between means (quantities of output and revenue from farm sales) of LRDP beneficiaries and non-beneficiaries. The results are presented in tables 2 and 3.

Table 2: Crop harvests and revenues from farm sales

Crop harvests (Means)							
Crops	Beneficiaries	N	Non-Beneficiaries	N	Difference	P-values	
Matooke (bunches)	535.58	273	165.46	220	370.12	0.173	
Maize (sacks)	12.98	290	10.83	247	12.91	0.459	
Beans (sacks)	3.93	300	4.28	260	-0.35	0.838	
Irish potatoes (sacks)	5.24	145	4.66	94	0.57	0.610	
Sweet potatoes (sacks)	2.23	252	2.13	196	0.11	0.787	
Cassava (sacks)	4.28	276	2.68	223	1.61	0.005	
Coffee (sacks)	4.81	158	4.31	104	0.50	0.491	
Soya beans (Sacks)	0.71	21	0.45	20	0.45	0.026	
Tomatoes (Boxes)	30.27	35	15.73	33	14.54	0.423	
Onions (Sacks)	5.00	37	5.14	14	-0.14	0.909	
Cabbage (Number)	705.56	17	276.88	13	428.67	0.252	
Ground nuts (Sacks)	3.49	188	2.19	112	1.30	0.003	
Green pepper Sacks)	3.07	7	1.56	8	1.51	0.379	

Notes: Revenues are computed per season (six months)

	Revenues from crop sales (Means)					
	Beneficiaries	N	Non-Beneficiaries	N	Difference	P-values
	606870.8	271	235355.1	214	371515.7	0.021
	959473.9	287	492782.2	245	466691.6	0.025
	594023.5	298	186928.6	252	407095.0	0.013
	410000.0	142	396877.8	90	13122.2	0.913
	24378.5	251	31418.9	191	-7040.4	0.530
	115769.2	273	76144.5	218	39624.7	0.129
	91548.4	155	704910.0	100	86638.4	0.516
	24809.5	21	12500.0	16	12309.5	0.541
	1144429.0	35	1242833.0	30	-98404.8	0.828
	324594.6	37	230454.5	11	94140.1	0.700
	881764.7	17	451500.0	10	430264.7	0.496
	224122.3	188	134954.1	109	89168.2	0.015
	196000.0	6	145000.0	6	51000.0	0.760

Although we observe positive differences in terms of crop production between LRDP beneficiaries and non-beneficiaries, such differences are only significant for cassava, soya beans and ground nuts. However, in terms of revenues from farm sales, LRDP beneficiaries seem to be benefiting more from sales of matooke, maize, beans and ground nuts. The possible explanation for such a difference between production and revenue from farm sales can be attributed to some LRDP beneficiaries who are in groups that are tendered to supply some inputs like seeds and seedlings to other group members. In terms of animal rearing, positive and significant differences between number of animals owned by beneficiaries and non-beneficiaries manifest in only local breed goats, local breed pigs and in poultry (combined local and modified) [6] . The results remain robustly similar for revenues from the sale of those animals or chicken (see table 3).

Table 3: Number of animals or chicken owned by the household and revenues from their sales per year

Animals owned (Mean)							
Animals	Beneficiaries	N	Non-Beneficiaries	N	Difference	P-values	
Cows (Local type)	4.95	101	3.63	97	1.32	0.148	
Cows (Modified/hybrid)	4.98	46	5.93	27	-0.95	0.577	
Goats (Local type)	6.96	160	4.84	111	2.12	0.089	
Goats (Modified/hybrid)	6.81	16	13.13	8	-6.31	0.378	
Pigs (Local type)	6.02	182	4.58	116	1.43	0.031	
Pigs (Modified/hybrid)	8.22	18	3.00	8	5.22	0.231	
Sheep	5.421	38	4.84	25	0.58	0.632	
Poultry	15.09	336	9.42	321	5.67	0.035	

[6] We combine chicken because of public confusion between some local breeds and Kloirers (type of modified chicken). In fact some people rear Kloirers on free range as local chicken.

Note that from the results presented in tables 2 and 3, we fail to control for the potential accessibility to other government support programmes and also individual characteristics. Per se, we turn to regression analysis which allows for inclusion of control variables. In the regression analysis, we start by testing whether the provision of LRDP assistance has an effect on self-reliance in home food production and the household consumption behaviours.

So, we asked our respondents about the main source of food for home consumption, the number of meals they take a day, the number of times the household changes meals in a week, the number of times a household consumes milk or sugar in a week.
Specifically, we regress Y_{ij} (main source of food for home consumption, the number of meals they take a day, the number of times the household change meals in a week, the number of times a household consumes milk or sugar in a week) of the respondent i (i=1,..., 657) in village j on the beneficiaries' dummy b_k, a dummy (Other$_{assist}$ — takes 1 if a household received any other government support, 0 otherwise and a vector of controls derived from individual characteristics to increase the precision of our regression estimates.

	Revenues from animal sales (Means)					
	Beneficiaries	N	Non-Beneficiaries	N	Difference	P-values
	1057700.0	100	1189111.0	90	-131411.1	0.718
	1690000.0	45	891666.8	24	798333.3	0.247
	396437.5	160	141752.4	105	254685.1	0.013
	386875.0	16	1260000.0	5	-873125.0	0.215
	392456.1	182	254601.8	113	137854.3	0.017
	548235.3	17	360000.0	6	188235.3	0.683
	179473.7	38	163739.1	23	15734.6	0.816
	79383.9	336	50469.0	321	28914.94	0.039

The error term is represented by ε_i

$$Y_{ij} = \alpha + \beta D_k + \gamma \text{Other}_{\text{assist}} + \delta X_{ij} + \varepsilon_i$$

Logically, if LRDP improved household welfare in terms of increased self-reliance in own food production and improved household consumption behaviours, then we expect $\beta \geq 0$.
We use OLS to estimate the above specified model and report robust standard errors.

