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Baseline Report for the Evaluation of BRAC Uganda's 'Microfinance Multiplied' Approach

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BRAC-Uganda's 'microfinance multiplied' approach

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Abstract

In summer 2009, a large-scale household survey was carried out to assess the impact of BRAC Uganda's Microfinance Multiplied strategy. Information on more than 13,000 households living in areas served by different combinations of BRAC programmes – as well as in control areas – was collected in order to create the baseline data set. The current report summarizes the findings from that research on the current situation in three programme areas and one control area in terms of human assets (education and health), physical assets, consumption, financial assets (including saving and borrowing patterns), social assets, employment and entrepreneurship. Since shocks and crisis events have a strong impact on these indicators, the report also reveals the frequency and extent to which they affect the quality of life of households. Given their status as particularly vulnerable groups, both gender and youth are a special focus of the reports. Investigating gender and age differences in terms of human assets and employment reveals interesting dynamics that demonstrate a narrowing gender gap in education. Yet the results show a consistent disadvantage that female-headed households face in their socio-economic development.

Key words: microfinance; agriculture; microfinance multiplied; gender; youth.

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EXECUTIVE SUMMARY

Since its launch in Uganda in 2006, BRAC has become one of the largest development organisations in the country and a major provider of microcredit. It operates 89 branches in 45 districts providing financial services to more than 100,000 microfinance members. In recognising that credit alone is often not sufficient to assist escape from poverty, BRAC offers a number of integrated programmes to help people rise out of poverty and realise their potential, an approach that BRAC has coined its 'Microfinance Multiplied' approach. BRAC provide support services in agriculture, livestock and poultry, health, adolescent development and youth education.

BRAC is undertaking a major study through which to measure the impact of its microcredit and agriculture extension programmes and to explore the additional effect of the multiplied approach. This report presents the baseline findings for this study. Survey areas have been divided into four groups: areas where BRAC operates microfinance programmes; areas where BRAC offers agriculture extension services; areas where both microfinance and agriculture extension services are offered; and control areas where neither Microfinance nor Agriculture services are rendered by BRAC. The impact evaluation study – to be conducted in mid-2011, 18 months after the baseline survey – will identify the impact of each programme and try to measure any synergy effects in the areas where BRAC combines its microfinance and agriculture programmes.

This baseline report provides a snapshot view of the socio-economic status of over 13,000 Ugandan randomly-selected households (with a population of more than 60,000 individuals) by presenting their human, physical, financial and social assets, consumption and welfare indicators, employment and entrepreneurship patterns, and vulnerability to shocks and crisis events. Apart from measuring the baseline to use for the follow-up impact evaluation of BRAC's microfinance multiplied approach, this study focuses on gender and youth dimensions of our outcomes of interest in order to reveal differences by age and gender.

The analysis of our survey data showed a dramatic improvement of literacy and primary and secondary school enrolment and revealed a narrowing gender gap across generations. Yet, school dropout is still a major problem must be addressed.

Female-headed households were more vulnerable in terms of many socio-economic indicators, affirming their status as a target of development programmes. Female-headed households are at a significant disadvantage over male-headed households in terms of food consumption and asset ownership (except housing) but do not lag behind in terms of minimum welfare indicators such as type of latrine, walls material, or shoes ownership. They are more likely to depend on income transfers, while male-headed households are more likely to be engaged in wage employment and therefore depend less on external sources. Although male- and female-headed households had the same propensity to have savings, the average savings amount for female-headed households was half that of male-headed households. While

female-headed households were less likely to have applied for loans, there was no significant difference in the average amount of loans borrowed, except for loans from friends and MFIs other than BRAC.

As for the differences based on survey areas, households in the Control group are at a significant disadvantage over almost all the main indicators except social capital. Households in Agriculture areas are also worse off in many of these outcomes. These findings illustrate the importance of geographic locations: households in these areas were also furthest away from town centres. This means that we are not dealing with perfect comparison groups. During the impact evaluation, therefore, difference-in-difference and other statistical tools will be used to control for these initial differences so that programme effects are not confounded with already existing advantages (and disadvantages) of programme areas.

1. INTRODUCTION AND OVERVIEW

1.1 Background

Although its per capita GDP of $1200 (PPP) places Uganda in the bottom decile of the world economy (CIA World Factbook), over the last two decades Uganda has had one of the fastest growing economies in Sub-Saharan Africa. This has contributed to a substantial reduction in poverty levels, from 56 percent in 1992 to 31 percent in 2006 (Kuteeza et al 2010). After the mid-1990s, when there was a lot of criticism that growth was not translating into better standards of living for the majority of the population, Uganda started to adopt more pro-poor growth strategies. Since then, Uganda has experienced a significant decline in income poverty. Since agriculture is a major employer in rural areas – where the most of the country's poor reside – the strong boost of Uganda's agriculture sector is largely responsible for these income poverty trends. Still, the impressive reductions in income poverty have not always been accompanied by improved quality of life indicators. Qualitative studies, such as PPAs (participatory poverty appraisals) often showed a marked decline in well-being and a deepening of poverty and food insecurity as a result of Uganda's high population growth and deterioration of natural resources, lost productivity due to health issues and limited access to public services, amongst others (Ibid). Inequality is another strong concern – poverty affects more women than men, and the urban-rural gap is increasing.

Recent data estimates Uganda's population at around 30.7 million, 85 percent of whom live in rural areas (UBOS 2009). The 2009/2010 Uganda National Household Survey also reveals that subsistence farming is the main income source for 42 percent of the population. The population is young: half of them are aged 15 years or younger. Just under three quarters of the population aged 10 years and above can read and write. The national unemployment rate is 4.2 percent. In the last four years there has been growth in average consumption, but at a slower rate than during the previous reporting period. Although the proportion of people in poverty has decreased, their absolute number is the same as a result of Uganda's high population growth (UBOS 2009).

1.2 BRAC Uganda and the Microfinance Multiplied Study

BRAC Uganda began its operations in 2006, with its primary objective to provide the poor with easy, reliable and efficient access to institutional credit. In the majority of districts where BRAC operates, microfinance is offered alongside a package of support services and programmes in health, agriculture, poultry and livestock, empowerment and livelihoods for adolescents (ELA), small enterprise (SEP), and microfinance, as shown in Table 1 below.

Table 1: Coverage of BRAC Uganda's support services and programmes (as of February 2011)

Programme	Districts	Population covered	Branches	Staff
Microfinance	45	644,085	89	684
Health	42	1,612,800	94	158
Agriculture	41	311,316	60	89
Poultry/livestock	41	554,200	60	78
SEP	34	22,572	71	128
ELA	25	140,431	54	128
Education	4	6,993	09	27

Key to BRAC's approach is the integration of these various programmes into its microfinance approach. One of the major research programmes within BRAC Uganda's Research and Evaluation Unit will be to investigate the extent to which the impact of microfinance is multiplied through this integrated programme approach. BRAC Uganda have coined this the 'microfinance multiplied' approach. Key to this approach is the interdependency and interoperation between its various programmes. The term 'multiplied' implies that BRAC aims at benefits that go beyond those which could be realised if programmes were run separately. This would have decisive policy implications: if multiplication effects can be identified, strategies to alleviate poverty should have an explicit multi-dimensional approach.

The intention of this longitudinal study, therefore, is to see whether these multiplied effects are at play. In the research design and selection of study locations, special attention is placed on the microfinance and agriculture programmes.[2] The study aims to investigate the individual impact of each of these programmes, as well as their combined impact on various individual and household-level variables.

This baseline report highlights the findings from the first round of data collection. Since this is a baseline survey, as yet there is no impact story to tell with regards to BRAC's microfinance multiplied approach. While each section compares experiences among respondents in both the control group and all three treatment groups, at this stage, differences across these areas are based upon geographic differences rather than because of BRAC's programmes. The baseline survey has revealed, however, interesting findings related to gender and youth – two of BRAC's major research foci in Uganda – which are emphasised throughout the report.

1.3 Study Design and Methodology

Since a randomized controlled trial methodology was not practical given the ambitious and extensive expansion of BRAC's operations in Uganda, it was decided to randomly select a fixed number of survey locations within each of the counties covered by this study based on their geographic location and

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[2] Given the numerous programmes BRAC offers in Uganda, there are various possible programme combinations arising endogenously. Identifying the individual impact of each programme separately becomes implausible. Hence, the study places emphasis on microfinance and agriculture programmes. Other programme combinations will be made subject to analysis based on their presence in particular communities.

current treatment status.[3] In the first stage branch managers were asked to identify those locations in which either a Microfinance group exists or Microfinance borrowers reside. In addition, agriculture programme staff were contacted and instructed to indicate where BRAC-trained model farmers live. The respective locations that could be chosen came from a list of Local Council 1's (LC1) located in the respective county.[4] The LC1s with indicated programme activity comprise the overall treatment group. Based on this comprehensive list of treatment LC1s (LC1s with BRAC programmatic activity), 12 survey locations in each county were randomly selected, stratified according to their treatment status:

• LC1s featuring a Microfinance group and a model farmer
• LC1s featuring a Microfinance group only
• LC1s featuring a model farmer only
• LC1s featuring Microfinance borrowers only

In case any of the above categories could not be filled, replacement LC1s were chosen regardless of their treatment nature. A household census was then conducted within each of these survey locations to acquire a complete list of all households in each. This provided the basis for randomly selecting participant households for the two-round surveys. For the first time in Uganda, the research department opted to add additional questions to the census in order to be equipped with the necessary information to construct village level aggregates. In addition to these 12 treatment LC1s, five control villages were randomly chosen from the same list of LC1s within each intervention county excluding those in which BRAC operated.

Since microfinance and agriculture programme staff are restricted to operating within a 4km and 6km radius from BRAC branch offices respectively, LC1s with a distance of 6-9km to the nearest branch office were considered for selecting the control locations.[5] This means that villages in control areas are further away from BRAC branch offices (and therefore further from town centres). Nine kilometres was fixed as an upper limit to ensure that control locations are not placed too far away from the respective branch office and programme areas for better comparability. Given the non-random nature of programme placement this appeared to be the most suitable strategy for the control survey location selection.

Overall, the 36 survey counties are located in 26 districts and distributed across Uganda (see the map in Appendix A). The three counties representing municipalities were grouped together with the respective surrounding county served by the branch. Hence, there are 33 county level treatment areas in which 17 LC1s each (12 treatment and 5 control) are selected for the survey. Within each of these locations 25 households were randomly selected for interviews, amounting to a total sample size of 14,025 potential respondent households. The baseline data was collected between June to November 2009. The final database contains 13, 229 households providing information on 62,977 total household members. These

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[3] The study has been designed by Niklas Buehren from UCL
[4] "Local Council 1", is the smallest administrative unit in Uganda.
[5] The distance calculations are based on the approximated locations of each LC1s centre to the centre of the LC1 in which the BRAC branch office is located using spatial data.

households will be made subject to a repeat survey, which will take place 18 months after the baseline. Hence the final impact assessment will be based on a panel data set that will greatly help to deal with household-level and time invariant heterogeneity.

This report provides the analysis of the baseline survey, and explores access to and distribution of human assets, physical assets, financial assets, social assets, employment and income-generating activities, vulnerability to shocks, and consumption and welfare across survey respondents. Throughout each of these sections it compares the situation of the control group with areas who have i) received only microfinance services ii) only agriculture services and iii) *both* microfinance and agriculture. The analysis has been, where possible, divided into gender and age groups, in order to emphasise BRAC Uganda's focus on gender and youth.

Some of the following analysis takes place at the household-level. The analysis of demographic characteristics – including health, education and occupation – however, goes deeper than this, taking detailed information on these issues for each household member. This offers two advantages. It offers more detailed household-level information that can be tracked over time, and means that findings can be disaggregated to show impacts specifically associated with age and gender, two of BRAC's key target groups. Household members, therefore, are split into three age groups; children under 5; children aged between 5 and 14; youth aged 15 to 24; and non-youth over the age of 25. Other sections use the household as a complete unit as their unit of observation, and the report distinguishes between male- and female-headed households throughout.

 For most of the outcomes of interest the report presents T-test analysis results (on the assumption of unequal variance) by gender and age-groups or by gender of the household head. To identify differences between programme groups (the three treatment groups and the control group) we have used Bonferroni Tabulation.[6]

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[6] The tables illustrated here measure the difference of each programme group from the control group only, but log files of full tabulations are available on request.

2. ANALYSIS AND FINDINGS

2.1 Human assets

2.1.1Demographic Characteristics of Households

In all four of the surveyed areas the number of females outnumbers the number of males by between two to six percentage points. The survey revealed a gender ratio of 52 to 48, which is similar to the 51 to 49 ratio of the 2009/2010 Uganda National Household Survey (UNHS) (UBOS 2010). Eighteen percent of all households are headed by females. Microfinance Only areas had both a greater number of females and female-headed households than Control group areas.

The survey reveals a fairly young population across the study areas, as Table 2 illustrates. Fourteen percent of the population are children under 5, 30 percent are aged 5 to 14, 20 percent are youth, aged between 15 and 24 years old and 36 percent are over 24. There are no significant differences in age-group distribution by programme group. The average number of household members is 4.76 (slightly below the national average of 5.01), and the average age of the household-head is 40. Those households in areas receiving only agriculture programmes have more household members. In addition, the other two treatment areas had fewer children than those in the Control Group. The average number of children per household is 2.43 (maximum is 15). Households in "Agriculture Only" areas had, on average, more children than households in other areas.

Table 2: Household Characteristics by Programme Group

	MF Only	Agriculture Only	MF & Agriculture	None (Control)	Total
Proportion of					
Female-headed households	0.19**	0.17	0.18	0.17	0.18
Females	0.53**	0.51	0.52	0.51	0.52
Children Under 5	0.14	0.13	0.14	0.14	0.14
Children 5-14	0.30	0.32*	0.30	0.30	0.30
Youth 15-24	0.19	0.20	0.20	0.20	0.20
Non-Youth 25 and above	0.37	0.35	0.37	0.36	0.36
Average Number of					
Household Members	4.66***	5.04***	4.68**	4.82	4.76
No. of Children Under 18 per Household	2.37	2.67**	2.36	2.45	2.43
Total Number of					
Surveyed Households	4,583	1,726	3,085	3,835	13,229
Household Members	21,359	8,691	14,446	18,481	62,977

Note: *p<0.1** p<0.0 5***p<0.01; Asterisks signify difference from the Control Group

2.1.2 Education

Achieving universal primary education and eliminating gender equality in education are among the eight Millennium Development Goals. Uganda's Poverty Eradication Action Plan (PEAP) recognises the critical role education plays in strengthening civil institutions, building a democratic society, empowering women and protecting the environment (UBOS 2006). This reflects findings from the 2010 Human Development Report, which emphasises that increases in literacy and educational attainment have strengthened the ability of populations to make informed choices and hold governments accountable (UNDP 2010).

In order to increase access to quality primary education, the Government of Uganda initiated the Universal Primary Education (UPE) programme in 1997. Through this, the government committed to pay school fees, to provide textbooks and other related expenses, and to meet the costs of co-curricular activities, school administration and maintenance. The introduction of UPE led to a substantial increase of 132 percent in gross enrolment from the pre-UPE total of 3.1 million in 1996 to 7.2 million children in 2006. In 2004, Uganda recorded a gross enrolment ratio of 104.4 percent and net enrolment ratio of 86 percent. Uganda is, therefore, on the right path to achieving the MDG target of 100 percent by 2015. In addition, the gender enrolment gap in primary education has narrowed, with the proportion of girls in total enrolment rising to 49 percent in 2004, up from 44.2 percent in 1990 (UNDP 2010b).

This section examines the dynamics of literacy and education, enrolment rates and education attainment across the surveyed households. Although this survey provides only a snapshot view of educational attainment in study areas, information on all household members allows us to follow the progress that Uganda has made in terms of literacy and school enrolment across generations. The survey also allows us to track gender differences, and see whether the gender gap in education has changed. For this purpose, we have divided the population into three groups – children (aged 5-14), youth (aged 15-24), and non-youth (aged 25 and above).

Literacy rates

Looking at the literacy rates across age groups and gender breakdown reveals interesting dynamics. Among the non-youth group, 84 percent of males and 67 percent of females are literate. The difference is large – 17 percent - and statistically significant. Amongst youth, however, 92 percent of males and 87 percent of females can read and write. Although there remains a significant five percentage points difference between the two genders, the gap is almost three times smaller. Furthermore, among children there are no differences by gender (see Table 2). Figure 1 overleaf illustrates the narrowing gender gap in adult literacy across different age groups.