Table 4: Households' self-reliance in food production and their associated consumption behaviours

	Source_food_farm		Number_meals		
	1	2	3	4	
Beneficiaries	0.082 (0.026)***	0.078 (0.025)***	0.134 (0.044)***	0.128 (0.044)***	
Age		0.0002 (0.001)		-0.004 (0.002)*	
Gender_HH_Head		0.079 (0.057)		-0.024 (0.083)	
Married_Engaged		0.088 (0.053)*		0.082 (0.080)	
Educ_Primary		0.032 (0.027)		-0.132 (0.045)***	
Household_size		0.016 (0.004)***		-0.005 (0.008)	
Land_size		0.020 (0.009)**		0.008 (0.014)	
$Other_{assist}$		-0.022 (0.026)		0.132 (0.044)***	
Constant	0.826 (0.021)***	0.535 (0.068)***	2.589 (0.033)***	2.749 (0.107)***	
N	657	657	657	657	
R-Squared	0.015	0.100	0.014	0.057	

*Beneficiaries is a dummy variable taking 1 if the subject belongs to the group that received any assistance from Luwero Rwenzori Development Programme, 0 otherwise. Robust standard errors are reported in the parentheses. ***p < 0.01 ***p<0.05 and *p < 0.1.*

	Change_meals		Milk_conspn		Sugar_conspn	
	5	6	7	8	9	10
	0.306 (0.138)**	0.305 (0.136)**	0.476 (0.232)**	0.421 (0.231)*	0.396 (0.221)*	0.404 (0.216)*
		-0.016 (0.006)***		-0.0001 (0.010)		-0.034 (0.009)***
		0.053 (0.267)		0.092 (0.401)		-0.910 (0.447)**
		0.087 (0.248)		0.452 (0.381)		1.362 (0.418)***
		-0.138 (0.143)		-0.502 (0.243)**		-0.520 (0.220)**
		-0.006 (0.021)		0.005 (0.039)		-0.038 (0.038)
		-0.018 (0.036)		0.144 (0.080)*		0.053 (0.076)
		0.357 (0.139)**		0.520 (0.233)**		0.220 (0.217)
	3.209 (0.098)***	3.774 (0.344)***	2.931 (0.163)***	2.237 (0.531)***	4.598 (0.161)***	6.052 (0.512)
	657	657	657	657	657	657
	0.007	0.038	0.006	0.036	0.005	0.066

In models (1), (3), (5), (7) and (9) of table 4, we report parsimonious models in which we regress the outcome variable against the beneficiaries dummy and in models (2), (4), (6), (8) and (10), we expand the respective parsimonious models by including a set of controls. The results in all ten models indicate positive and statistically significant coefficients associated with the beneficiaries dummy. The level of significance ranges between 1% and 10% level. The estimated coefficients are stable especially by direction across all specifications which fits our hypothesis >0. Model (1) reveals that 91 percent of the LRDP beneficiaries mainly access food for home consumption from their own farms compared to 82.6 percent of the non-beneficiaries who mainly access food from own farms. The implication for this result is that accessibility to LRDP assistance increases the potential of households to expand on their farm production which has possibly translated into increased ability to produce own food. Putting it differently, LRDP reduces household food expenditure. Not surprisingly, perhaps, we also find married or engaged respondents, large families and households with large land sizes to be securing food, mainly from own farm.

Additionally, the results in model (3) indicate that LRDP beneficiaries averagely consume 2.72 meals a day compared to 2.59 meals/day for non-beneficiaries. The difference in the number of meals/per is significantly different from zero at the 1% level. Moreover, the impact of LRDP on the number of times a household changes meals in a week is also socio-economically meaningful because the estimates from the parsimonious model (5) suggest that LRDP beneficiaries have more changes in the number of meals per week compared to non-beneficiaries i.e. LRDP beneficiaries change meals by 0.306 times more than non-beneficiaries. This difference is statistically significant at 5% level. In relation to milk and sugar consumption per week, results in models (7) and (9) indicate positive and significant differences in the number of times, milk and sugar are consumed by LRDP benefiting households compared to their counterparts in the non-benefiting households. To be more specific, households that benefited from LRDP, consume milk and sugar by more 0.476 times (the difference is significantly at 5% level) and 0.396 times (the difference is significantly at 10% level) respectively compared to their counterparts that did not access LRDP support.

Is LRDP associated with education attainment and health care accessibility?

To assess whether LRDP has an impact on education attainment and health care accessibility, we asked a series of questions. First, we asked our respondents about the number of school going children who were attending school before covid, the type of schools they attended (public or private), how much in terms of school fees they were paying per term, the type of hospitals they access (public or private), and how much they spend on medical bills per every six months. We hypothesise that school attendance is associated with the financial strength of the household. Thus, we expect households that received LRDP support to have a higher potential of sending their children to school and also, be able to attend private schools, pay higher school fees than their counterparts that did not receive the support. In relation to health care accessibility, we also theorize that LRDP beneficiaries possess a higher potential to access private hospitals and possibly, pay higher medical bills than the programme non-beneficiaries.

Table 5: LRDP, education attainment and health care accessibility

	School attendance		Children Public_schools		Children Private_schools		
	1	2	3	4	5	6	
Beneficiaries	0.106 (0.029)***	0.100 (0.027)***	-0.023 (0.209)	-0.006 (0.195)	0.166 (0.188)	0.203 (0.172)	
Constant	0.779 (0.024)***	0.366 (0.070)***	2.9408 (0.143)***	0.688 (0.504)	2.954 (0.148)***	1.169 (0.448)**	
Controls	NO	YES	NO	YES	NO	YES	
N	639	639	277	277	378	378	
R-Squared	0.020	0.202	0.000	0.133	0.002	0.202	

*Beneficiaries is a dummy variable taking 1 if the subject belongs to the group that received any assistance from Luwero Rwenzori Development Programme, 0 otherwise. Robust standard errors are reported in the parentheses. ***p < 0.01 ***p<0.05 and *p < 0.1. Results in models (2), (4), (6), (8), (10) and (12) are estimated including controls used in table 4.*

In models (1), (3), (5), (7), (9) and (11), we again consider parsimonious specifications for various outcome variables, and then estimate more unrestricted models (2), (4), (6), (8), (10) and (12) in which we including a vector of controls. The first thing we observe in table 5 is that the beneficiaries dummy is positive and significant across all specifications except in models (3), (4), (5) and (6) which detail the impact of LRDP on the type of schools attended. To be more specific, results in models (3) to (6) indicate there is no significant difference between the type of schools attended by children from either a household that accessed LRDP support or from households that never received any support from LRDP. The possible explanation for such results is that parents prefer their children to attend schools in their proximity as a way of reducing on risks associated with distant schools. Frenette, (2004; 2006) reports that distance normally deters students from attending school especially from poor families. This is supported by Rahbari, et al., (2014) who report that long distances from home to schools contribute to school drops.

	School fees/term		Hospital access (public)		Medical expenses	
	7	8	9	10	11	12
	164276.6 (59870.9)***	155744.9 (56197.1)***	-0.146 (0.038)***	-0.149 (0.038)***	61198.0 (20948.0)**	62064.2 (21155.4)***
	422950.2 (37796.6)***	191137.9 (144532.9)	0.664 (0.026)***	0.424 (0.085)***	146884.7 (12886.3)**	98904.1 (39372.6)**
	NO	YES	NO	YES	NO	YES
	531	531	657	657	657	657
	0.013	0.108	0.005	0.060	0.013	0.055

Returning to model (1), the results seemingly suggest that households that received LRDP support have a higher number of school going children (of school going age) attending school . Precisely, the results show that 88.5 percent of the school going school in households that benefited from LRDP attend school compared to 77.9 percent of the school going children who attend school in households that never benefited from LRDP support. This difference is significant at 1% level. This ability of the LRDP benefiting households to send their children to school is further supported by their potential to pay higher school fees than the LRDP non-benefiting households(see model [7] — it shows that LRDP benefiting households pay UGX. 164,276.6 above the fees paid by LRDP non-benefiting households (UGX 422950.2). This difference is also significant at 1% level.

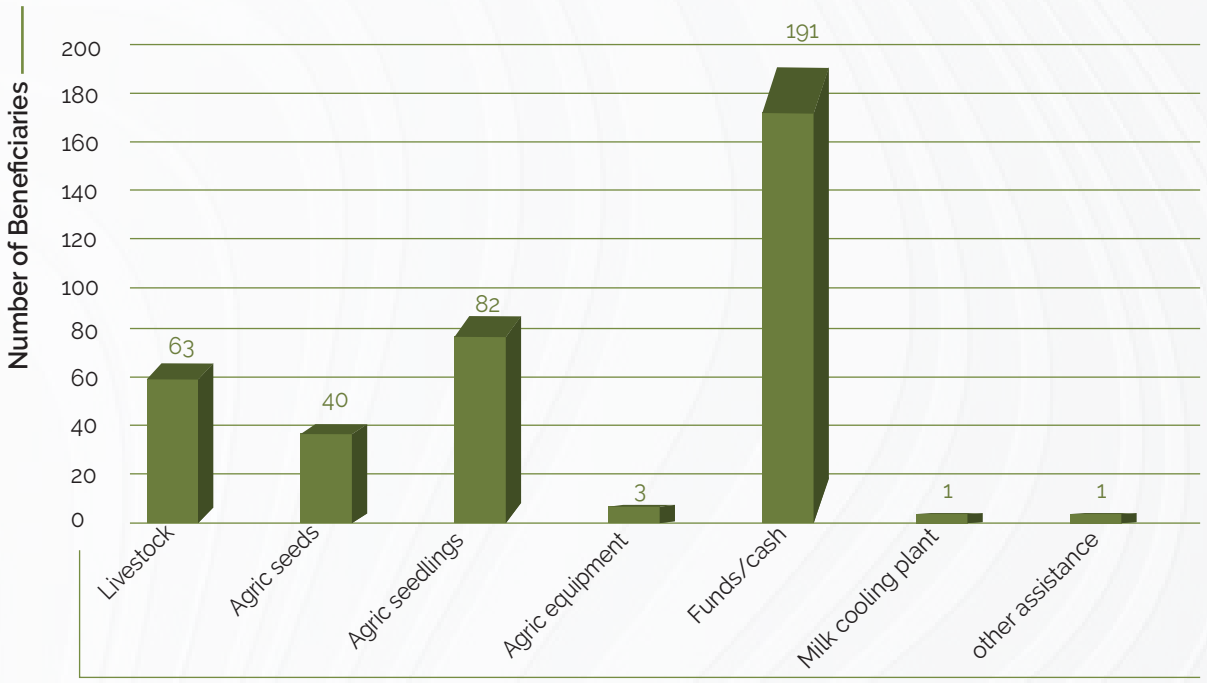
Next, we turn to health care accessibility. The results in model (9) demonstrates that public hospitals are mostly attended by households that never received LRDP support. Actually, 66.4 percent of the respondents from LRDP non-benefiting households use public hospitals as their main source of medical attention as compared to 51.5 percent from LRDP benefiting households. This result seems not surprising because, households that accessed LRDP are also associated with more asset holding which indicates better income status (see table 7). The results in model (9) are also supported by model (11) which shows that LRDP benefiting households spend slightly more money on medical expenses (more UGX 61,198.0 above the amount spent by non-beneficiaries — UGX 146884.7). This difference is also statistically significant at 1% level.

[7] *We admit that we remained silent about the level of attendance but only focused on school attendance.*

Has LRDP affected saving, financial accessibility and investment behaviours?

As earlier noted, the NRA bush war and ADF insurgency caused a lot of disturbances inter alia, loss of lives, destruction of property and disruptions of economic activity. Per se, all endeavours to redress such disturbances required a number of interventions that must suit vast populations with specific demographics. Figure 1 shows the forms of support received by our respondents from LDRP. The key observation that can be made from figure 1 is that some respondents received more than one form of support because our treated group totals to 336 respondents while the forms of support beneficiaries amount to 381 by count. The possible explanation for such a discrepancy is that some group leaders used their powers to get more than one form of support.

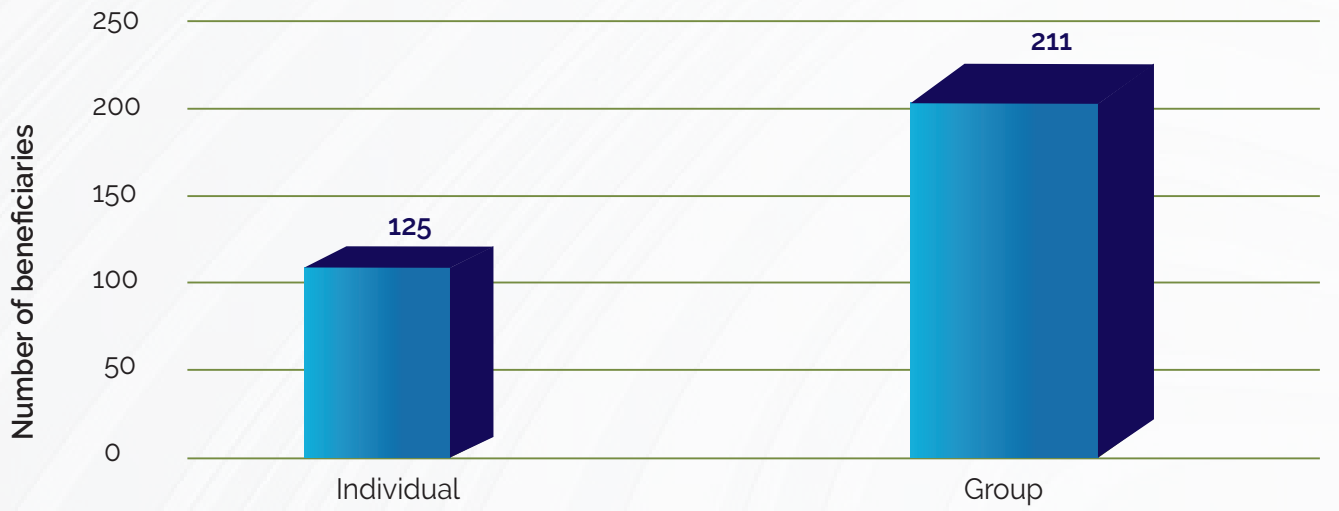
Figure 1: Forms of support received by respondents from LRDP



Source: Field survey data.