The literacy rate for those aged 18 and above among our surveyed population is 79 percent, higher than the national average of 71 percent (UBOS 2010). The gender gap is also smaller among the surveyed group: 13 percent in comparison to the national average of 21 percent.
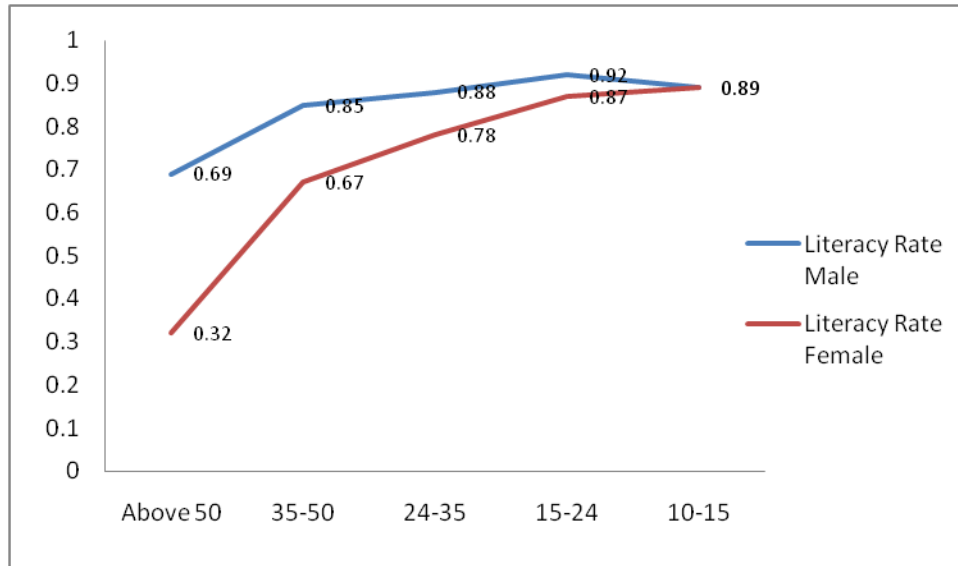
Figure 1: Gender Gap in Adult Literacy Rates across Generations

School Enrolment

School enrolment is one of the most important measurable indicators of education. According to UNDP Millennium Development Goals Report, enrolment in sub-Saharan Africa remains the lowest of all regions but is on the rising trend (UNDP 2010b).

As Table 3 reveals, among the non-youth population, nine percent of males and 22 percent of females have never attended school: this displays both a large number of those who had never enrolled in school, as well as a large gender gap. Both of these problems have reduced somewhat. As Table 2 showed earlier, among the youth and children's groups there is both a lower proportion of those who have never enrolled in school and a dramatically lower gender gap. The gender gap narrows to only three percent for youth and practically disappears for children. This was common across both the control group and all three treatments groups, which displayed high rates of school enrolment and negligible gender gaps.

School enrolment indicators in survey areas are better than the national average. Nationwide, ten percent of the population aged 6-24 never attended school compared to five percent in our surveyed areas (UBOS 2010). In addition, national statistics find that 73 percent of males and 66 percent of females of that age group are currently attending school, versus 82 percent of males and 72 percent of females in our survey areas (Ibid).

Table 3: Literacy and Enrolment Rates by Gender and Age Group

	CHILDREN (5-14)			YOUTH (15-24)			NON-YOUTH (>24)		
	Male	Female	Diff.	Male	Female	Diff.	Male	Female	Diff.
Literacy Rate[7]	0.74	0.74	-0.003	0.93	0.88	0.04***	0.84	0.68	0.16***
Complete Illiteracy Rate[8]	0.20	0.19	0.005	0.04	0.08	-0.03***	0.11	0.25	-0.14***
Never Attended School	0.07	0.06	0.002	0.04	0.06	-0.02***	0.09	0.21	-0.12***
Currently At School	0.90	0.91	-0.002	0.63	0.46	0.17***	0.02	0.02	-0.002
Attended School in the Past	0.03	0.03	0.00	0.33	0.48	-0.14***	0.89	0.77	0.12***

ote: * p<.10, ** p<.05, *** p<.01

Barriers to school enrolment

Although Uganda has made great strides in increasing school enrolment and closing the gender gap, the survey also investigated the reasons that prevented people from enrolling in school, and whether these reasons differ across time and gender groups.
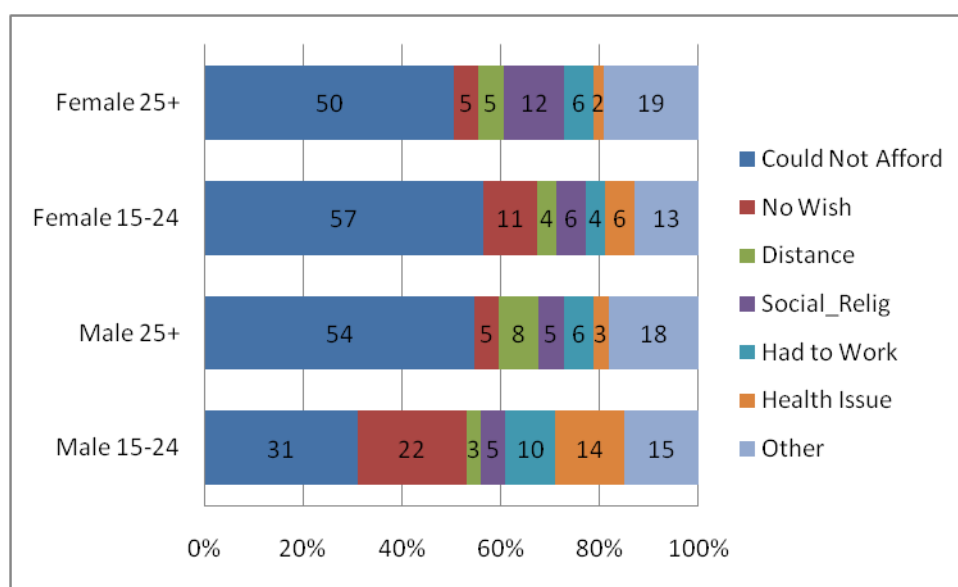
Figure 2: Reasons for Never Attending School

As Figure 2 shows, while the costs of education were the main barrier to education for non-young males, this was not the case for young males. A lack of affordability prevented 54 percent of those non-young

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[7] Can read and write
[8] Can neither read nor write

males who had never attended school vis-à-vis less than a third of young males. Amongst male youths, the second most important reason for not attending school was a lack of desire to study: this was a much greater barrier to educational attainment for youths than it had been among non-youths. Exploring the disenchantment of young males with education would be a worthy focus for future research. While some of this difference may be accounted for by the fact that a greater proportion of those who wanted to be in school were able to go to school, this can be only a partial explanation. It could be that that the primary focus of education initiatives on women have somehow excluded certain groups of males, but could also reflect disillusionment with the quality of received education or its irrelevance in the job market. Another subject of a further research would be to explore why health issues have become a more important barrier to school enrolment for male youth than they were both for female youth and older generation males.

A lack of affordability remains the main reason preventing enrolment among over half of young females who had never enrolled in school: in fact it is cited as a reason by seven percentage points more among young females than the non-young females. It also affects a larger proportion of young females than males – which may mean that if households cannot afford to educate both children, they educate males. Remarkably, social and religious pressure has become less of an issue for young females. This affects only six percent of those young women who never went to school versus 12 percent of their non-youth counterparts, and there is now no gender gap between young females and males in this respect.

An analysis of school enrolment reveals positive dynamics in reducing the gender gap and in moving towards universal school enrolment. Barriers to school enrolment for those that have never been enrolled in school – including, among young men, a lack of desire – suggest that there are other areas that need to be addressed, including the costs and quality of education.

Educational Attainment
Net enrolment and literacy rates, however, provide an incomplete picture of educational outcomes. As well as school enrolment, educational attainment – how long children stayed at school – is also an important indicator. Figure 3 shows the distribution of the survey population who went to school in the past and are not currently enrolled, across the grades they completed. There are seven categories – Primary low (Primary 1 to 3), Primary high (Primary 4 to 7), Secondary low (Secondary 1 to 4), Secondary high (Secondary 5 to 6), Certificate (either incomplete or complete), University (incomplete or complete).

Figure 3 reveals both generation and gender differences in educational attainment. Both among non-youth and youth populations, 48 percent and 50 percent of females respectively dropped out of school in low Primary grades (the difference is not significant). There were positive changes in educational attainments across generations in terms of the proportion of women who completed low-level secondary education, from 29 percent to 35 percent. There was also a decline in the proportion of women who got only three or fewer years of primary education – from ten percent to six percent.

Surprisingly, there has been a slight decline in the proportion of women attaining tertiary education across these two generations, in the form of certificate or university education.[9]
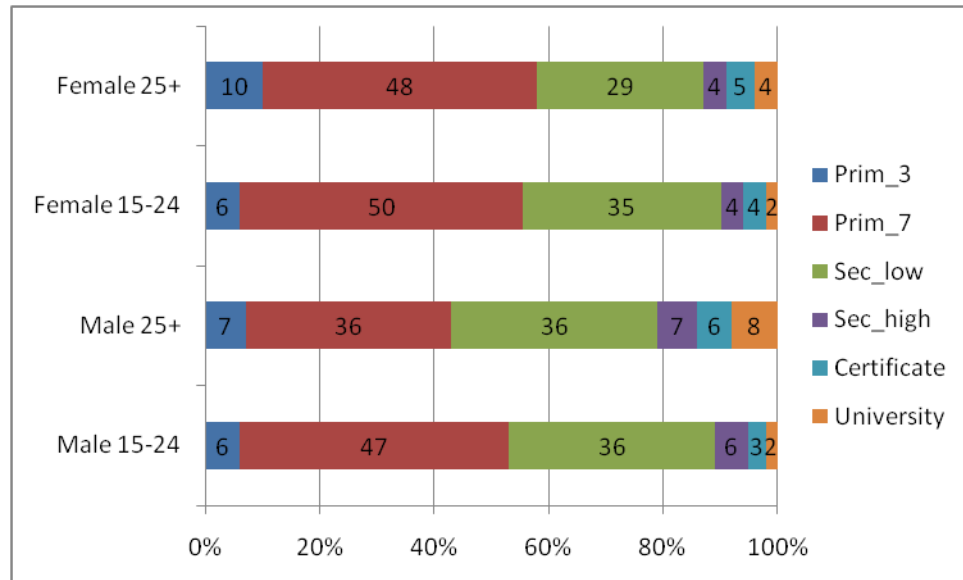
Figure 3: Educational Attainment, by Gender and Age Group

For men however, progress in educational attainment is less equivocal. While the proportion of dropouts at Primary 1-3 levels has remained the same, the proportion of those dropping out during Primary 4-7 has dramatically increased.[10] There is virtually no significant change at 95 percent level of proportions at secondary level, and there is a negative trend in certificate and university education across the two generations of males.

These proportions do not mean that men have started to lag behind in terms of attainment in comparison to the older generation. Amongst non-youth members, a much smaller proportion were never enrolled in school, and can therefore not be counted as "drop-outs". This explains why the percentage of drop-outs amongst non-youth is smaller in comparison with the youth group. These findings highlight, however, that despite achievements in enrolment rates, school drop-out remains a large problem and should be specifically addressed.

Among the non-youth group there are statistically significant differences among men and women in virtually all categories, with women overrepresented at lower levels of educational attainment. In comparison, the narrowing of the gender gap in youth is also reflected in school attainment: the only statistically different categories between men and women are "Secondary high" and "Certificate" levels. In a practical sense, however, these differences (in opposite directions), although statistically significant, are too small to be considered important.

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[9] The age group 18-30 was compared to the older generation as well, but the results hold.
[10] The survey questionnaire only identified reasons that children had never been enrolled in school. Looking at the reasons for school drop-out could be another important follow-up area of research.

Findings Highlights

Literacy rates and school enrolment are improving, and there has been a narrowing of the gender gap in school enrolment across generations. School drop-out remains a significant problem.

Affordability remains the major barrier to school enrolment, particularly for young females. A lack of willingness to study has become the second most important cause for young males not to enrol in education.

Differences by Programme Group

Populations in control areas that do not benefit from BRAC programmes have small but statistically significant disadvantages against the treatment areas in educational indicators. Except for a few exceptions, control areas were disadvantaged in terms of literacy and illiteracy rates, school enrolment and attainment levels. There are no significant differences in the proportion of dropouts in Primary 1-3 and Secondary 1 to 4 grades, as Table 4 illustrates.

Table 4: Literacy and Enrolment Rates, By Programme Group

	MF Only	Agriculture Only	MF & Agriculture	None (Control)	Total
Adult Literacy Rate[11]	0.83***	0.82***	0.80	0.79	0.81
Completer Illiteracy Rate[12]	0.12***	0.13***	0.15	0.16	0.14
Never Attended School	0.08***	0.09***	0.11*	0.11	0.10
Currently in School	0.45***	0.47***	0.43	0.43	0.44
Children Currently in School (5-14 years)	0.92***	0.92***	0.90**	0.89	0.91
Attended in the Past	0.47**	0.44***	0.46	0.46	0.46
Highest Grade Completed[13]					
Primary3	0.09	0.10	0.11*	0.10	0.10
Primary7	0.45***	0.48***	0.47***	0.54	0.48
Secondary low	0.32	0.32	0.30	0.29	0.31
Secondary high	0.05***	0.03***	0.05***	0.02	0.04
Some Certificate	0.05***	0.04	0.05**	0.03	0.04
Some University	0.04***	0.03**	0.03***	0.02	0.03

Note: * p<.10, ** p<.05, *** p<.01; Stars signify difference from Control Group

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[11] Can read and write if aged 15 and above
[12] Can neither read nor write if aged 15 and above
[13] Among population 5 and above who used to attend school in the past

2.1.3 Health and Health-Seeking Behaviour

Health is a priority goal in its own right, as well as a central input into economic development and poverty reduction (Sachs 2001). Healthy populations live longer, are more productive and can save more. This section looks at selected health-related indicators, namely malaria incidence and prevention, use of de-worming drugs, incidence and duration of illness and injuries, and the number of work-days lost because of health problems.[14] The survey also examined access to health services, looking both at who is consulted in case of health problems, distance to medical facilities and costs incurred in accessing medical services. Outcome indicators are again differentiated by gender and age groups.

According to Uganda's Ministry of Health, malaria is responsible for more illness and death than any other single disease in Uganda.[15] Uganda has the third highest number of deaths from malaria in Africa and some of the highest recorded malaria transmission rates in the continent.[16] Insecticide-treated bed nets (ITNs) are used to prevent malaria infection and have been proven highly effective in reducing maternal anaemia and infant mortality.[17]

As Table 5 shows, 46 percent of the total population reported having used bed nets the night before their interview, five percentage points higher than the national average (UBOS 2010). There are small – but significant – differences between age groups, with non-youth groups using bed-nets slightly more than youth and children. On average, similar to national figures, females are more likely than males to use bed nets. While non-youth men are slightly more likely to use bed net than females, this difference is small, at only two percentage points. The only large difference across genders is among the youth group: young males are eight percentage points less likely to use bed nets than young females. That there is higher usage of bed nets among females could partly be a result of health awareness programmes that are primarily targeted at women. Among adults (18 and above) being literate increases the likelihood of using bed net by 10 percentage points.

One third of the total survey population (covering all households and household members) had suffered from malaria in the last six months. Children under 15 are considerably more prone to the disease than older age groups. Among children there are no gender differences, but among both the youth and non-youth group, females were slightly more likely to have experienced malaria. The regression of bed net usage the night before the survey and malaria incidence reveals little correlation. This may be because of the different periods of reference, but may be an area of further exploration.

According to the Ugandan Ministry of Health, around one quarter of the Ugandan population is at risk of worm infections.[18] According to J-Pal's 'School-Based Deworming' research project, worms reduce the

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[14] The survey questionnaire did not ask respondents about prevalence and impact of HIV/AIDS on household members. This could be another potential research topic.

[15] http://www.health.go.ug/mcp/index2.html

[16] http://www.malariaconsortium.org/pages/uganda.htm

[17] http://www.povertyactionlab.org/evaluation/role-exposure-social-networks-and-marketing-messages-households-willingness-pay-malaria-p

[18] http://www.wellcome.ac.uk/News/2010/News/WTX062495.htm

absorption of nutrients in the body and cause internal bleeding, leading to anemia and malnutrition, resulting in lower attendance and concentration in class.[19] Deworming drugs are the primary way of treating such infections. Twenty eight percent of the population had taken deworming drugs in the last three months. As can be expected children are most likely to have used them, and the non-youth group used them the least. There are no gender differences in this regard.