Taking a deeper look at figure 1 we observe that most of the LRDP support was in form of cash transfers followed by agricultural seedlings (coffee seedlings, pineapple suckers, banana suckers, cassava cuttings, mango seedlings etc.), livestock (mainly cows and goats) and then, agricultural seeds. Figure 2 shows 125 of 336 respondents from the LDRP beneficiaries group, received LRDP support directly (directly to individual households) while 211 respondents accessed assistance through groups.

Figure 2: Channels of assistance transfers



Because LRDP targeted beneficiaries were required to form groups or SACCOs to ease the transfer of support especially cash transfers, we postulate that LRDP beneficiaries are performing better in terms of financial management, financial inclusion and possibly, investment. We asked our respondents about their saving, financial accessibility and investment behaviors and results are presented in table 6.

Table 6: LRDP, Saving, financial accessibility and investment behaviours

	Saving account		Savings amount		Loan access		
	1	2	3	4	5	6	
Beneficiaries	0.162 (0.027)***	0.161 (0.027)***	601345.0 (188333.7)***	560265.2 (167014.5)***	0.298 (0.036)***	0.296 (0.036)***	
Constant	0.773 (0.023)***	0.871 (0.067)***	643591.9 (56151.0)***	368959.4 (421809.5)	0.455 (0.028)***	0.546 (0.087)***	
Controls	NO	YES	NO	YES	NO	YES	
N	657	657	657	657	657	657	
R-Squared	0.053	0.102	0.015	0.044	0.093	0.131	

*Beneficiaries is a dummy variable taking 1 if the subject belongs to the group that received any assistance from Luwero Rwenzori Development Programme, 0 otherwise. Robust standard errors are reported in the parentheses. ***p < 0.01 ***p<0.05 and *p < 0.1. Results in models (2), (4), (6), (8), (10) and (12) are estimated including controls used in table 4.*

Across all twelve models we find positive coefficients associated with the beneficiaries dummy, and in all models, these coefficients are statistically significant at 1% level. The estimated coefficients are stable across specifications. These models reveal that LRDP accessibility is associated with improved saving, financial accessibility and investment behaviours among the beneficiaries.

The results from all parsimonious models suggest that, first, 93.5 percent of the LRDP beneficiaries own a savings account (they mostly save with SACCOs, groups or via mobile money[8]) compared to 77.3 percent of the non-beneficiaries (see model 1).

Second, LRDP beneficiaries own UGX 601345.0 more in form of savings. To be more specific, LRDP beneficiaries' average savings total to UGX 1,244,936.9 while non-beneficiaries' average savings amount to UGX 643591.9 (see model 3)[9] .

Third, 75.3 percent of the LRDP beneficiaries have acquired at least a loan in the last 12 months compared to 45.5 percent of the non-beneficiaries (see model 5). Loans are mainly accessed from SACCOs, groups or money lenders[10] .

	Loan amount		Loan default		New income activity	
	7	8	9	10	11	12
	509164.3 (108100.8)***	482906.1 (106186.7)***	0.111 (0.029)***	0.105 (0.028)***	0.175 (0.038)***	0.172 (0.038)***
	382585.7 (53397.1)***	298466.7 (257479.6)	0.109 (0.017)***	0.038 (0.064)	0.474 (0.028)***	0.640 (0.089)***
	NO	YES	NO	YES	NO	YES
	657	657	657	657	657	657
	0.032	0.071	0.022	0.038	0.031	0.081

Forth, LRDP beneficiaries also acquired more loan amounts (UGX 891,750.0) in the last 12 months compared to UGX 382585.7 borrowed by non-beneficiaries (see model 7).

Fifth, LRDP beneficiaries are found to be more loan defaulters than non-beneficiaries. Specifically, 22.0 percent of the LRDP beneficiaries have ever defaulted in the past three years compared to only 10.9 percent of the non-beneficiaries (see model 9).

According to information obtained from LRDP beneficiaries points to observing government support as a donation and some beneficiaries seemingly taking advantage of the government's reluctance in penalizing defaulters. In this study, loan default takes a value of 1 if a respondent has ever defaulted in the last three years, 0 otherwise. Lastly, 64.9 percent of the respondents from LRDP beneficiaries reported to have started at least one new income generating activity in their households compared to 47.4 percent of the respondents in the non-beneficiaries group that reported start-up of at least a new income generating activity in the last three years. Activities that have been started are reported in figure 3.

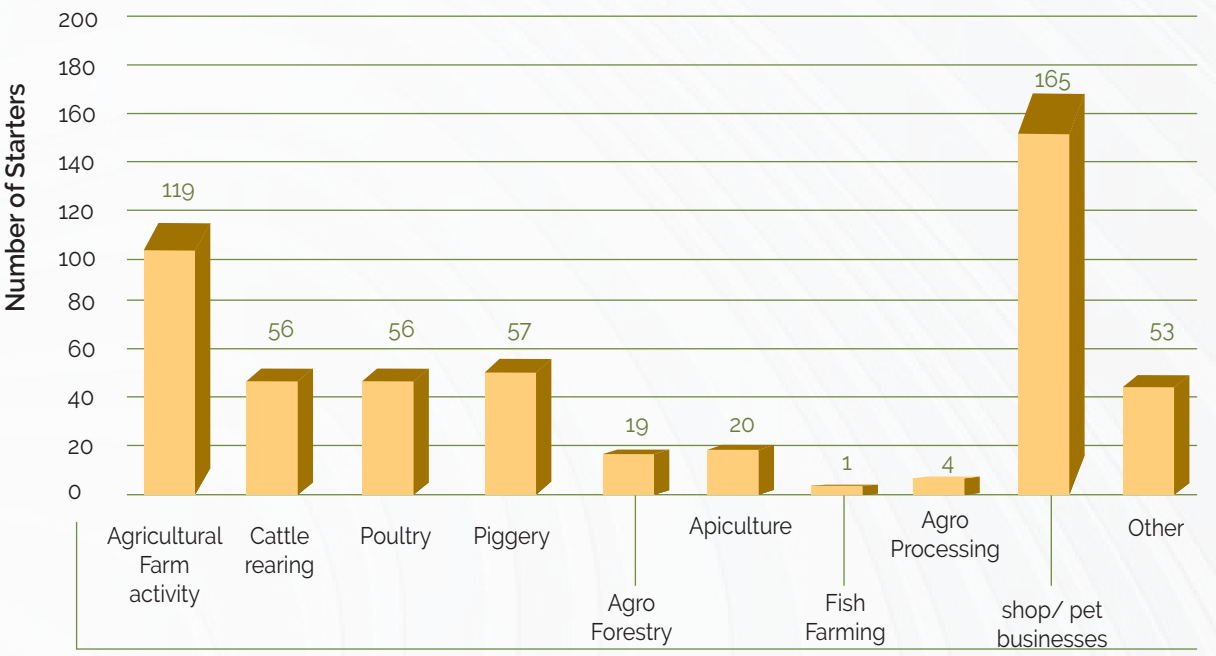
---

8 Appendix 2 provides a comparison of saving modes used by LRDP beneficiaries and non-beneficiaries.

9 The results in models 1 to 4 are not surprising because, data also suggests 86.6 percent of respondents from LRDP beneficiaries group are members of at least one savings group compared to 62.6 percent of the respondents from non-beneficiaries group.