Ten percent of the population had suffered some kind of injury or illness in the month prior to the survey. Non-youth populations were more likely to have suffered more days lost work due to illness or injury than either the children or youth groups suffered from days off work or school. Of those that that suffered illness, 81 percent consulted someone. As Figure 4 shows, 29 percent of them consulted private clinics, 22 percent Pharmacies and shops, 17 percent government hospitals and 16 percent of them government health units. This differs slightly from national figures on health-seeking behaviour, which show that 43 percent of people consulted private clinics, 25 percent government health centres, and 17 percent - pharmacies. Both this study and national findings reveal high rates for private clinics. This can be partly accounted for by their larger availability in comparison to government facilities. Just over 40 percent of Ugandan communities have a private clinic as opposed to only 15 percent having government health units or hospitals. The distance to the place of consultation was on average 3.77 kilometres, and the average cost was 12, 516 Ush (around $6). Average costs were lower for children and youth, but higher for the non-youth group.
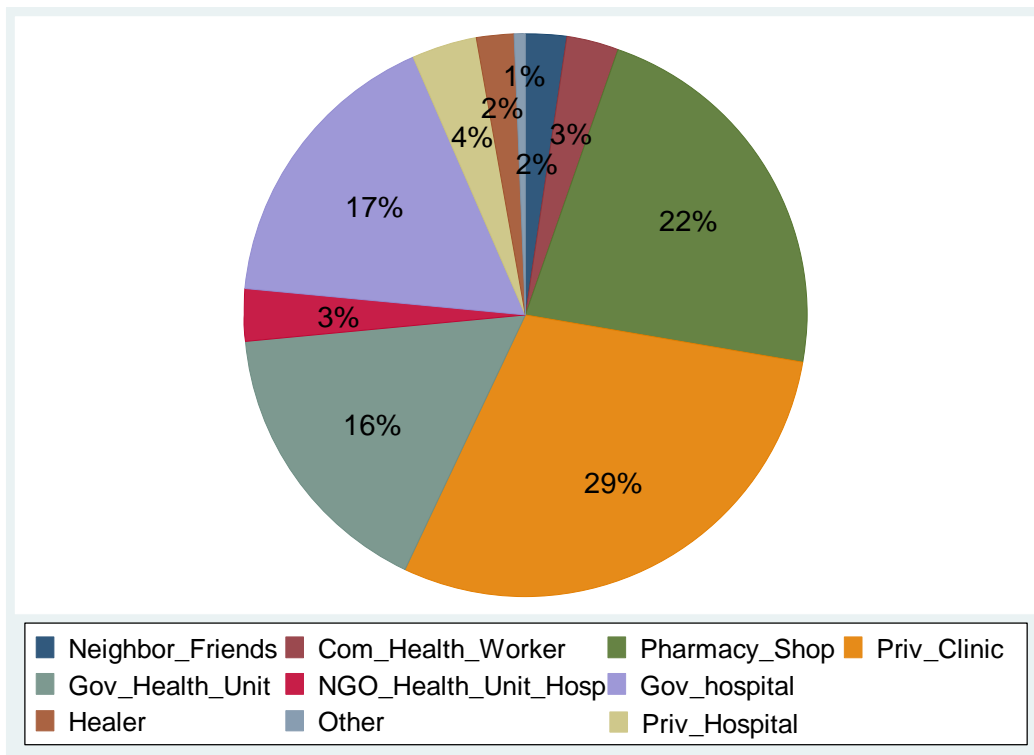
Figure 4: Who Was Consulted in Case of Illness or injury?

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[19] http://www.povertyactionlab.org/scale-ups/school-based-deworming

Table 5: Health Indicators by Gender and Age Group

	ALL	CHILDREN (Under 15)				YOUTH (15-24)				NON-YOUTH (>24)			
	Total	All	Male	Female	Diff.	All	Male	Female	Diff.	All	Male	Female	Diff.
Has Disability	0.12	0.09	0.09	0.10	-0.01*	0.09	0.09	0.10	-0.00	0.16	0.15	0.17	-0.03***
Used Bed net Last Night	0.46	0.45	0.45	0.45	0.01	0.43	0.38	0.46	-0.08***	0.50	0.51	0.49	0.02***
Malaria Incidence (Last 6 months)	0.33	0.38	0.38	0.38	0.01	0.28	0.27	0.29	-0.02**	0.29	0.27	0.31	-0.04***
Used Deworming Drugs (Last 3 months)	0.28	0.38	0.38	0.37	0.01	0.24	0.24	0.25	-0.01	0.19	0.19	0.20	-0.01
Had Illness/Injuries (Last 6 months)	0.10	0.12	0.12	0.12	0.00	0.08	0.08	0.08	0.01	0.10	0.08	0.11	-0.02***
Days Suffered from Illness/Injuries	8.91	7.29	7.27	7.31	-0.04	8.78	8.93	8.66	0.28	11.43	11.34	11.49	-0.15
Days lost to Illness/Injuries	6.93	5.62	5.65	5.59	0.06	6.77	7.13	6.48	0.65	8.95	9.04	8.89	0.15
Anyone Consulted	0.81	0.83	0.83	0.83	-0.00	0.79	0.77	0.80	-0.03	0.80	0.82	0.79	0.03*
Distance to Consulting Venue (km)	3.77	2.99	2.89	3.10	-0.21	3.37	3.06	3.61	-0.56	5.17	4.98	5.31	-0.33
Cost of Consultation (Ush)	12,516	9051	8653	9457	-804	11,810	13101	10783	2318	15,842	22,494	15,106	7388

Note: *p<0.1 ** p < 0.05 *** p<0.01

Findings Highlights

One third of the surveyed population suffered from malaria in the 6 months prior to the survey, with children being more vulnerable to the disease. Less than half of the population had used bed nets the night before the survey, with females being more likely to use them than males. Literacy also increased the likelihood of net usage.

In case of illness or injury private clinics were the first point of consultation for close to a third of the population. On average, the first point of consultation was within less than four kilometre's distance.

Differences by Programme Group

There are few consistent differences among programme groups in terms of health indicators. As can be seen in Table 6, people in Microfinance Only and Microfinance *and* Agriculture areas were more likely to use a bed net. Malaria incidence is highest in Agriculture Only and lowest in Microfinance Only areas but the difference is very small in practical sense. People in Microfinance *and* Agriculture areas were the most likely to have used deworming drugs, while people in Control areas were the least likely to have suffered from illness and injuries, and had walk longest to their consultation venue. Again, however, the differences are not big enough to be of practical significance.

Table 6: Health Indicators by Programme Group

	MF Only	Agriculture	MF& Agriculture	None (Control)	Total
Has Disability	0.12	0.11	0.13***	0.11	0.12
Used Bed net Last Night	0.49***	0.42	0.52***	0.41	0.46
Malaria Incidence	0.32***	0.35*	0.33	0.33	0.33
Used Deworming Drugs	0.12	0.11	0.13**	0.11	0.12
Had Illness/Injuries	0.10*	0.11***	0.11***	0.10	0.10
Anyone consulted	0.82	0.80	0.81	0.82	0.81
Days suffered	8.69	8.86	9.10	9.02	8.90
Days lost	6.62***	6.66*	6.99	7.40	6.93
Distance to Consulting Venue (km)	3.45**	3.53	3.38*	4.66	3.77
Cost of Consultation (Ush)	14,832	10,789	11, 454	11,417	12,493

Note: *$p<0.1$ ** $p < 0.05$ *** $p<0.01$; Stars indicate significant difference from the Control Group

2.1.4 Consumption and welfare

Consumption basket composition

Consumption and expenditures have, for a long time, been used to measure poverty and welfare both by academics and policy practitioners (See, for example, Chen et al 2001). They solve the problem of income seasonality on the one hand, and, with some exceptions, are less sensitive for families to divulge than information on income. This section looks at the composition of consumption baskets of

households. It further examines how much households spend on different types of consumption items and whether there are any differences between male and female-headed households.

According to UNHS 2009/2010, the share of food and beverages is the largest component in household consumption baskets, constituting 45 percent (with a large variation between rural and urban households). This is followed by rent and fuel expenses, which constitute 16 percent of consumption baskets (UBOS 2010).
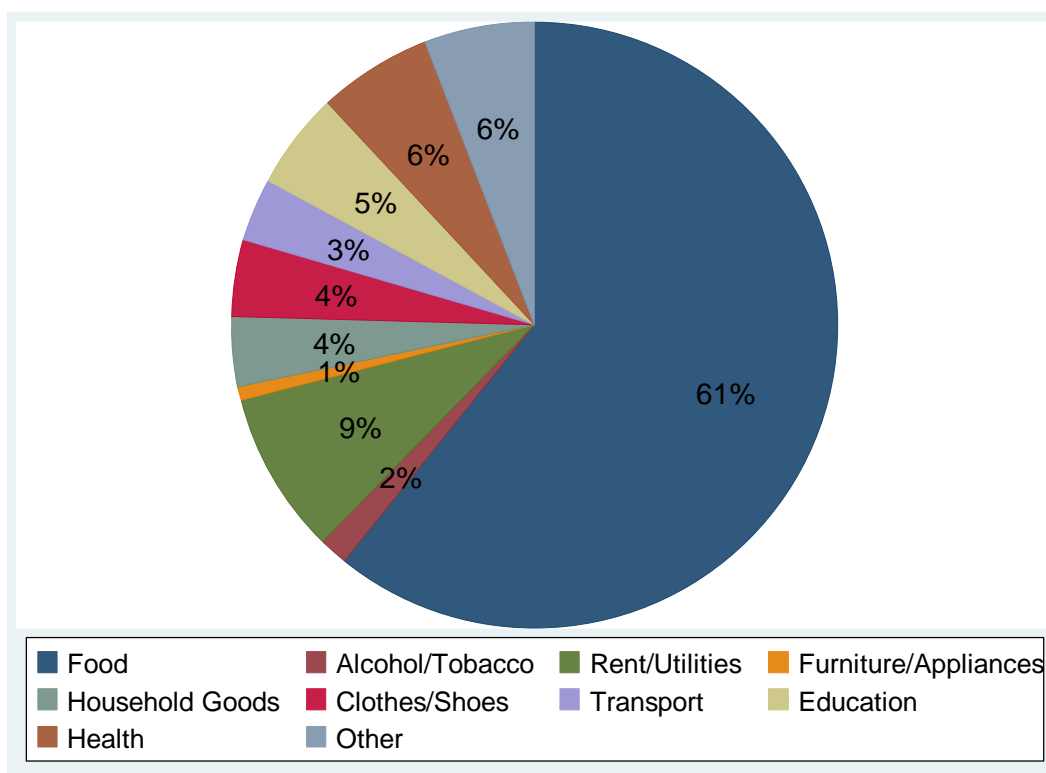
Figure 5: Consumption Basket Composition (By Value)

Figure 5 illustrates the composition of consumption baskets for survey households. Similar to national statistics, food accounts for the highest proportion of household consumption, but its share in our sample is higher: on average 61 percent of total household expenditures. This large share of food means that most households are vulnerable to fluctuations in food prices. Although higher food prices mean better profits for commercial farmers, most households consume more food than they produce,[20] and therefore are more likely to experience negative impacts in the event of price hikes. Rent and utilities (electricity, water, and fuel) take up nine percent of consumption. Health-related expenditures (medicines, consultation, etc.) constitute six percent of the consumption basket. The costs of education (including school fees, uniform, and books for example) account for five percent of consumption expenditure. Small household goods (such as soap, tooth paste, or cosmetics) and spending on clothes

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[20] As we can see in the section on Source of Earnings, only 9 percent listed commercial farming as the major source of earnings.

and shoes both constitute four percent of total consumption. The costs of transportation, whether through bus fares, petrol or spare parts, make up three percent of total household consumption.
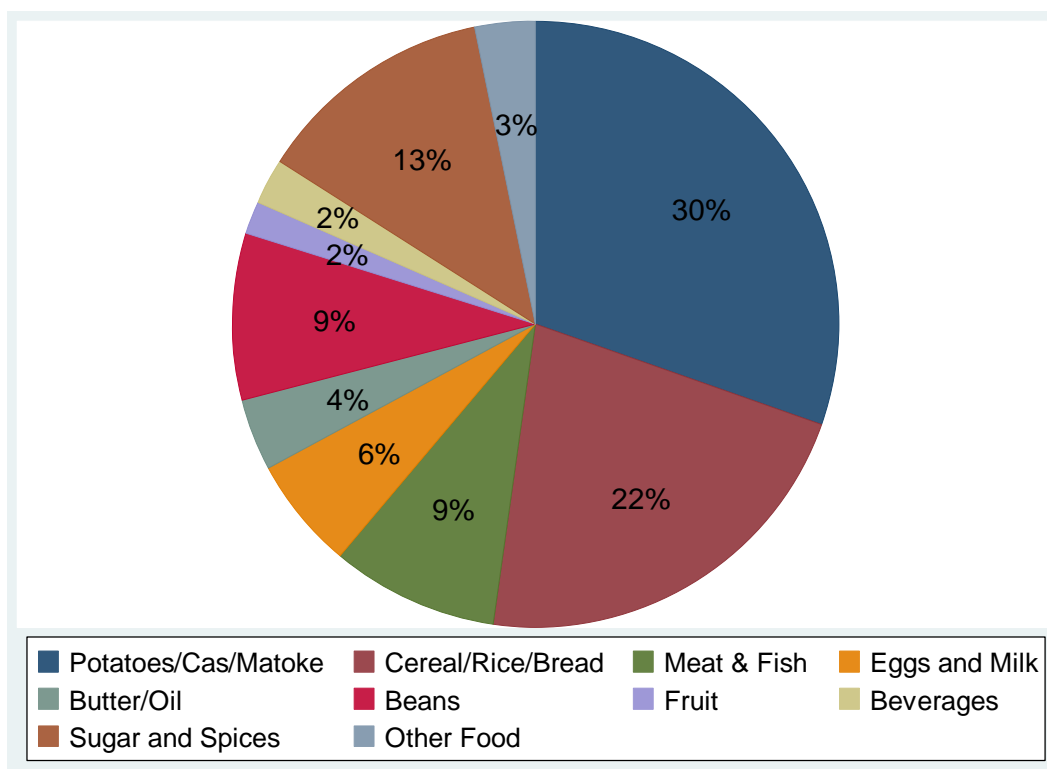
Figure 6: Food Basket Composition (By Value)

In terms of food consumption, as can be seen in Figure 6, 30 percent of the food basket is spent on potatoes, cassava and *matoke* (green bananas, usually eaten mashed). Rice, cereal and bread constitute 22 percent. Thus, staple and 'plain' foods account for a little more than half of food consumption. Interestingly, sugar and spices take up a relatively large 13 percent slice in the consumption basket of households. Beans – a good source of protein and a common food in Uganda – and nuts constitute nine percent of food consumption. A similar amount is spent on meat and fish. The remainder of the food basket comprises butter and cooking oil, fruit, beverages and other foods. There are no major differences between male and female-headed households in terms of composition of either food or consumption baskets: the vulnerability of female-headed households is apparent in monthly consumption expenditures rather than composition, as the next section shows.

Monthly Consumption Expenditures

Since consumption is an important welfare indicator, it is interesting to see whether there are differences in consumption expenditure across male- and female-headed households. Given that male-headed households have, on average, more members than female-headed households, comparing average household expenditure creates a bias against female-headed households. If we instead compare per capita expenditures, we get a bias against male-headed households, since a larger denominator results in smaller numbers. This is especially true for types of expenditures that do not

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vary marginally by the number of persons, such as rent or utilities. That is why we chose to run a regression to identify these gender differences, controlling for the number of members, or in case of education expenditures, for the number of children under 18.

As we can see in Table 7, even after controlling for the number of members, female-headed households are at a significant disadvantage in terms of monthly consumption expenditures in all but health-related expenditures. The largest difference is in food expenditures: female-headed households spend, on average, 22,359 Ush (around $10) less per month than their male counterparts. The 4,242 Ush (around $2) difference in transportation is largely due to petrol expenses that are more common in male-headed households (which have a higher rate of car and/or motorbike ownership). Female-headed households spend on average 3,595 Ush ($1.60) less on clothes monthly than male-headed households. The 2287 Ush ($1) and 1420Ush ($0.6) difference in Rent/Utilities and Education respectively is statistically significant only at the ten percent level. The difference in furniture/appliance and small household goods consumptions, albeit statistically significant, is extremely small. These expenditure break-downs reveal that female-headed households display specific vulnerabilities in terms of their disadvantage on per capita food expenditure. This has a direct impact on their household's human capital in terms of nutrition, health, and productivity, both in work and education.

Table 7: Correlation of Gender of Household Head and Monthly Consumption Expenditures

	Food	Rent/Utilities	Furniture/Appliances	Household Goods	Clothes/Shoes	Education	Health	Transport
Female Head	-22359***	-2287*	-837***	-735*	-3595***	-1423*	793	-4242***
# of Members[21]	11820***	302	133***	620***	1063***	3259***	2692***	1062***
Constant	129698***	24849***	1803***	8336***	7677***	9527***	5101***	5879***

Note: * p<.10, ** p<.05, *** p<.01

Differences by Programme Group

As Table 8 illustrates, households in control areas have smaller expenditures on food, rent/utilities, furniture and appliances, household goods, clothes/shoes, transportation and other expenses. They have similar expenditures with other areas only in terms of alcohol and tobacco, education and health (only MF Only areas have higher health expenditures). Thus, Control area households have, on average, the lowest level of consumption welfare, followed by Agriculture Only areas. Households in Microfinance Only areas demonstrate the highest consumption level in all categories.