10 See appendix 3 for the sources of loans acquired by LRDP beneficiaries and non-beneficiaries.

Figure 3: New income generating activities between August 2018 and August 2021



Source: Field survey data.

We observe from figure 3 that majority of our respondents have invested mainly in shops/pet businesses followed by agricultural farm activities (mostly new crop varieties) and then, piggery, poultry and cattle rearing.

LRDP and asset ownership

One of the key interests for implementing LRDP was to enhance household incomes and their overall socio-economic empowerment. Because of that, we presuppose that LRDP beneficiaries are associated with more asset ownership. This, we test by comparing the number of households with at least a person that owns a particular asset. We focus on the commonly owned assets by households . We use simple T-test statistic technique and present results in table 7.[12]

11 *We remain silent about the number of assets owned but only focused on a household having at least one asset for each type.*

12 *These results remain robustly similar even when we control for access to other government programmes in a regression framework.*

Table 7: LRDP and household asset holding

Assets	Beneficiaries	N	Non-Beneficiaries	N	Differences	P-values
Land_size	2.146	336	2.221	321	-0.075	0.640
Phone	0.970	336	0.928	321	0.042	0.014
Radio	0.792	336	0.698	321	0.094	0.006
Television	0.381	336	0.283	321	0.097	0.008
Power_Hydro	0.077	336	0.156	321	-0.078	0.002
Solar	0.884	336	0.723	321	0.161	0.000
Generator	0.012	336	0.019	321	-0.007	0.478
Bicycle	0.405	336	0.293	321	0.112	0.003
Motorbike	0.420	336	0.346	321	0.074	0.052
Car/vehicle	0.039	336	0.022	321	0.017	0.209
Iron_roof	0.952	336	0.879	321	0.074	0.001
Walls_brick_cement	0.693	336	0.611	321	0.083	0.026
Floor_cement	0.554	336	0.474	321	0.080	0.041

Three conclusions can be drawn from the results in table 7. (1) There are more households from the LRDP beneficiaries compared to non-beneficiaries' households that own at least a phone, a radio, a television, a solar panel, a bicycle, a motorbike, an iron roofed house, a house made of bricks and cement for walls and floor. This difference is statistically significant at either 1% or 5% level. (2) More respondents from the non-beneficiaries group are connected to hydro power grid compared to LRDP beneficiaries. This difference is significant at 1% level. The difference in hydro power connection can be explained by the LRDP beneficiaries over relying on solar energy as the results on solar energy accessibility suggest. (3) There is no significant difference in the size of land owned by respondents across the experimental arms. This result is similar to those who own generators and cars/vehicles.

5.0 Conclusion & Recommendation

Political upheavals are normally associated with voluminous effects including loss of lives, destruction of property, psycho-social disorders, disruptions in economic activity and family care, losses in educational opportunities, displacement of settlements and destruction of socio-economic infrastructure. Unfortunately, Uganda has for long not been freed from such. A number of civil conflicts, rebel insurgencies and a commonly known bush war of 1981- 1986 have befallen the country resulting into immense disruptions that require counteracting measures. This far, it is important to understand how counteracting measures to disruptions caused by political upheavals affect the wellbeing of the intended beneficiaries.

In this study, we investigate whether the programme positively impacted on household incomes and their overall economic empowerment in Luwero triangle and Rwenzori sub-region. We use T-test inferential statistical technique and Ordinary Least Squares (OLS) estimator on retrospective data, collected from Luwero Rwenzori Development Programme beneficiaries and non-beneficiaries in Kiboga and Mubende districts.

Our main results suggest that, largely, the programme has a positive impact on household asset holding, food security and household expenditure on social services particularly, education attainment and health. We also document more loan defaulters amongst programme beneficiaries compared to non-beneficiaries. From a policy perspective, our results suggest that the design and contents of any support programmes are key ingredients to leverage the economic empowerment and self-reliance of the beneficiaries and also suggest for increased monitoring of government loan schemes to ensure recovery.

REFERENCES

Bezlepkina, I. V., Lansink, A. G. O., & Oskam, A. J. (2005).
Effects of subsidies in Russian dairy farming. Agricultural Economics, 33(3), 277-288.

Deininger, K. (2003).
Causes and consequences of civil strife: microlevel evidence from Uganda. Oxford Economic Papers, 55(4), 579-606.

Frenette, M. (2006).
Too far to go on? Distance to school and university participation. Education Economics, 14(1), 31-58.

Government OF Uganda, (2020).
Project performance review report. Luwero Rwenzori Development Programme.

Klugman, J., Neyapti, B., & Stewart, F. (1999).
Conflict and Growth in Africa. Volume 2: Kenya, Tanzania and Uganda. Paris: Development Centre Studies,Oecd Development Centre.

Martin, C. P., Talbert, R. L., Burgess, D. S., & Peters, J. I. (2007).
Effectiveness of statins in reducing the rate of severe sepsis: a retrospective evaluation. Pharmacotherapy: The Journal of Human Pharmacology and Drug Therapy, 27(1), 20-26.

Pham, P. N., Vinck, P., & Stover, E. (2008).
The Lord's Resistance Army and forced conscription in northern Uganda. . Human Rights Quartely 30, 404.

Rahbari, M., Hajnaghizadeh, F., Damari, B., & Adhami, B. (2014).
Dropouts and social determinants of health; policy for the prevention of school dropout, qualitative study of the causes and interventions. International

Journal of Preventive Medicine, 5(11), 1396.
Sumner, D. A. (2008). Agricultural subsidy programs. The Concise