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[21] For education, the control variable is the number of children

Table 8: Monthly Consumption Expenditures (Ush) by Programme Group

	MF Only	Agriculture Only	MF & Agriculture	None (Control)	Total
Food	195,109***	178,334***	187,897***	163,088	181,956
Alcohol/Tobacco	5,075	3,604	4,059	4,779	4,560
Rent/Utilities	32,677***	22,089***	29,556***	16,532	25,887
Furniture/Appliances	2,707***	2,003	2,563***	1,676	2,283
Household Goods	12,564***	10,699*	11,569***	9,361	11,160
Clothes/Shoes	12,770***	12,314*	12,563***	10,790	12,088
Transportation	11,989***	8,865	11,159 ***	7,805	10,175
Education	18,407	18,240	16,457	17,164	17,571
Health	19,737**	18,666	17,538	16,241	18,071
Other	20,815***	16,763**	18,928***	13,107	17,612

Note: * p<.10, ** p<.05, *** p<.01; Stars signify difference from Control Group

2.1.5 Welfare indicators

Statistical analysis of the Uganda National Household Survey data reveals that qualitative measures such as housing materials, type of latrine, type of fuel used for cooking, and ownership of clothes and shoes are relevant indicators of household welfare (Sulaiman and Bin Searj 2009). This section examines these indicators and examines welfare differences between male-headed and female-headed households among the surveyed areas.

Housing

Approximately a quarter of total households have a poor quality roof made of thatch, straw, mud or wood planks. A little less than three quarters of households have iron sheet or tin roofs. Only three percent of households have a higher quality roof (made of cement or tiles). Male-headed households are slightly more likely to have a lower quality roof and slightly less likely to have medium quality roofs. Forty four percent of total households have low quality walls made of thatch/straw, mud and poles, or unburned bricks, and fifteen percent have walls made of burnt bricks with mud. The rest have better quality walls – burned brick with cement, cement blocks or stone. Male-headed households are slightly more likely to have better quality walls. Overall, households in the survey areas have better housing conditions: 73 percent have iron-sheet roofs (vis-a-vis 62 percent nationwide) and 32 percent have mud-and-pole walls (vis-a-vis 39 percent nationwide) (UBOS 2010).

Sanitation

Just under a quarter of households do not have proper toilets. Instead, these households use uncovered pits, the bush or some other location. More than two thirds of the households have shared or private covered latrines. Only nine percent of households have flush toilets or VIP (Ventilated Improved Pit) latrines. There is no difference between male and female-headed households in terms of type of toilet.

The prevalence of flush toilets and VIP latrine ownership is higher in our survey areas than the national average (5.5 percent). It is hard to fully compare latrine information with national data, however, because the UNHS (UBOS 2010) does not differentiate between covered pit latrines and uncovered pits.

Cooking Fuel

A large majority of households (73 percent) use firewood to cook food, which has been found to be a strong indicator of poverty status (Sulaiman and Bin Keraj 2009). A quarter of households use charcoal, paraffin or kerosene. Only two percent of the households use electricity and gas. There is no difference between male and female-headed households. This distribution almost exactly reflected the national average presented at UNHS 2009/2010 (UBOS 2010).

Clothes and footwear

In 93 percent of surveyed households every member has at least two sets of clothes, compared to 88 percent of the national average. Every member has at least one pair of shoes in 83 percent of the households, far higher than the national average of 58 percent.

Thus, except for some small differences, male-headed and female headed households are similar in terms of these welfare indicators. In the case of housing conditions, this similarity may be due to the fact that houses as fixed assets undergo little change over time. For example, a widow within a female-headed household may have been living in a brick-walled house since her husband was alive. The same explanation however does not hold for the type of cooking fuel or minimal clothes/shoes ownership. It is quite encouraging to see, that in terms of minimum welfare indicators, female-headed households do not lag significantly behind male-headed households.

Table 9: Living Conditions and Other Welfare Indicators: by Gender of Household Head

	All	Male-Headed	Female-Headed	Difference
Low Quality Roof *(Mud, Thatch/Straw, etc.)*	**0.24**	0.24	0.21	0.03***
Medium Quality Roof *(Iron Sheets/Tin)*	**0.73**	0.73	0.76	-0.03***
Good Quality Roof *(Cement, Tiles, etc.)*	**0.03**	0.03	0.03	0.00
Low Quality Walls *(Thatch/Straw, Mud, Unburned Bricks)*	**0.44**	0.43	0.45	-0.02
Medium Quality Walls *(Burnt Bricks with Mud)*	**0.15**	0.15	0.15	0.00
Good Quality Walls *(Burnt Bricks with Cement, Stone, etc.)*	**0.41**	0.42	0.40	0.02*
Low Quality Toilet *Uncovered pit, Bush, etc.*	**0.23**	0.23	0.24	-0.01
Medium Quality Toilet *Latrine*	**0.68**	0.68	0.68	-0.00
Good Quality Toilet *Flush Toilet, VIP Latrine*	**0.09**	0.09	0.08	0.01
Low Price Cooking Fuel *(Firewood)*	0.73	0.73	0.73	0.00
Medium Price Cooking Fuel *(Charcoal, Paraffin, Kerosene)*	**0.25**	0.26	0.25	0.01
Higher Price Cooking Fuel *(Electricity, Gas, Other)*	**0.02**	0.02	0.03	-0.01**
All have at least 2 sets of clothes	**0.93**	0.93	0.93	-0.01
All have at least 1 pair of shoes	**0.82**	0.82	0.82	0.00

Note: *** $p<0.01$, **$p<0.05$ *$p<0.10$

Differences by Programme Group

As we can see from Table 10 below, control group households are clearly at a disadvantage in terms of all welfare indicators except for ownership of at least two sets of clothes per household member (where there is no difference by programme group). They are considerably more likely to have a low quality roof, low quality walls, and a poor type of latrine, and use cheaper-priced fuel for cooking. They are also slightly less likely to have a pair of shoes for each household member. In terms of fuel and type of latrine, households in "Agriculture Only" areas are relatively similar to Control area households. "Microfinance and Agriculture" area households are similar to controls only in terms of roof quality. The households in "Microfinance Only" areas seem to fare best in terms of living conditions and other welfare indicators.

Table 10: Living Conditions and Other Welfare Indicators by Programme Group

	MF Only	Agriculture Only	MF & Agriculture	None (Control)	Total
Low Quality Roof	0.18***	0.19***	0.29	0.28	0.24
Medium Quality Roof	0.78***	0.78***	0.68	0.69	0.73
Good Quality Roof	0.03	0.03	0.03	0.03	0.03
Low Quality Walls	0.36***	0.43***	0.45***	0.52	0.44
Medium Quality Walls	0.15	0.16	0.15	0.15	0.15
Good Quality Walls	0.49***	0.41***	0.41***	0.33	0.41
Low Price Fuel	0.60***	0.85*	0.65***	0.88	0.73
Medium Price Fuel	0.37***	0.14**	0.33***	0.11	0.25
High Price Fuel	0.03***	0.01	0.02***	0.01	0.02
Low Quality Toilet	0.19***	0.26	0.22***	0.27	0.23
Medium Quality Toilet	0.70***	0.66	0.68	0.67	0.68
High Quality Toilet	0.10***	0.08	0.10***	0.06	0.09
At least 2 sets of clothes per member	0.93	0.92	0.92	0.92	0.93
At least 1 pair of shoes per member	0.85***	0.83***	0.81	0.79	0.82

Note: ***p <0.01, **p<0.05 *p<0.10; stars signify difference from Control group

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Findings Highlights

Food constitutes the majority of monthly household consumption, followed by rent and utilities. Staple foods make up the bulk of food consumption. Female-headed households spend less money on food consumption than male-headed households.

Just under a quarter of the households have mud or thatch roofs and a third have their wall made from mud and poles. Only nine percent of the households have flush toilets and VIP Latrines. Ninety eight percent of the households use firewood and charcoal for cooking food.

The vast majority of households have been able to provide each one of their members with at least two sets of clothes and one pair of shoes.

2.2 Physical assets

Despite lacking the advantage of monetary income's comparability and fungibility, assets may provide a better picture of long-term living standards than an income snapshot because they have been accumulated over time, last longer and are relatively easier to measure (Moser and Felton 2009).

This section analyses ownership of a list of household assets – comprising physical capital and consumer durables, namely housing, car, motorcycle, bike, fridge, TV, radio and mobile phone. It also compares ownership of these assets between male and female-headed households. The outcome of interest here is the mere fact of asset ownership. The previous section went into further detail on the more

qualitative aspects of physical capital, such as wall materials and type of latrine, as well as on ownership of personal items, such as shoes and clothes.
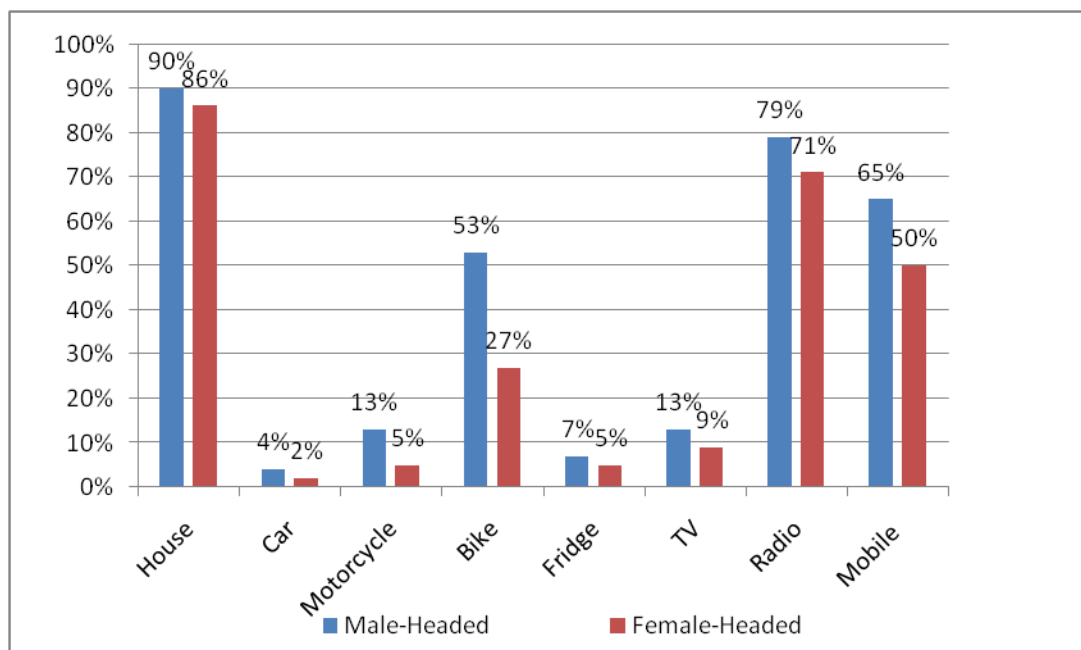
Figure 7: Asset Ownership: By Gender of Household Head

As can be seen in Table 11 and Figure 7, there are significant differences between male and female-headed households in terms of asset ownership. The smallest difference is in house ownership – 86 percent of female headed households owned their house in comparison with 90 percent of male-headed ones. Car ownership is extremely small overall – under five percent - but male-headed households are more likely to have a car. Thirteen percent of male-headed households have motorcycles versus five percent of female headed ones. This large difference may be partly due to the fact that it is mainly men who drive the motorcycles both as a *boda-boda* (in which it is used as a motorcycle-taxi) or for personal use. The gap in bicycle ownership is even larger – 53 percent versus 27 percent. Again, this can be partly conditioned by the fact that in Ugandan culture, riding a bicycle is more suitable for men than women. Fridge ownership is again very low overall – seven percent and five percent in male and female-headed households respectively. TV ownership is quite low too: thirteen percent of male headed households and nine percent of female headed households own a television. Radio ownership, on the other hand is quite widespread. Seventy nine percent of male-headed households possess a radio. Among female-headed households the ownership is 8 percentage points lower. There is quite a large (15 percentage points) difference in mobile phone ownership – 65 percent versus 50 percent for male- and female-headed households respectively. On aggregate, households in survey areas fare better than the national average in terms of physical asset ownership., especially ownership of house (89 percent vs. 82 percent), bicycle (48 percent vs. 38 percent), motorcycle (11 percent vs. five percent), and mobile phone (62 percent vs. 46 percent).

Thus in terms of ownership of all assets, male-headed households hold a significant advantage over female-headed households. While for some assets like bikes or motorcycles, this difference may not

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necessarily be fully indicative of economic status – either because it is not socially acceptable for women to use them or they are used more in 'male' occupations like taxi driving – for other assets like refrigerators or mobile phones this difference is a stronger indicator of the economic disadvantage of female-headed households.

Table 11: Asset Ownership by Gender of Household Head

	All	Male-Headed	Female-Headed	Difference
House	**0.89**	0.90	0.86	0.03***
Car	**0.04**	0.04	0.02	0.02***
Motorcycle	**0.11**	0.13	0.05	0.07***
Bike	**0.48**	0.53	0.27	0.26***
Refrigerator	**0.07**	0.07	0.05	0.02***
TV	**0.12**	0.13	0.09	0.03***
Radio	**0.78**	0.79	0.71	0.08***
Mobile Phone	**0.62**	0.65	0.50	0.15***

Note: ***p <0.01, **p<0.05 *p<0.10

Findings Highlights

The majority of households own their houses, which as the previous section showed are often low quality.

Only around one in ten households own motor-vehicles, refrigerators and TVs.

Male-headed households are more likely to own physical assets, the most prominent differences being in ownership of bicycles, motor-vehicles, and mobile phones.

Differences by Programme Group

As can be seen in Table 12 below, households in "Microfinance Only" and "Microfinance and Agriculture" areas are significantly different from control areas in terms of ownership of almost all asset types. Households in control areas are more likely to own their house but less likely to own a car, a motorcycle, a TV, a mobile phone or radio.[22] Since bicycles and motorcycles can be considered as partial substitutes, it is not surprising that the difference in bicycle ownership is in the favour of households in control areas. The "Agriculture Only" areas have an advantage over control areas only in motorcycle, radio and mobile phone ownership. Thus, with the exception of house ownership, households in control areas are overall at a significant disadvantage compared with the other areas.

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[22] There is no difference b/w Microfinance Only and Control areas in terms of radio ownership.

Table 12: Asset Ownership: Differences by Programme Group

	MF Only	Agriculture Only	MF & Agriculture	None (Control)	Total
House	0.84***	0.94	0.87***	0.95	0.89
Car	0.05***	0.03	0.04***	0.02	0.04
Motorcycle	0.12***	0.13***	0.12***	0.09	0.11
Bike	0.44***	0.56	0.45***	0.53	0.48
Refrigerator	0.09***	0.06	0.07***	0.04	0.07
TV	0.18***	0.08	0.13***	0.06	0.12
Radio	0.80***	0.80***	0.75	0.76	0.78
Mobile Phone	0.66***	0.64***	0.64***	0.56	0.62

Note: *** <0.01, **<0.05 *<0.10 (stars signify difference from Control group)

2.3 Financial assets

Savings

As financial assets, savings – both formal and informal – have an important impact on household livelihoods, for both promotive and preventive purposes. Savings are important both as a buffer in case of crisis events, but also as a means to buy productive assets, invest in enterprises or finance education (Karlan et al 2005). A recent by Finscope revealed that 71 percent of Ugandans aged 16 and above are currently saving or investing: the majority save in secret places (60 percent) and/or informal institutions (38 percent), with only 15 percent having formal bank accounts (Finscope 2009). The report also showed that males are slightly more likely to save than females (73 percent vs. 69 percent). This section investigates saving preferences of households in surveyed areas, including where and how much households save and whether there are differences between male and female headed households with respect to savings.

More than two thirds of the households (69 percent) have savings, as Figure 8 and Table 13 below illustrate. Just over 40 percent of households save in only one location, 21 percent in two locations, and a further seven percent save in more than two locations. Savings are most commonly kept at home, with 59 percent of households keeping their savings here. Fewer than 20 percent of households have savings at a bank, and a further 12 percent of households save with another person. Six and seven percent of households respectively save with SACCOs (Savings and Credit Cooperatives) and ROSCAs (Rotating Savings and Credit Associations).
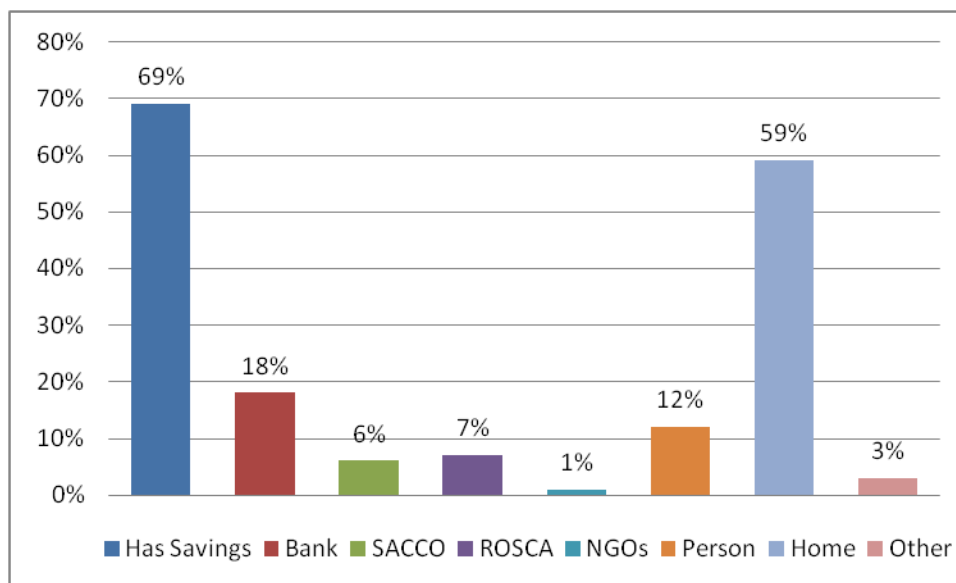
Figure 8: Proportion of Households Saving in Each Location

Among those who saved, the average amount of savings was 397,512 Ush (around $174). Households saving in banks were found to have the largest average savings – 966,243 Ush ($423). SACCO clients save on average 201,700 Ush ($88). Households trust on average 209,095 Ush ($92) to other persons. Among households who save at home, the average amount of their savings is 95,050 Ush ($42).