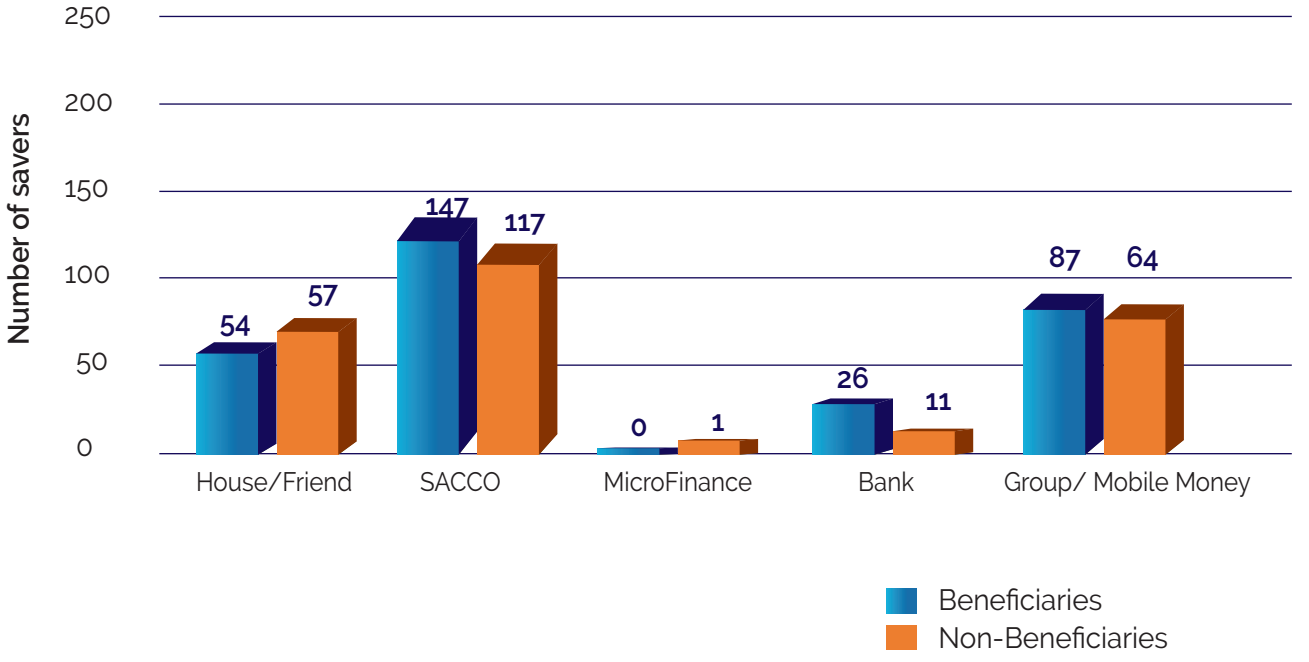
Encyclopedia of Economics, 4.Frenette, M. (2004).
Access to college and university: Does distance to school matter?. Canadian Public Policy/Analyse de Politiques, 427-443.

Wijetunga, C. S., & Saito, K. (2017).
Evaluating the fertilizer subsidy reforms in the rice production sector in Sri Lanka: A simulation analysis. Advances in Management and Applied Economics, 7(1), 31.

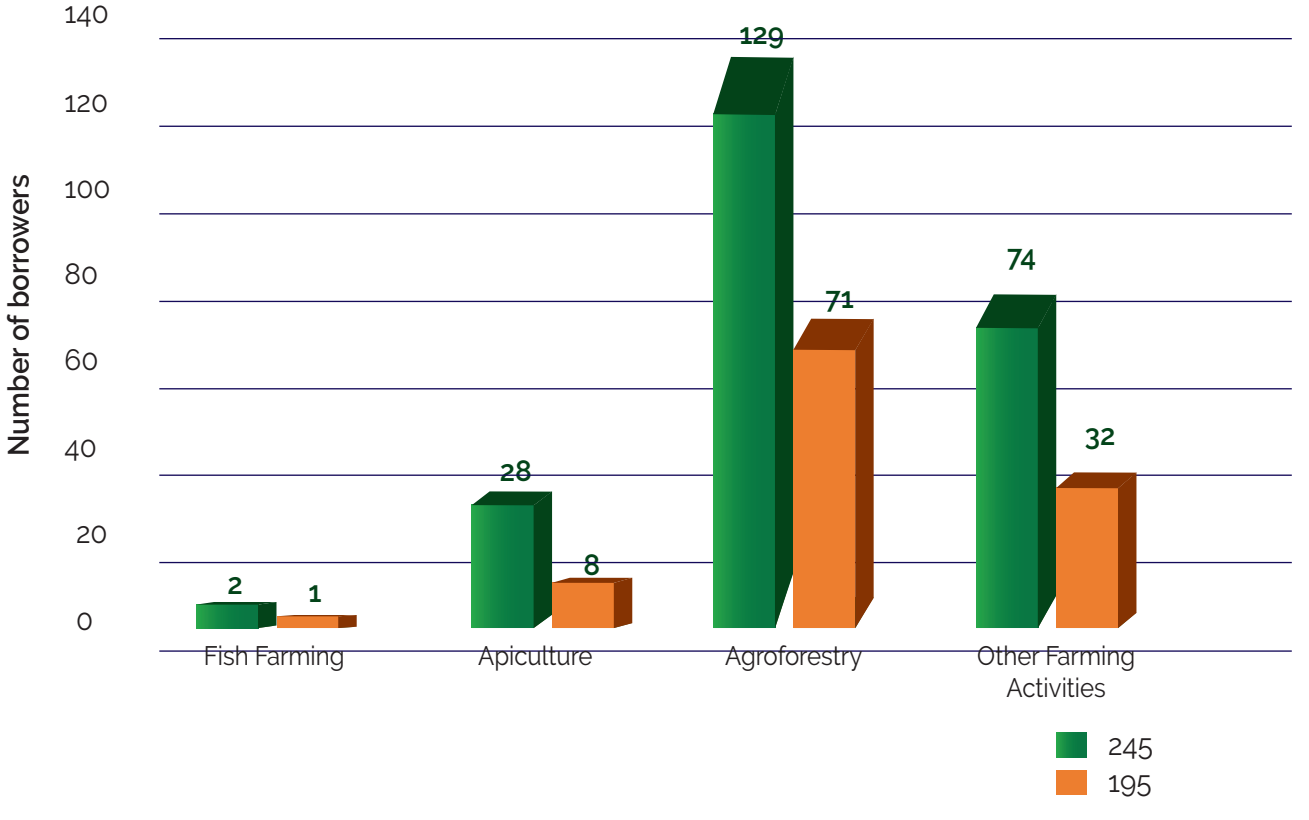
Appendix 1: Detailed Variable Definition