It is interesting to see how male- headed and female-headed households differ in their savings behaviour and capacity. Despite the fact that, as we saw in other sections, female-headed households are at a significant economic disadvantage, they are as likely to have savings as male-headed households. However there is a significant difference in the total amount of average savings across male- and female-headed households: those male headed households that save, save almost twice as much as female-headed households that save. Male-headed households are also much more likely to save in bank accounts – 19 percent versus 11 percent. It is notable, however, that those female-headed households that do save at a bank save as much, on average, as male-headed households save in banks. Male headed households are also slightly more likely to save with SACCOs, but the difference is only two percentage points. In terms of average savings at SACCOs, the difference between male and female-headed households is over 60,000 Ush and statistically significant. Male-headed households are also a little more likely to save with other people (13 percent versus nine percent), but there is no difference in terms of amount saved through this way. Apart from the above-mentioned, there are no other significant differences among male and female headed households, either in terms of likelihood to save in a given location, or the average amount saved.

Table 13: Proportion of Saving Households and Average Savings Amount (Ush) at Each Location

	Proportion of Households Saving at Each Location				Average Amount of Non-Zero Savings at Each Location			
	All	**Male-Headed**	**Female-Headed**	**Difference**	**All**	**Male-Headed**	**Female-Headed**	**Difference**
Any Savings	0.69	0.70	0.69	0.01	397,512	431,681	238,539	193,142***
Bank	0.18	0.19	0.11	0.08***	966,433	989,396	782,911	206,484
SACCO	0.06	0.06	0.05	0.02***	201,700	210,395	148,522	61,872**
ROSCA	0.07	0.07	0.06	0.01	93,833	92,991	98,128	-5,137
NGOs	0.01	0.01	0.01	0.00	209,095	216,739	169,136	47,603
Other Person	0.12	0.13	0.09	0.03***	107,909	112,236	81,819	30,417
Home	0.59	0.59	0.59	-0.00	95,050	96,151	90,102	6,049
Other	0.03	0.03	0.03	0.00	477,207	555,718	98,260	457,458

Note: *** <0.01, **<0.05 *<0.10

Differences by Programme Group

As can be seen in Table 14, households in Control areas are less likely by three to four percentage points to have savings. Their average total savings is more than half that of households in "Microfinance Only" and "Microfinance and Agriculture" areas. The difference from "Agriculture Only" areas although large, is not significantly larger than zero. They are also a lot less likely to have savings at a bank. The average savings amount among those who have bank deposits, however, does not differ across programme areas. The last important difference is that the average savings amount at home is also significantly smaller in Control and "Agriculture Only" areas.

Table 14: Proportion of Saving Households and Average Savings Amount (Ush) at Each Location

	MF Only	Agriculture Only	MF & Agriculture	None (Control)	Total
Has Savings	0.70***	0.71**	0.71***	0.67	0.69
Average Savings	498,460***	373,614	470,310***	219,957	397,512
Has Savings at Bank	0.21***	0.15**	0.20***	0.12	0.18
Average Savings at Bank	1,130,991	1,136,423	917,438	595,206	966,433
Has Savings at SACCO	0.06	0.07**	0.06	0.05	0.06
Average Savings at SACCO	205,162	205,009	230,418	171,450	201,700
Has Savings at ROSCA	0.07	0.08	0.06	0.07	0.07
Average Savings at ROSCA	98,598	80,757	98,167	90,145	93,833
Has Savings at NGO	0.01	0.01**	0.01**	0.01	0.01
Average Savings at NGO	108,465	96,360	360,476	248,720	209,095
Has Savings with Other Person	0.11	0.11	0.13	0.13	0.12
Average Savings with Other Person	124,191	90,005	133,972	77,241	107,909
Has Savings at Home	0.59	0.62*	0.58	0.58	0.59
Average Savings at Home	105,710***	66,947	121,598**	74,402	95,050
Has Savings at Other Location	0.03	0.03	0.04	0.03	0.03
Average Savings at Other Location	325,377	384,333	1,131,655	85,764	477,207

Note: *** <0.01, **<0.05 *<0.10 (stars signify difference from Control group)

Loan Demand

In order to provide microfinance services that meet the needs of households, it is important to understand the demand for loans from different types of institutions, and the constraints that households face in accessing loans. This section explores the proportion of households that applied for loans, and the percentage of their demand that was successfully met. It also analyses the reasons that prevent some households from requesting loans.

In the last 12 months, close to a third of households had applied for or requested any form of loan (or multiple loans). Only five percent of the households applied for a loan from a formal institution (defined as a bank or other government agency subject to central monetary authority regulation). Of those households that applied for formal loans, just less than three quarters received them. Only nine percent of the population applied for a loan from a semiformal institution (such as microfinance institutions, cooperatives, non-governmental organisations, etc.). Over three quarters (78 percent) of those who applied from these sources received their loan.

Informal sources of loan were more widespread. Twenty percent of households had requested a loan from an informal source (such as friends and relatives, local money lenders, shop keepers, landlord/employer, village level associations, etc.), and 88 percent were able to fulfill their requirements through this channel. As can be seen in Table 15, female-headed households were less likely to have applied for a loan from any of these sources, but those that applied had an equal chance of obtaining

their loan. It is noteworthy that these self-selecting female-headed households were considered by all types of institutions as creditworthy as male-headed households.

Interestingly, our research revealed that over two-thirds of households (68 percent) had not applied for a loan from any type of institution. An analysis of the reasons that prevented households from applying for a loan highlights that there are different barriers depending on the type of lending institution. As Figure 9 illustrates, the primary reason for not borrowing from all three sources are demand-side: households had no need to borrow or did not wish to be indebted.

The next most important reason for not applying to formal institutions such as banks is inadequate security (collateral) – this was a problem for 19 percent of the households who did not apply to a formal institution. Stricter demands for collateral are characteristic to banks. However collateral is also a hurdle for 12 percent and six percent of the households that did not apply to semiformal and informal sources, respectively. Collateral provision is a supply-side issue and could be addressed by semiformal institutions if they want to target these households.
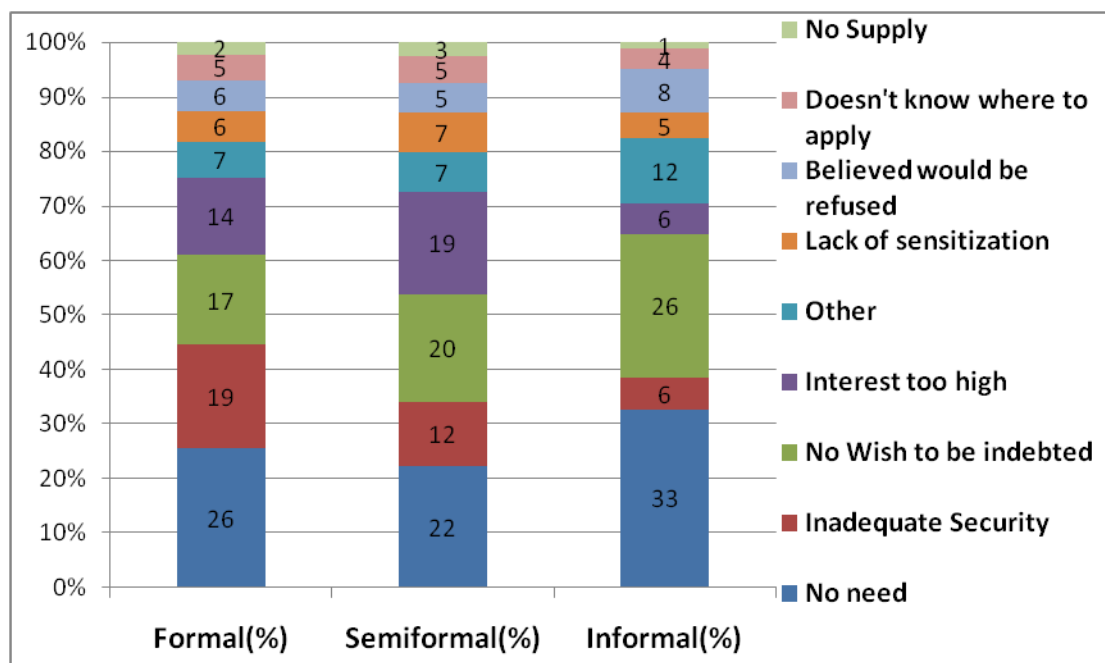
Figure 9: Reasons for Not Applying for a Loan

Another important supply-side problem cited is high interest rates, more often in the case of semiformal institutions than banks and informal sources. Since semiformal institutions usually service smaller size loans, they have to charge higher interest rates to cover the costs of loan provision. Few households complained of a lack of local supply of financial institutions.

Table 15: Loan Demand and Obtainment Rate by Gender of Household Head

	All	Male-Headed	Female-Headed	Difference
Applied for Loan to a Formal Institution	0.05	0.05	0.02	0.03***
Obtained a Loan from Formal Institution	0.73	0.72	0.73	-0.01
Applied for Loan to a Semiformal Institution	0.09	0.09	0.07	0.02***
Obtained a Loan from Semiformal Institution	0.78	0.78	0.79	-0.01
Applied for Loan to a Informal Institution	0.27	0.28	0.24	0.04***
Obtained a Loan from Informal Institution	0.88	0.88	0.88	0.00

Note: * p<.10, ** p<.05, *** p<.01

Differences by Programme Group

As Table 16 reveals, households in Control Areas were less likely to have applied for a loan to a formal institution than households in "Microfinance Only" and "Microfinance and Agriculture" areas. However, households in control areas that did apply were more likely to receive it (the difference with "Microfinance Only" areas is not statistically significant). Control area households were also the least likely to have applied for a loan from semiformal institutions, but had the highest likelihood to be granted a loan if applied (the difference with "Agriculture Only" areas is significant only at a ten percent level, with other Programme Areas this is not significant). Finally, households in Control areas were as likely as the households in other areas to have applied to informal sources, and were more likely than households in "Agriculture Only" areas to get the requested loans.

Table 16: Loan Demand and Obtainment Rate by Programme Group

	MF Only	Agriculture Only	MF & Agriculture	None (Control)	Total
Applied for Loan to a Formal Institution	0.06***	0.04	0.06***	0.02	0.05
Obtained Loan from Formal Institution	0.77	0.64*	0.64**	0.81	0.73
Applied for Loan to a Semiformal Institution	0.10***	0.07**	0.13***	0.05	0.09
Obtained Loan from Semiformal Institution	0.80	0.69*	0.78	0.81	0.78
Applied for Loan to Informal Institution	0.28	0.27	0.26	0.27	0.27
Obtained Loan from Informal Institution	0.88	0.85**	0.86	0.91	0.88

Note: * p<.10, ** p<.05, *** p<.01; Stars signify difference from Control Group

Loan obtainment

As microfinance is becoming more emphasised on the development agenda, it is important to get a better picture of the current borrowing behaviour and opportunities of the households. While the previous section looked at loan demand, this section examines obtainment of loan funds and loan amounts from different sources, as well as the reasons for borrowing. Once again, we analyse the difference between male and female-headed households in terms of borrowing behaviour. As Table 17 shows, 27 percent of households have borrowed cash in the last 12 months at an average amount of 334,000 Ush ($147). Male-headed households were five percentage points more likely to have borrowed cash. However there is no statistically significant difference in the average amount borrowed between male- and female-headed households.

Among those who borrowed any sum of money, 11 percent of households took a loan from a bank. Male-headed households were more likely to borrow from a bank, but there is no significant difference in the average amount borrowed (168,188 Ush, or $74) across male and female-headed households. Eleven percent of households borrowed from BRAC and nine percent of households borrowed from other MFIs, borrowing an average loan amount of 30,514 Ush ($13) and 51,534 Ush ($23), respectively. Male and female-headed households were equally likely to borrow from BRAC and other MFIs, but the average amount borrowed from other MFIs is almost twice larger for male-headed than for female-headed households. Remarkably, there is no such difference in case of loans from BRAC.
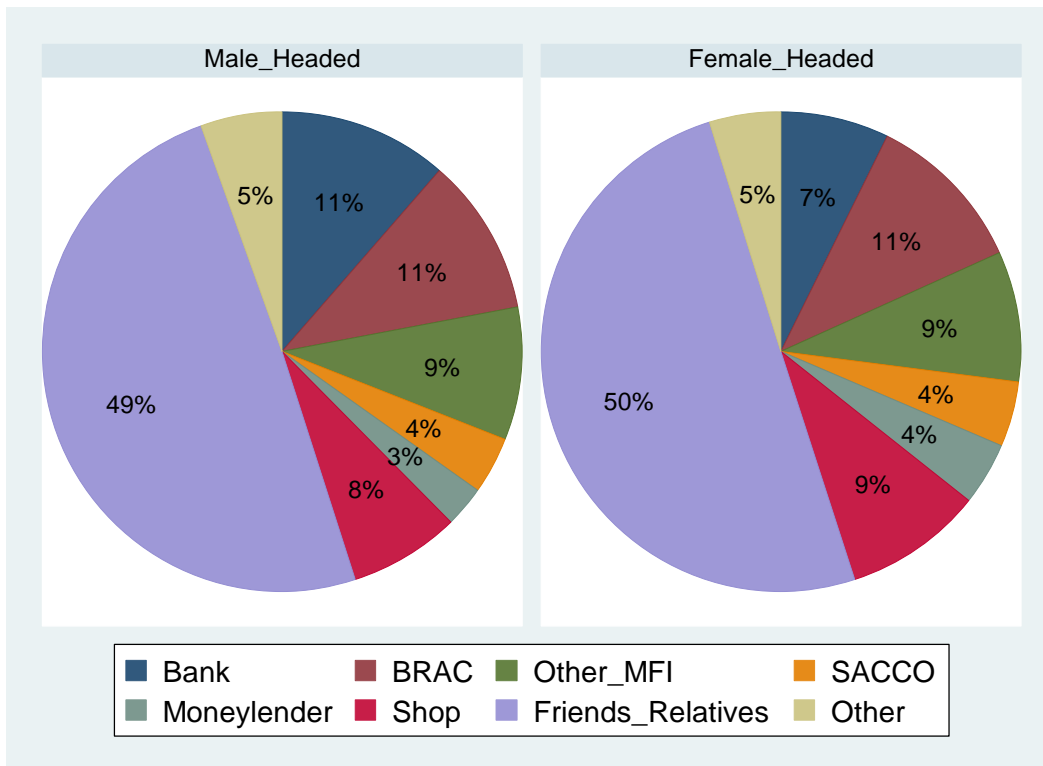
Figure 10: Main Source of Loan among the Households that Borrowed Cash in the last 12 months

Four per cent of households borrowed money from SACCOs. This source of lending offers smaller loan sizes, with average loans of only 12,768 Ush ($6). There was no difference in borrowing from SACCOs between male and female-headed households in this respect. There was also no difference in loans being taken from shops and moneylenders: male and female-headed households were equally likely to have borrowed from these sources, with eight percent and three percent of households borrowing from these sources respectively. The average amounts borrowed are small, however. For those borrowing from shops, the average loan size is only 1,849 Ush ($0.80). Likewise, for average loan size is 4,975 Ush ($2) for those borrowing from moneylenders.

Table 17: Borrowing Rate and Average Loan Amount (Ush) Per Source by Gender of Household Head

	BORROWING RATE				AVERAGE LOAN AMOUNT			
	All	Male-Headed	Female-Headed	Difference	All	Male-Headed	Female-Headed	Difference
Borrowed Cash (last 12 months)	0.27	0.28	0.23	0.05***	334,130	334,784	329,683	5,101
Bank	0.11	0.11	0.07	0.04***	168,188	159,451	215,701	-56,250
BRAC	0.11	0.11	0.11	-0.00	30,514	30,355	31,161	-806
Other MFIs	0.09	0.09	0.09	0.00	51,534	55,458	29,476	25,982***
SACCO	0.04	0.04	0.04	-0.01	12,768	13,073	10,983	2,091
Shop	0.08	0.08	0.09	-0.02	1,849	1,884	1,645	239
Moneylender	0.03	0.03	0.04	-0.01	4,975	5,311	3,077	2,234
Friends	0.50	0.49	0.50	-0.01	52,307	56,514	29,835	26,679***
Other	0.05	0.05	0.05	0.01	12,208	13,527	4,836	8,691***

Note: * $p<.10$, ** $p<.05$, *** $p<.01$

The largest sources of loans are, unsurprisingly, friends and relatives. Fifty percent of those who borrowed took a loan from these sources, at an average amount of 52,307 Ush ($23). Although the take-up rate is the same among male and female-headed households, the loan size is almost twice larger for males than for females.

Reasons for Borrowing

As Figure 11 highlights, households took loans for various reasons, primarily for financing their non-farm businesses.[23] Funding consumption costs is the next major reason that households borrow money. Male-headed households are more likely to borrow for agriculture-related activities such as buying land, livestock, equipment and inputs. Sixteen percent list this as the reason for their primary loan, while only eight percent of female-headed households specified this as a motivation for borrowing.

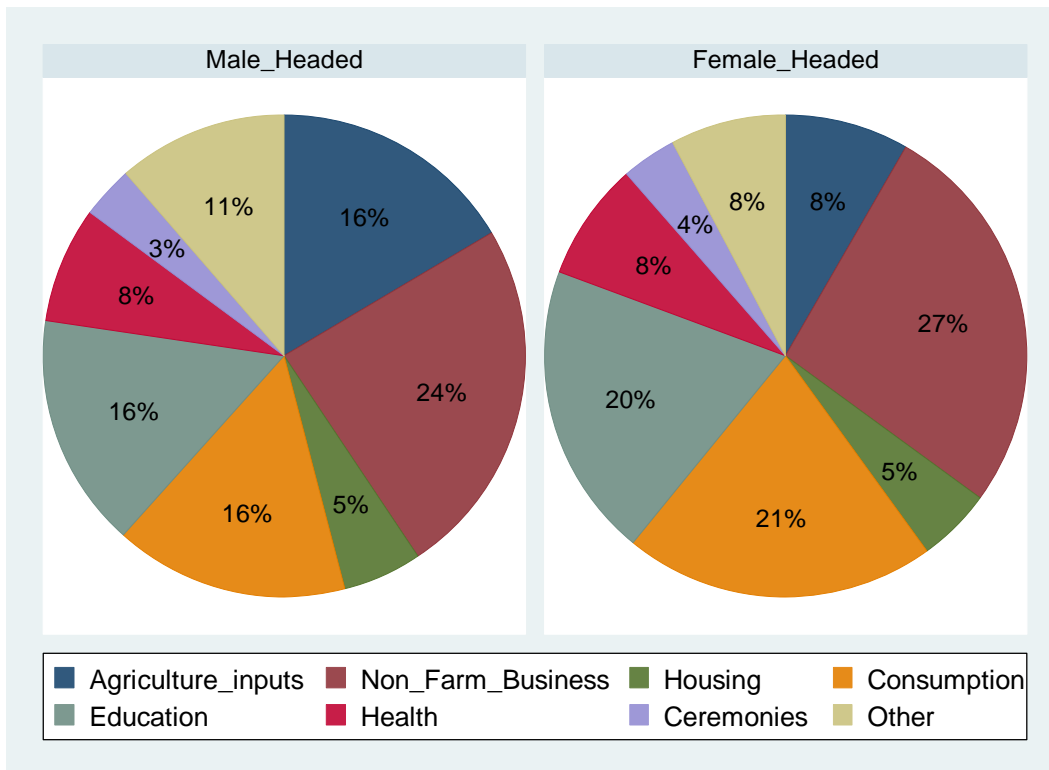[23] This difference is not statistically significant

Figure 11: Reason for Loan by Gender of Household Head
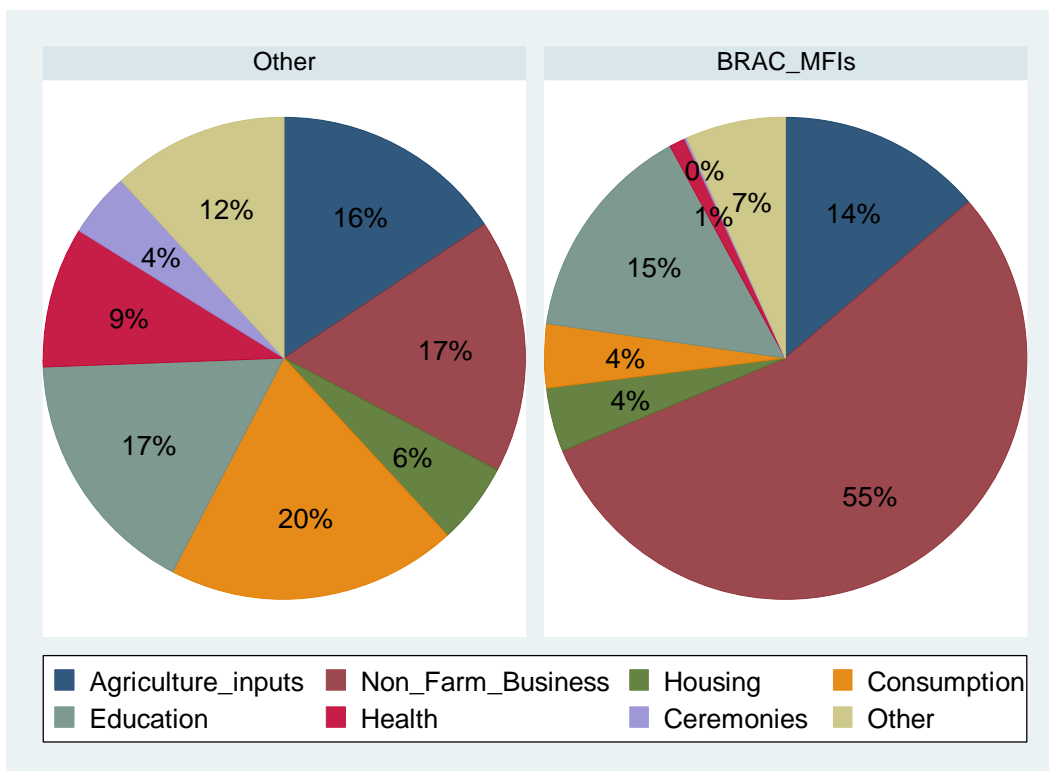

Figure 12: Loan Reason by Source

Female-headed households are more likely to borrow for consumption (21 percent versus 16 percent) and education (20 percent versus 16 percent) than male-headed households. These results are quite expected. Buying land, livestock and equipment are major investments: for more vulnerable female-headed households this is harder both financially and in terms of human resources. Being financially less secure, female headed households are also more likely to borrow for smoothing consumption and for paying school fees.

Another issue of interest is whether reasons for borrowing differ according to the microfinance institution (including BRAC) that the loan is sourced from. As can be seen in Figure 10, households do not borrow from BRAC and MFIs for the same reasons that encourage them to take loans from other sources. Loans from MFIs (including BRAC) are borrowed primarily for non-farm business (55 percent), education (16 percent) and agricultural activities (14 percent): only four percent borrow for consumption. Loans from other sources, in contrast, are borrowed primarily for consumption (20 percent), education (17 percent) and agriculture (17 percent). Survey data shows that few people borrow from BRAC or other MFIs to cover health-related and ceremonial expenses.

Reasons for borrowing in the survey areas have a fairly similar distribution in comparison with national household surveys. However, we observe more pronounced gender-based differences when looking at the gender of household heads: in the national household survey, which looks at the gender of individual borrowers, these gender-based differences are not so pronounced (UBOS 2010).

Findings Highlights

Over a quarter of all survey households have borrowed money in the last 12 months. Half of these have borrowed primarily from family and friends.

Male-headed households are more likely to take loans from banks than female-headed households, but there is no significant difference in the amounts borrowed from this source across male- and female-headed households.

Female-headed households are more likely than male-headed households to borrow for consumption-smoothing purposes.

Loans are primarily taken for financing a non-farm business, particularly when the loan is taken from a financial institution.

Difference by Programme Group

As Table 18 shows, households in Control areas were the least likely to have borrowed cash in the last 12 months, and this difference is statistically significant for "Microfinance Only" and "Microfinance and Agriculture" areas.

Table 18: Borrowing Rate per Source by Programme Group

	MF Only	Agriculture Only	MF & Agriculture	None (Control)	Total
Borrowed Cash	0.29***	0.26	0.30***	0.23	0.27
Bank	0.14***	0.09	0.10	0.07	0.11
BRAC	0.12***	0.07	0.18***	0.02	0.11
Other MFIs	0.10	0.11	0.08	0.07	0.09
SACCO	0.04	0.03	0.04	0.04	0.04
Shop	0.03	0.02**	0.02*	0.04	0.03
Moneylender	0.06	0.10	0.07	0.09	0.08
Friends	0.45***	0.53	0.44***	0.60	0.5
Other	0.05	0.06	0.05	0.05	0.05

Note: * p<.10, ** p<.05, *** p<.01; Stars signify difference from Control Group

They were also the least likely to borrow from a bank, or BRAC[24] and other MFIs: for the latter, however, the difference is not statistically significant. Households in Control areas are more likely to have borrowed from shops and from friends.

In terms of the average total borrowed amount, as well as the average amount borrowed from banks, households in Control areas borrowed the least: the difference, however, is statistically significant only in comparison with households in "Microfinance Only" areas. The same is true of loan amounts borrowed from BRAC, but this difference is significant in both "Microfinance Only" and "Microfinance and Agriculture" areas. For all other sources, although there is a difference in the average borrowed amount, the high variance means this is not statistically significant (see Table 19).

Table 19: Average Loan Amount (Ush) per Source by Programme Group

	MF Only	Agriculture Only	MF & Agriculture	None (Control)	Total
Borrowed Cash	442,642**	189,945	377,325	197,224	334,130
Bank	259,125*	56,384	190,363	63,565	168,188
BRAC	35,036***	19,637	48,396***	10,778	30,514
Other MFIs	58,360	61,169	45,321	42,720	51,534
SACCO	12,027	9,501	10,600	17,751	12,768
Shop	5,120	1,838	3,484	7,854	4,975
Moneylender	2,291	1,770	1,418	1,661	1,849
Friends	55,603	32,640	64,307	44,863	52,307
Other	14,540	7,005	14,618	8,809	12,208

Note: * p<.10, ** p<.05, *** p<.01; Stars signify difference from Control Group

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[24] Even though BRAC does not offer Microfinance services in Control Areas, people can borrow from another BRAC location.

2.4 Social assets

Robert Putnam (1993) defines the term "social capital" as referring to features of social organisation – such as networks, norms, and trust – that facilitate coordination and cooperation for mutual benefit". It is, he claims, a "vital ingredient of economic development" (Putnam 1993). This section looks at selected indicators of social capital, including social involvement, trust, mutual help, and peacefulness.

Table 20: Social Involvement Indicators by Gender of Household Head

	All	Male-Headed	Female-Headed	Difference
Household has a member in Local Council Committee	0.09	0.10	0.06	0.04***
Household has a member in a local group	0.15	0.15	0.12	0.04***
# of times household member has attended a ceremony in the last 12 months	6.39	6.44	6.17	0.27

Note: * p<.10, ** p<.05, *** p<.01

As Table 20 reveals, nine percent of households had at least one member involved as a member of the local council committee, close to the national average of ten percent (UBOS 2010). In addition, 15 percent of households have at least one member in some form of local group. Male-headed households are more likely to be socially connected through having a household member in the local council or other local groups. Ten percent of male-headed households had some form of membership, compared with six percent of female-headed households. Members of both male and female-headed households had attended an average of six ceremonies in their community in the last 12 months.
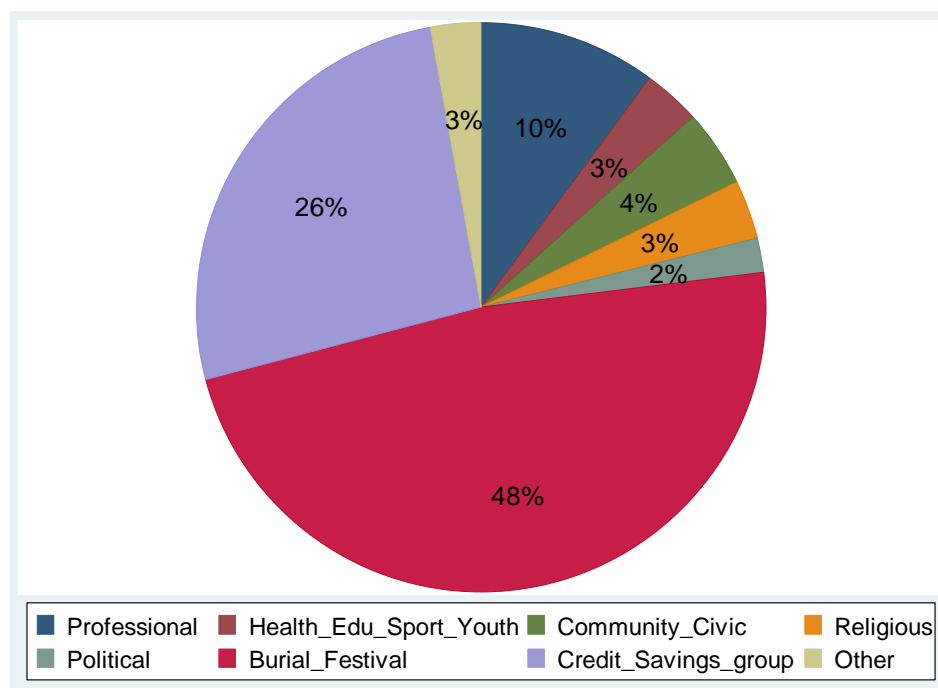
Figure 13: Type of Group

As Figure 13 illustrates, almost half of those involved in a local group are members of burial and festival societies, a quarter are in credit and savings associations, and 10 percent are engaged in professional associations such as farmer's groups and cooperatives, labour unions, etc. Only two to four percent are in religious, political, youth, education, health and other groups.

Social Capital in the Community
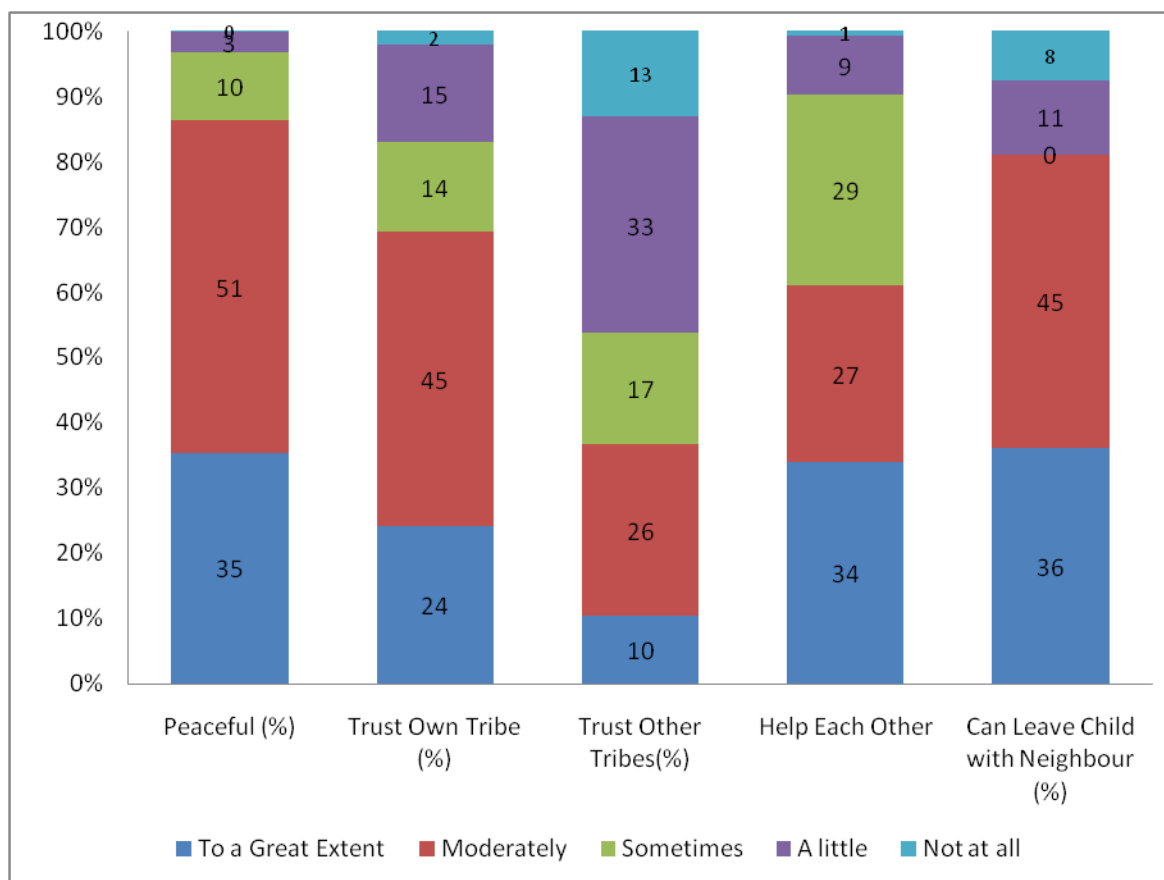
Figure 14: Social Capital Indicators

Nearly 90 percent of households consider their communities 'very' or 'moderately' peaceful, and nearly 69 percent of respondents find village people from their ethnic group trustworthy. There is less trust across tribes, however: only 36 percent think village members from other tribes are trustworthy. This large difference reflects the distinct tribal and ethnic identities in Uganda. Just over 60 percent of respondents believe that people in their village are helpful to each other all of the time or quite often and felt that they can leave a child with a neighbour for a couple of days if there is a need, as Figure 14 and Table 20 illustrate.