Age:	defines the age of respondents in complete years.
Gender (Male):	defines respondents who are males by gender.
Gender_HH_Head (Male):	defines household heads who are males by gender.
Married_Engaged:	Respondents' marital status with married or engaged = 1, 0 otherwise. Educ_Primary: defines the highest grade completed by the respondent with completed primary level =1, 0 otherwise.
Own children:	Number of children owned by the respondent.
Household size:	Number of people currently staying in the household.
Christians:	Respondents whose religious affiliation is Christianity.
First_Occup farming:	Households whose main (first) occupation is farming.
Second_Occup farming:	Households whose secondary occupation is farming.
Otherassist:	Household received any other form of government support = 1, 0 otherwise.
Loan default:	A dummy that takes a value of 1 if a respondent has ever defaulted in the last three years, 0 otherwise.
Land size:	Acres of land owned by the household.
Source_food_farm:	Households whose main source of receives food is own farm.
Number_meals:	Number of meals consumed by a household per day including breakfast.
Change_meals:	Number of times a household changes a meal composition per week.
Milk_conspn:	Number of times a household consumes milk in a week.
Sugar_conspn:	Number of times a household consumes sugar in a week.
School_attendance:	Number of school going children that were able to attend school before covid.
Children_Public_schools:	Number of school going children who were attending public schools before covid.
Children_Private_schools:	Number of school going children who were attending private schools before covid.
School fees/term:	Amount of money in shillings that was paid by households for school going children to attend school.
Hospital_access (public):	Number of households that access health care from public hospitals.
Medical expenses:	Amount of money in shillings paid by households to access health care services in six months.
Savings_account:	Number of households or household heads with a savings account.
Savings_amount:	Amount of savings in shillings for a household or household head.
Loan_acquistion:	Number of households that borrowed in the last 12 months.
Loan_amount:	Amount of borrowed funds in shillings in the last 12 months.
Loan_default:	Number of respondents who defaulted (at least once) on their loans in the past 3 years.
New_income_activity:	Number of households that started (at least one) new income generating activity in the past 3 years.

Appendix 2: Modes of saving used by beneficiaries and non-beneficiaries



Appendix 3: Sources of loans to beneficiaries and non-beneficiaries



Appendix 4: Data collection tool

FILL BEFORE TALKING TO THE RESPONDENT
General Information

01	Enumerator	Initials
02	Supervisor	Initials
03	Data clerk	Initials

Introduction Message

Hello. My name is _____ I am working on behalf of Ministry of Finance, Planning and Economic Development. Through School of Economics, Makerere University, Ministry of Finance, Planning and Economic Development is conducting a survey aimed at "Assessing the Impact of Luwero Rwenzori Development Program to Economic Welfare of the People in the Sub-Region". This study will be of great help in informing policy for economic development of the country. We would very much appreciate your participation in this survey. The survey will take just a few minutes to complete.
Participation in this survey is voluntary and should we come to any question that you don't want to answer, just let me know and I will go to the next question. Important is that whatever information you provide will be kept with a high degree of confidentiality.

Signature of Enumerator: _____ Date: D: M: Y:

START REAL INTERVIEW (START ASKING THE STUDY QUESTIONS)
Module 0: Location Details

		Name	Code	
04	District			1=Kiboga 2=Mubende
05	Sub-county			
06	Parish			
07	Village			

Module A: Personal and Household Information

NO.	QUESTIONS	(CIRCLE APPROPRIATELY)	
101	Is the respondent male or female?	1=Male 2=Female	
102	How old were you at your last birthday? (RECORD IN YEARS)	If the respondent does not remember, ENTER 99	
103	Are you married? (PROBE FOR THE RESPONDENT'S MARITAL STATUS)	1=Single 2= Married 3= Engaged 4=Divorced 5= Separated 6=Widowed	
104	How many children do you have?		
105	How many people are currently living in your household?		
106	What highest level of school did you complete?	1=Lower primary 2=Upper primary 3=Lower secondary 4=Upper secondary 5=Certificate 6=Diploma 7=Degree+ 8 = Other, specify	
107	What is your religion?	1= Christian 2= Muslim 3= Traditionalist 4 = other, specify	
108	What is your tribe?	1= Muganda 2= Munyankole 3= Mutoro 4= Munyarwanda 4= Acholi 5 = Lugubala 6= Munyoro 7= Musoga 8 = Iteso 9= Alur 10= Mukonjo 11= Mukiga 12=Other, specify	
109	What is the main occupation in your household? (KEY INCOME CONTRIBUTOR)	1=Farming/crop 2=Livestock farming 3=Trade/business 4= Public service 5= Work for private employer 6= Others, specify	
110	What is the second occupation in this household?	1=Farming/crop 2=Livestock farming 3=Trade/business 4= Public service 5= Work for private employer 6= Others, specify	
111	What is the gender type for the household head?	1=Male 2=Female	
112	Did the respondent's household receive any assistance from LRDP?	1 = Yes 2 = No	
113	What form of assistance did your household receive? (MULTIPLE RESPONSE)	a. Livestock/animals b. Agricultural inputs/seeds c. Agricultural inputs/seedlings d. Agricultural inputs/equipment e. Cash f. Milk cooling plant g. Other, specify	
114	What channel was used to transfer the assistance?	1 = Individual (Direct) 2 = Group	
115	Besides, Luwero Rwenzori Development Program, has your household been exposed to any other government program e.g. emyoga?	1 = Yes 2 = No	
116	IF YES TO QN 115, name the program		

Module B: Agricultural activities

NO	QUESTIONS AND FILTERS	ANSWER	CODE	
201	Did your household engage in farming in the last 3 years?		1= Yes 2= No	
202	What farming activities is your household engaged in? (MULTIPLE RESPONSE)	TICK		
	a. Crop production			
	b. Cattle rearing			
	c. Piggery			
	d. Poultry			
	e. Fish farming			
	f. Apiculture			
	g. Agroforestry			
	h. Other (Specify)			
CROPS ONLY				
203 A	Which of the following crops do you normally grow?	SPECIFY QUANTITY	**203 B:** How much of the quantity is sold per season?	**203 C:** On average, how much money do earn from farm sales per season?
	a. Matooke/Bananas (BUNCHES PER MONTH)			
	b. Maize (Sacks)			
	c. Beans (Sacks)			
	d. Irish potetoes (Sacks)			
	e. Sweet potetoes (Sacks)			
	f. Cassava (Sacks)			
	g. Coffee (Sacks)			
	h. Soya beans (Sacks)			
	i. Cow peas (Sacks)			
	j. Tomatoes (Boxes)			
	k. Onions (Sacks)			
	l. Cabbage (Number)			
	m. Ground nuts (Sacks)			
	n. Green papper (Sacks)			
	o. Rice (Kg)			
	p. Tea (kgs)			