Findings Highlights

Nearly one in ten households has a member in the local committee.

The vast majority of households find their community peaceful.

Households trust their community members considerably more if they are from the same tribe as themselves.

Differences by Program Group

Involvement: Households in Control and Agriculture areas are more likely to be involved in Local Councils or groups and have, on average, attended more ceremonies than households in other areas.

Social Capital: The 1 to 5 scale (1 to 4 for childcare) seeks to capture the existence of social capital in communities. Total social capital is calculated as a sum of averages of different indicators (see Table 2 below). While not a comprehensive index, it is useful for making comparisons across communities. As we can see in the table below, Control and Agriculture areas have higher social capital than Microfinance Only and Microfinance & Agriculture areas. Households in these areas are more likely to trust members of their tribe, find community members helpful, and leave their child with their neighbour in case of absence.

Table 21: Social Capital and Social Involvement by Programme Group

	MF Only	Agriculture Only	MF & Agriculture	None (Control)	Total
Social Involvement					
LC member	0.08***	0.10	0.09	0.10	0.09
Group Member	0.13***	0.16	0.13***	0.17	0.15
Number of Ceremonies Attended	6.16***	7.10	5.69***	6.90	6.39
Social Capital					
Peacefulness	4.18	4.24***	4.15	4.18	4.18
Trust Own Tribe	3.67***	3.82	3.70***	3.81	3.74
Trust Other Tribes	2.86	2.83	2.91	2.87	2.87
Helpfulness	3.76***	3.95	3.78***	3.93	3.84
Childcare at Neighbour's	3.04***	3.18	3.04***	3.16	3.09
Total Social Capital	16.79***	17.74	16.96**	17.39	17.13

Note: * p<.10, ** p<.05, *** p<.01; Stars signify difference from Control Group

2.5 Economic activities

2.5.1 Main income sources

Knowledge of a household's main source of income provides information on their level and type of vulnerability and their priorities, as well as helps to analyse their needs in order to identify points of social or market intervention. Understanding whether there are gender-based differences in the distribution of income sources is crucial to understanding specific vulnerabilities of female-headed households and to ensure a better focus on women-oriented projects.
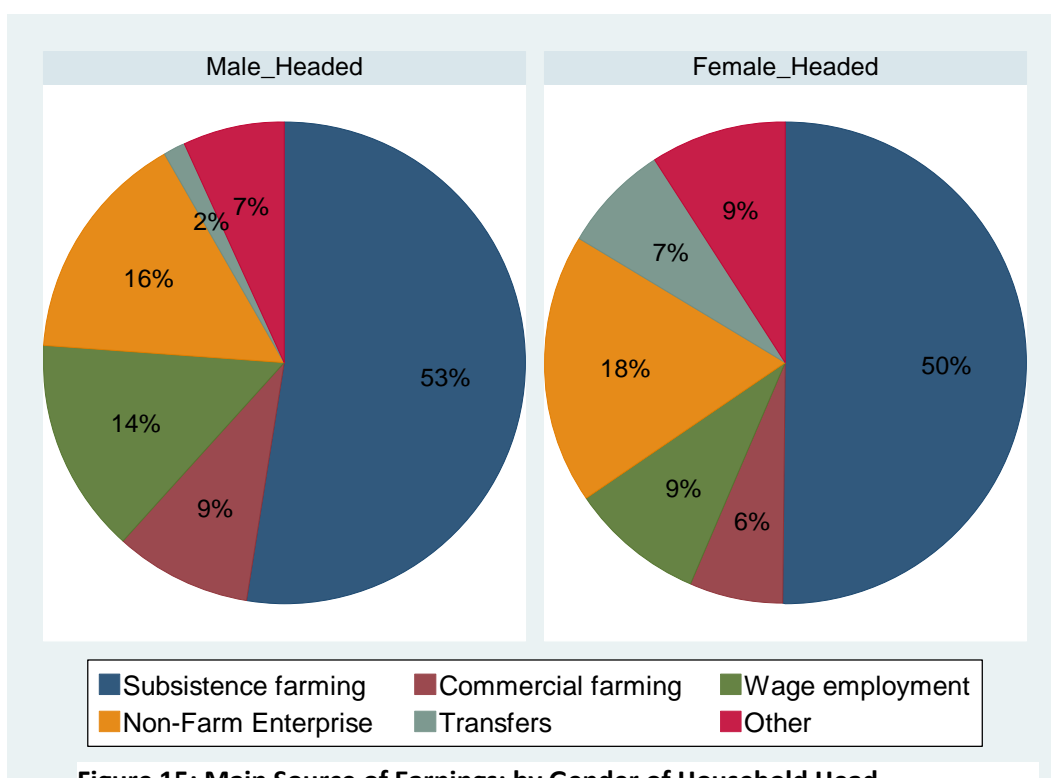
Figure 15: Main Source of Earnings: by Gender of Household Head

As Figure 15 and Table 22 reveals below, subsistence farming provides the main income source for 53 percent of male-headed and half of female-headed households: their livelihoods, therefore, are dependent on harvest and weather conditions. Non-farm enterprise is the main source of income for 16 percent of male-headed and 18 percent of female-headed households respectively. Male-headed households are significantly more likely than female-headed ones to earn primary income from wage employment (14 percent versus nine percent) and commercial farming (nine percent versus six percent). Female-headed households depend more on transfers as their main source of income (seven percent versus only two percent of male-headed households). While female-headed households are more dependent on external sources of finance, therefore, male-headed households are more self-dependent.

The dominance of subsistence farming as the main source of income is similar to the national distribution of income sources: there remain some differences with our findings, however. Nationwide, just over 40 percent of households nationwide derive their livelihoods primarily from subsistence farming, four percent from commercial farming, 25 percent from wage employment, 21 percent from non-farm enterprise, 0.23 percent from transfers and eight percent from other activities (UBOS 2010).

Table 22: Main Source of Earnings: by Gender of Household Head

	All	Male-Headed	Female-Headed	Difference
Subsistence Farming	0.52	0.53	0.50	0.02**
Commercial Farming	0.09	0.09	0.06	0.03***
Wage Employment	0.13	0.14	0.09	0.05***
Non-farm Enterprise	0.16	0.16	0.18	-0.03***
Transfers	0.03	0.02	0.07	-0.06***
Other	0.07	0.07	0.09	-0.02***

Note: *** $p<0.01$, **$p<0.05$ *$p<0.10$

Differences by Programme Group

As we can see from Table 23, households in Control areas are overwhelmingly more likely than the other three groups to depend on subsistence farming as their main source of income. They are also slightly more likely to earn their main income from commercial farming, and less likely to get it from non-farm enterprise, wage employment or other sources. However they do not depend on transfers any more than the other three groups. Apart from subsistence farming and wage employment, the distribution of main sources of income in "Agriculture Only" areas is similar to that of Control areas.

Table 23: Main Source of Earnings by Programme Group

	MF Only	Agriculture Only	MF & Agriculture	None (Control)	Total
Subsistence Farming	0.41***	0.59***	0.49***	0.65	0.52
Commercial Farming	0.08***	0.11	0.07***	0.10	0.09
Wage Employment	0.19***	0.11***	0.14***	0.08	0.13
Non-farm Enterprise	0.21***	0.10	0.19***	0.10	0.16
Transfers	0.03	0.03	0.03	0.02	0.03
Other	0.09***	0.06	0.08***	0.05	0.07

Note: *** <0.01, **<0.05 *<0.10 (stars signify difference from Control group)

2.5.2 Agriculture

This section examines household engagement with agriculture and the use of agriculture services. Seventy percent of households were engaged in agriculture and just under a third of households reared livestock in 2008. Male-headed households were more likely to be engaged in both of these activities than female-headed households. Of households engaged in agriculture, 17 percent were visited by an agriculture extension officer. As can be seen in Figure 16, out of those households that had received a visit, 73 percent received visits from Government/NAADS extension workers, sixteen percent from BRAC workers, and 11 percent from other NGOs. Six percent of households did not know what provider their

extension service provider was associated with. Twenty percent of households that reared livestock were visited by a livestock extension officer and more than two thirds of them have used the officer's services. Only a tenth of livestock rearers used artificial insemination, with female-headed household more likely to do so. Forty one percent of poultry rearers vaccinated their chicken.

73%

16%

11%

6%   6%

■ Gov/NAADS ■ BRAC ■ Other NGO ■ Other ■ Don't know
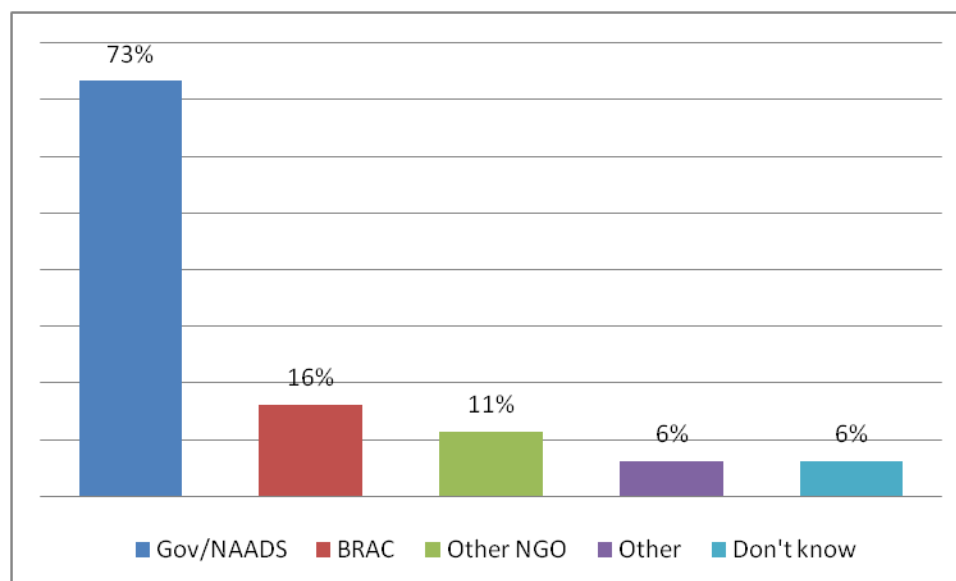
Figure 16: Agri Extension Officer Organisation

Table 24: Agriculture Indicators by Gender of Household Head

	All	Male-headed	Female-Headed	Diff.
Was engaged in Agriculture	0.70	0.71	0.67	0.04***
Was visited by Agri Extension Officer	0.17	0.18	0.14	0.03***
Reared Livestock[25]	0.31	0.32	0.26	0.06***
If so, was visited by Livestock Extension Officer	0.20	0.21	0.19	0.01
If so, Used LEO services	0.77	0.77	0.79	-0.01
Used Artificial Insemination[26]	0.11	0.10	0.16	-0.06*
Vaccinated Chicken	0.41	0.41	0.41	0.00

Note: *p<0.10 ** p <0.05 ***p<0.01

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[25] Among those who were engaged in agriculture
[26] Among those who reared livestock

Differences by programme group

Households in Control areas were most likely to be engaged in agriculture. They and "Agriculture Only" households were also more likely to have reared livestock. Households in Control area, however, were least likely to be visited by a livestock extension officer. Livestock rearers in the "Microfinance Only" areas were most likely to have used artificial insemination. Poultry rearers in Control and "Agriculture Only" areas were the least likely to have vaccinated their chicken.

Table 25: Agriculture Indicators by Programme Group

	MF Only	Agriculture Only	MF & Agriculture	None (Control)	Total
Was engaged in Agriculture	0.66***	0.70***	0.65***	0.80	0.70
Was visited by Agri Extension Officer	0.17	0.20**	0.18	0.16	0.17
Reared Livestock[27]	0.27***	0.35	0.28***	0.35	0.31
If so, was visited by Livestock Extension Officer	0.22***	0.24***	0.22**	0.16	0.20
If so, Used LEO services	0.79	0.76	0.77	0.77	0.77
Used Artificial Insemination[28]	0.15*	0.11	0.07	0.10	0.11
Vaccinated Chicken	0.42**	0.41	0.46***	0.35	0.41

Note: *p<0.10 ** p <0.05 ***p<0.01, Stars Signify Difference from Control Group

2.5.3 Self-employment

Most banks and microfinance institutions make their loans specifically for financing small and medium enterprises. It is, therefore, of interest to know the characteristics of these enterprises and their current sources of financing. This section explores the types of enterprises that households own and/or operate, and how they finance them, including differences between enterprises run by male- and female-headed households.

A third of households (34 percent of male-headed and 28 percent of female-headed) operated and/or had an income from some kind of enterprise in the last 12 months. Given that – as Table 26 highlights – the average number of employees is less than one, most of these can be considered small enterprises. Figure 17 shows the types of self-employment that households are engaged in, by gender of the household head.

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[27] Among those who was engaged in agriculture
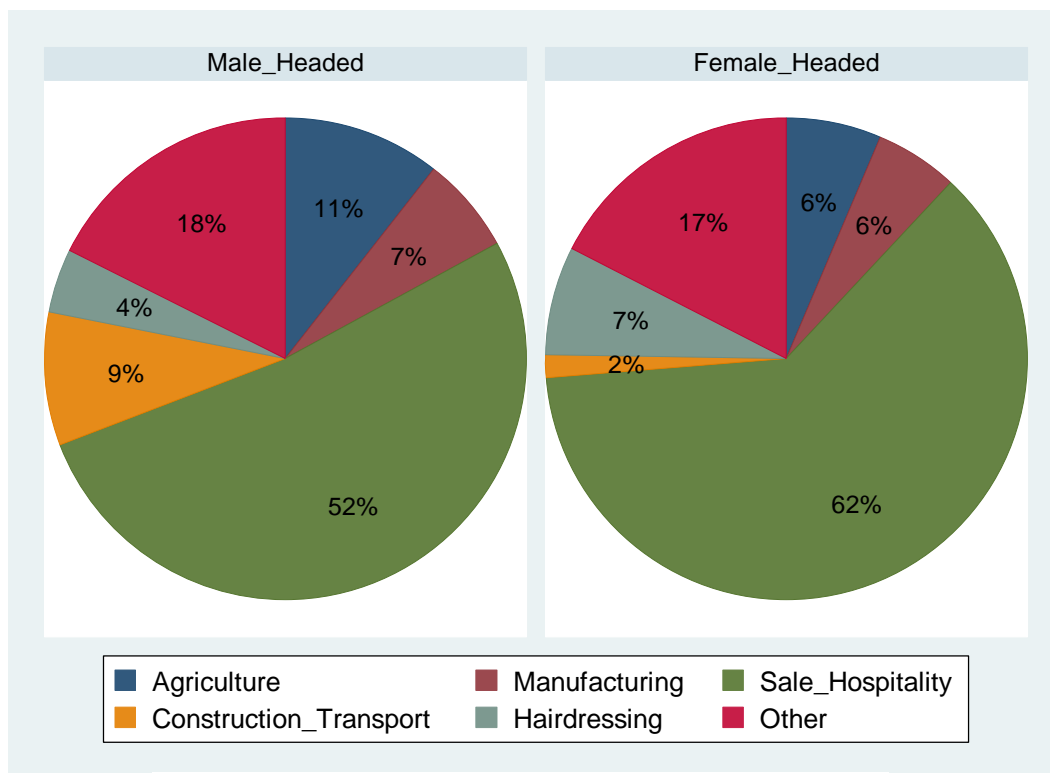[28] Among those who reared livestock

Figure 17: Type of Enterprise by Gender of Household Head

Over half of these enterprises are in the sales and hospitality industry, including activities such as the sale of food and household goods, motor shops, hotels, and restaurants. Ten percent of enterprises are related to agriculture (farming, livestock, fishing, etc.), eight percent to construction and transport, six percent to manufacturing, and five percent to barber shops and beauty parlours. Seventeen percent of enterprises include various activities and sectors such as mining, communications, real estate, and teaching.

There are differences between male and female headed households in terms of the likelihood of having an enterprise as well as in choice of industry. Male-headed households are six percentage points more likely to have an enterprise than female-headed households (See Table 26). Female-headed households are more likely to be involved in sales and hospitality sectors as well as hairdressing and barber shops. Male-headed households have a higher likelihood of being involved in construction and agriculture.