ANIMALS ONLY				
204 A	Which animal species do you keep at your household?	SPECIFY NUMBER	**204 B:** How many of this number is sold per year?	**204 C:** On average, how much money do earn from farm sales per year?
	a. Cows (Local type)			
	b. Cows (Modified/hybrid)			
	c. Goats (Local type)			
	d. Goats (Modified/hybrid)			
	e. Pigs (Local type)			
	f. Pigs (Modified/hybrid)			
	g. Sheep			
	h. Other, specify			
POULTRY ONLY				
205 A	What poultry types do you keep at your household?	SPECIFY NUMBER	**205 B:** How many of this number is sold per week?	**205 C:** On average, how much money do earn from farm sales per week?
	a. Local chicken			
	b. Modified chicken			
	c. Ducks			
	d. Turkeys			
	e. Other, specify:			
AGROFORESTRY ONLY				
206 A	What agroforestry species do you grow in your household?	SPECIFY NUMBER	**206 B**: How much of the quantity is sold?	**206 C:** On average, how much money do earn from farm sales per season?
	a. Mangos (Boxes – REFER TO THE USUAL TIN)			
	b. Oranges (Boxes – REFER TO THE USUAL TIN)			
	c. Avocadoes (Boxes – REFER TO THE USUAL TIN)			

	d. Passion fruits (Boxes – REFER TO THE USUAL TIN)			
	e. Jackfruits (NUMBER)			
	f. Other, specify:			
OTHER AGRICULTURAL ACTIVITIES				
207 A	What other agricultural activities does your household engage in?		**207 B:** How much of the quantity is sold?	**207 C:** On average, how much money do earn from farm sales per season?
	a. Honey (SPECIFY LITRES PER MONTHS)	LITRES =		
	b. Fish (SPECIFY NUMBER HARVESTED PER YEAR)	NUMBER =		

Module C: Market Accessibility — Extended to other products

NO.	QUESTIONS	ANSWER		
301 A	Does your household sale any of the following livestock products?	1 = Yes 2 =No	**301 B:** How much of the quantity is sold?	**301 C:** On average, how much money do you earn from sales of the product per week?
	a. Cow Milk (LITRES PER WEEK)			
	b. Cow (skins/hides) (NUMBER PER YEAR)			
	c. GHEE (KGS PER MONTH)			
	d. Goats milk (LITRES PER WEEK)			
	e. Goats (skins/hides) (NUMBER PER YEAR)			
	f. Other animal products (MANURE NO. OF TRIPS – SMALL TIPPER PER YEAR)			
	g. Eggs (NUMBER OF TRAYS PER WEEK)			
	h. Other poultry products, specify (MANURE IN SACKS PER YEAR)			

Module D: Savings, Loan accessibility and new investment

NO.	QUESTIONS	ANSWER		
401	Does your household or household head have some savings?		1=Yes 2= No	
402	On average, how much is the household annual saving? (CONSIDER PERIOD BEFORE COVID)	SPECIFY AMOUNT		
403	Where do you deposit your savings (MAIN DEPOSITING MEANS)? CIRCLE THAT APPLIES		1= House/Friend/ Relative 2= SACCO 3= Microfinance 4= Bank 5= Other, specify	
404	Are you a member of any savings group?		1=Yes 2=No	
405	Are you a member of any investment group?		1=Yes 2=No	
406	Have you or any member of your household borrowed any money in the last 12 months?		1=Yes 2=No >>>SKIP TO 412	
407	What was the size of the loan in shillings? (IN CASE OF MANY TIMES, ADD THEM)			
408	Where did you borrow the money from? (MAIN SOURCE) CIRCLE THAT APPLIES		1= Friend/Relative 2= SACCO 3= Microfinance 4= Bank 5= Other, specify	
409	If borrowed from SACCO, was the SACCO established as a response to LRDP?		1 = Yes 2 = No	
410	Have you ever defaulted on your loan payment in the last 3 years		1 = Yes 2 = No	
411	How many times have you ever failed to repay on time in the last 3 years? (EVEN IF ONE DAY, PLEASE CAPTURE IT)			
412	During the last 3 years, did you or anyone in this household start any new income generating activity?		1=Yes 2=No >>>SKIP TO 501	
413	IF YES TO Qn. 412, which activity? (MULTIPLE RESPONSE)	TICK		
	a. New crop variety			
	b. Cattle rearing			
	c. Poultry			
	d. Piggery			
	e. Agroforestry			
	f. Apiculture			
	g. Fish farming			
	h. Agro processing			
	i. Business/shop			
	j. Other, specify			

Module E: Household welfare (Food security and service accessibility)

NO.	QUESTIONS AND FILTERS	ANSWER
501	What is the main source of food for your household?	(CIRCLE THAT APPLIES) 1 = Domestic farm production 2 = Purchase from market 3 = Donations 4 = Other, specify .....
502	How many meals does your household take a day including breakfast?	SPECIFY NUMBER
503	How many times does your household change a meal composition in a week?	SPECIFY NUMBER
504	For how many times in a week does your household take milk?	SPECIFY NUMBER
505	For how many times in a week does your household take sugar?	SPECIFY NUMBER
506	Are school going children in your household able to attend school (pre-covid)?	1=Yes 2=No
507A	What type of schools they attended? (CIRCLE THAT APPLIES) a. Public schools b. Private schools	**507B**: How many children per school type? (SPECIFY NUMBER)
508	How much money were you paying for school fees per term? (CONSIDER BEFORE COVID PERIOD)	SPECIFY AMOUNT
509	What is the main type of hospital accessed by your household? (TICK WHAT APPLIES)	1 = Public hospitals 2 = Private hospitals
510	How much money do you averagely pay for medication in a period of six mouth?	SPECIFY AMOUNT

Module F: Household Characteristics

NO.	QUESTIONS AND FILTERS	ANSWER	
601	Does your household own land?	1= Yes 2= No >>>SKIP to 604	
602	IF YES TO 601, how big is the total size of your land in accres? Report all (Whether under use or not). PROBE THE RESPONDENT (In case of many plots, please provide the total in accres)	1= < 1 accre 2= 1 ≤ 5accres 3= 5 < 10 accres 4= 10 ≤ 20 accres 5= > 20 accres	

603	How big is the size of your land under farming (in accres)? PROBE THE RESPONDENT (In case of many plots, please provide the total in accres)	1= < 1 accre 2= 1 ≤ 5accres 3= 5 < 10 accres 4= 10 ≤ 20 accres 5= > 20 accres	
604	Does your household hire any piece of land for farming activitites?	1 = Yes 2 =No	
605	How big is the hired piece of land?	1= < 1 accre 2= 1 ≤ 5accres 3= 5 < 10 accres 4= 10 ≤ 20 accres 5= > 20 accres	
606	What is the main material for your roofing?	1= Grass (Thatch) 2= Iron sheets 3= Tiles 4= Other, specify	
607	What is the main material for your walls	1= Poles, rides and mud. 2= Bricks and mud 3= Bricks and cement. 4= Other, specify	
608	What is the main material for your floor?	1= Mad and dung 2= Cement 3= Tiles 4= Other, specify	
609 A	Do you or anyone in your household currently own any of the following?	1 = Yes 2 = No **609 B:** IF YES, how many?	
	a. Phone		
	b. Radio		
	c. Television		
	d. Electricity (Hydro)		
	e. Solar		
	f. Generator		
	g. Bicycle		
	h. Motorbike		
	i. Car/vehicle		

School of Economics, Makerere University,
Plot 51, Pool Road.
P.O Box 7062, Kampala - Uganda