Just under 20 percent of households who had an enterprise had financed it with a loan, as Figure 18 illustrates. Female-headed households were more likely to have borrowed for this purpose. Of the households who took a loan to start their business, 54 percent borrowed from an MFI, 15 percent from family and friends, ten percent from a bank, and the rest from SACCOs and credit unions, local moneylenders and other sources. The only statistically significant difference in terms of source of loans between male- and female-headed households is that male-headed households are more likely to borrow from a bank.
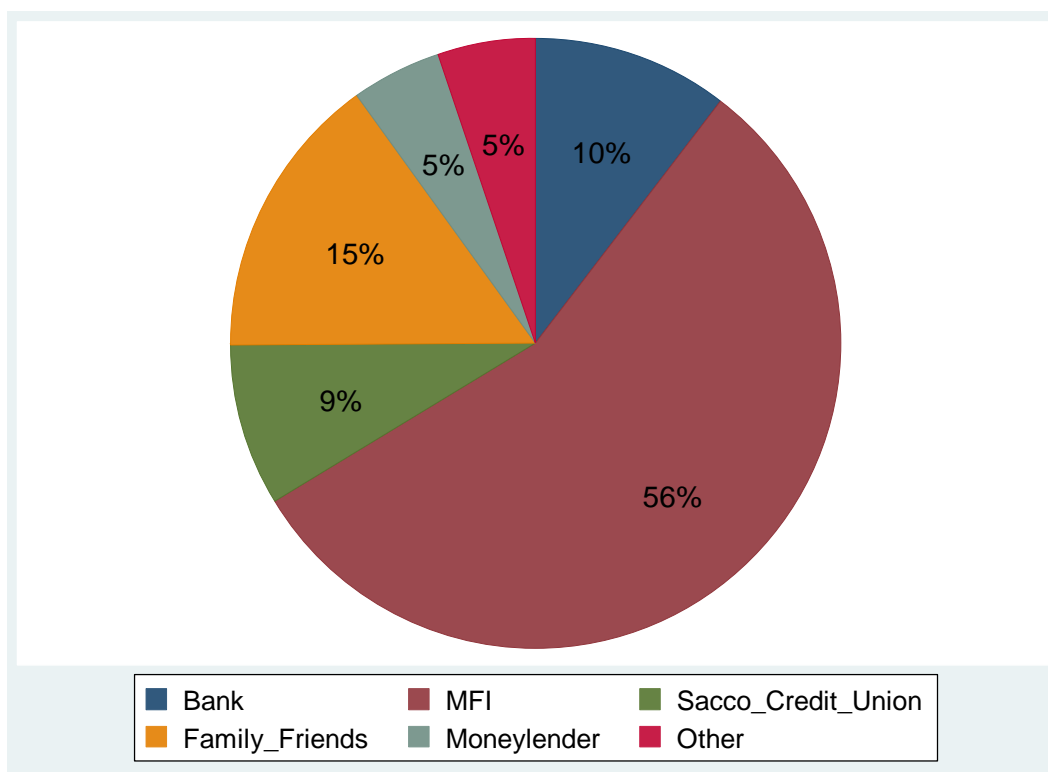
Figure 18: Sources of Financing Enterprise

Table 26: Enterprise Ownership, Type and Financing by Gender of Household Head

	All	Male-Headed	Female-Headed	Difference
Had an Enterprise	0.33	0.34	0.28	0.06***
Number of Employees	0.63	0.67	0.41	0.26***
Type of Industry				
Agriculture	0.10	0.11	0.06	0.04***
Manufacturing	0.06	0.07	0.06	0.01
Sales and Hospitality	0.54	0.52	0.62	-0.10***
Construction	0.08	0.09	0.02	0.07***
Hairdressing	0.05	0.04	0.07	-0.03***
Other	0.17	0.18	0.17	0.00
Have Taken Loan for that business	0.18	0.18	0.22	-0.04**
Source of finance				
Bank	0.10	0.12	0.05	0.06***
MFI	0.56	0.56	0.57	-0.01
SACCO & Credit Union	0.09	0.08	0.13	-0.05
Friends and Family	0.15	0.15	0.17	-0.02
Moneylender	0.05	0.05	0.05	-0.01
Others	0.05	0.06	0.03	0.03

Note: * p<.10, ** p<.05, *** p<.01

Differences by Programme Group

As Table 27 reveals, households in Control (as well as "Agriculture Only") areas were considerably less likely to have an enterprise. The distribution of types of enterprises is fairly similar across all areas, with the exception of a smaller disinclination of households in Microfinance Only areas to have agriculture-related enterprises. Households in control areas are also significantly less likely than all other areas to finance their enterprise with a loan. The only statistically significant difference in terms of loan source distribution is that "Microfinance and Agriculture" areas were more likely than others to have borrowed from an MFI, and "Microfinance Only" area households were slightly less likely to have taken a loan from SACCOs and Credit Unions.

Table 27: Enterprise Ownership, Type, Financing in the Last 12 Months by Programme Group

	MF Only	Agriculture Only	MF & Agriculture	None (Control)	Total
Had an Enterprise	0.39***	0.26	0.38***	0.24	0.33
Number of Employees	0.62	0.69	0.77*	0.45	0.63
Agriculture	0.08***	0.11	0.10	0.13	0.10
Manufacturing	0.06	0.09	0.05	0.06	0.06
Sales and Hospitality	0.55	0.47	0.56	0.52	0.54
Construction	0.07	0.13*	0.07	0.09	0.08
Transportation	0.06	0.03	0.05	0.04	0.05
Other	0.18	0.17	0.17	0.17	0.17
Have Taken Loan for that business	0.20***	0.18***	0.21***	0.11	0.18
Bank	0.12	0.18	0.06	0.08	0.10
MFI	0.56	0.53	0.63***	0.42	0.56
SACCO & Credit Union	0.07***	0.05	0.10	0.16	0.09
Friends and Family	0.16	0.15	0.12	0.20	0.15
Moneylender	0.05	0.05	0.04	0.08	0.05
Others	0.05	0.04	0.05	0.07	0.05

Note: * p<.10, ** p<.05, *** p<.01; Stars signify difference from Control Group

2.5.4 Wage Employment

Nearly a third of the population over the age of 14 held wage employment in the last 12 months. It is interesting to see what type of jobs they held, in which industry they are, and whether there are any gender and age differences.

For 68 percent of young males and 57 percent of young females, wage employment was on a temporary basis. Non-youth groups are more likely to have a permanent job. Fifty eight percent of males and 53 percent of females have a permanent work in government or private sector, as Figure 19 illustrates overleaf.
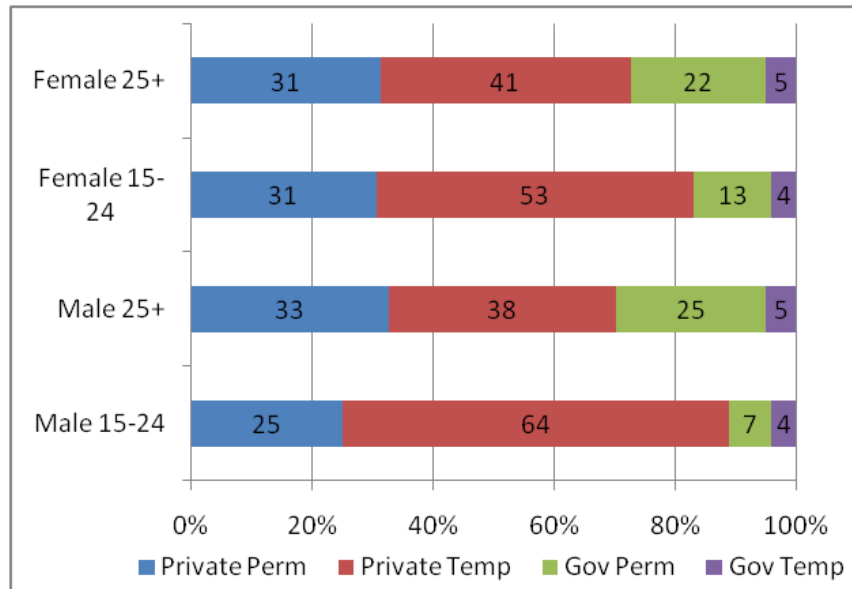
Figure 19: Type of Job, by Age and Gender

Figure 20 reveals the industries in which household members engaged in wage employment are currently employed. Just over half of young females and 42 percent of adult females are engaged in waged employment related to agriculture. Sales and hospitality is the second largest industry employing women of both age groups. A little more than a quarter of employed males were engaged in waged work in the agriculture industry. The construction industry employs 21 percent and 24 percent of non-young and young males, respectively. Transportation is the third largest employer for males.
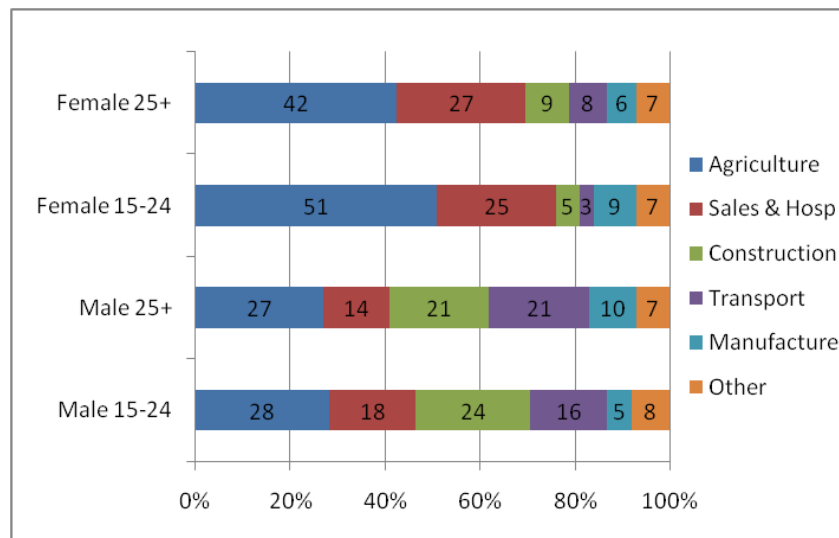
Figure 20: Industry of Wage Employment

2.5.5 Transfers

Wage employment and enterprises are not the only income source for households: neither is all household expenditure related to consumption and investment. Families send and receive remittances

locally and internationally, as well as giving and receiving cash 'gifts'. This section looks at the rate and amount of such transfers across male and female-headed households.

Table 28: Cash Transfers by Gender of Household Head

|	Proportion				Average Amount (Ush)			
	All	Male - Headed	Female-Headed	Difference	All	Male Headed	Female Headed	Difference
Received Local Remittance	0.15	0.12	0.26	-0.14***	32,139	24,502	65,241	-40,739***
Gave Local Remittance	0.07	0.08	0.05	0.02***	18,544	19,616	13,469	6,147
Got Remittance From Abroad	0.03	0.03	0.04	-0.01**	43,269	39,231	61,642	-22,411
Sent Remittance Abroad	0.01	0.01	0.01	0.01***	1,756	1,937	902	1035*
Received Cash Gift	0.25	0.24	0.29	-0.05***	32,640	34,976	21,789	13,187
Gave Cash Gift	0.18	0.19	0.17	0.02***	5,220	5,508	3,861	1,646

Note: * p<.10, ** p<.05, *** p<.01

As Table 28 reveals, in the six months prior to the interview, 15 percent of households received remittances locally and seven percent from abroad. A quarter of the total households interviewed had received cash gifts. Female-headed households were more than twice as likely to have received local remittances, and on average received twice as much as that received by male-headed households. They were also slightly more likely to have got remittances from abroad or cash gifts, but with no statistically significant difference in the amount. Seven percent of households have given local remittances, one percent had sent remittances abroad, and 18 percent had given gave cash gifts. Male-headed households were a little more likely to have given cash transfers but there is no significant difference in the average outgoing amounts at 95 percent level.

The pattern of cash transfers shows that male-headed households are more likely to be 'givers' of cash remittances and gifts, while female-headed households are more likely to be receivers of transfers. Some of these dynamics may be due to the fact that polygamous men might be taking care of more than one family.

Differences by Programme Group

There are not many consistent or significant differences across households in different control groups. Households in Control areas are slightly less likely than all others to have received local remittances, as well as less likely than "Microfinance and Agriculture" areas for households to have received remittances from abroad. They were also less likely than Microfinance Only areas for households to have given a cash gift. In terms of transfer amounts, the only statistically significant differences are in terms of given cash gifts and received remittances from abroad. Tables 29 and 30 highlight these differences.

Table 29: Cash Transfer Rate by Programme Group

	MF Only	Agriculture Only	MF & Agriculture	None (Control)	Total
Received Local Remittance	0.14	0.17	0.16	0.14	0.15
Gave Local Remittance	0.08***	0.08***	0.08***	0.06	0.07
Received Remittance from Abroad	0.03	0.03	0.04***	0.02	0.03
Sent Remittance Abroad	0.01	0.01	0.01	0.01	0.01
Received Cash Gift	0.25	0.26	0.25	0.25	0.25
Gave Cash Gift	0.19**	0.19	0.19	0.17	0.18

Note: * p<.10, ** p<.05, *** p<.01; Stars signify difference from Control Group

Table 30: Average Cash Transfer Amount (Ush) by Programme Group

	MF Only	Agriculture Only	MF & Agriculture	None (Control)	Total
Received Local Remittance	27,479	47,641	39,513	25,089	32,139
Gave Local Remittance	38,172	6,933	12,628	5,351	18,544
Received Remittance from Abroad	55,848	17,470	74,524**	13,208	43,269
Sent Remittance Abroad	2,325	1,392	1,347	1,582	1,756
Received Cash Gift	12,996	7,158	12,166	83,558	32,640
Gave Cash Gift	6,149*	8,139**	5,538	2,661	5,220

Note: * p<.10, ** p<.05, *** p<.01; Stars signify difference from Control Group

Findings Highlights

Subsistence farming is the main source of income for one in every two households.

Seventy percent of households are engaged in agriculture, and a third of them rear livestock.

One in three households is operating and/or gets an income from an enterprise. Female-headed households were more likely to operate in sales and hospitality sector than male-headed households.

One fifth of these enterprises were financed by a loan: in half of these cases the loans were taken from an MFI.

Less than a third of people aged 14 and above held a waged job in the last 12 months. There are significant age and gender differences in terms of job type and sector preference.

Female-headed households were twice as likely to have received cash transfers, and were likely to have received twice the amount than male-headed households.

2.5.6 Shocks and vulnerability

Research shows that disasters and shocks, both at the community-level (co-variant shocks) and household-level (idiosyncratic shocks), can have a strong negative impact on household livelihoods, and in some cases, push them into poverty (or further into poverty) (See for example, Krishna 2010). That is why it is important to know the extent to which households are affected by different types of shock, as well as how they cope with them.

The largest shocks that households faced were covariant. As Table 31 reveals, during the six months prior to the survey, droughts were the major shock affecting more than half of the population. Pests come next, affecting 13 percent of the population. It is interesting to observe that out of idiosyncratic shocks robberies are the most common (ten percent), and that they affect households more often than bad seeds, major illnesses, floods and epidemics. Male-headed households were slightly more likely to have experienced some of the events, but there is no difference in the amount spent or losses incurred.[29]

Droughts also caused the largest average loss in monetary value to households – 151,574 Ugandan Shillings (around $66). Idiosyncratic shocks are also costly to households. Death of a household member, major illnesses and robberies are the next largest financial shocks to the household, costing on average 126,293 ($55), 92,644 ($42) and 120,727 ($53) Ush respectively. It is important to note that some of these losses are hard to measure. For instance, in the case of a household member's death, funeral costs can be measured easily, but the loss of that member's potential income or concurrent decrease in the households expenditure are hard to measure.

Table 31: Event Incidence by Gender of Household Head and Average Losses

	All	Male-Headed	Female-Headed	Difference	Average Loss
Drought	0.52	0.52	0.52	0.00	151,574
Pest	0.13	0.13	0.10	0.03***	54,642
Robbery	0.10	0.08	0.06	0.03***	120,727
Bad Seed	0.08	0.11	0.09	0.02**	24,156
Major Illness	0.07	0.07	0.07	0.00	92,644
Flood	0.07	0.07	0.05	0.02***	65,862
Epidemic	0.04	0.04	0.03	0.01**	37,251
Member Died	0.04	0.04	0.04	0.00	126,293

Note: ***p <0.01, **p<0.05 *p<0.10 (stars signify difference from Control group)

It is interesting to see how people cope with different types of shocks. Coping mechanisms can be expected to be different in the face of covariant and idiosyncratic shocks. In covariant shocks such as

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[29] We ran a regression to see whether this gender difference in shocks was related to the breakdown of source of income (i.e. that men are more likely to be engaged in agriculture where the most frequent shocks are). This hypothesis was rejected, however. Even after controlling for being engaged in agriculture, or agriculture being the main source of income, this gender difference held.

weather calamities, bad harvests, or epidemics, the whole community is affected. This means there is likely to be fewer opportunities for community and household-to-household support in comparison with idiosyncratic shocks that are household-specific.

In case of droughts for instance, the most common coping mechanisms are reducing consumption (in 32 percent of cases) and using savings (in 34 percent of cases), as shown in Figure 21. Reducing consumption is detrimental to household since it directly affects the quality of life of the family, especially in terms of health and productivity. Seven percent seek additional work. Around five percent of the families sell their assets. Where productive assets are sold, this has a negative impact in the long-term, as it is likely to reduce their income and/or productive capacity. Five percent borrow from some source to cope with the losses, and two percent get transfers from friends and relatives to cope with losses.
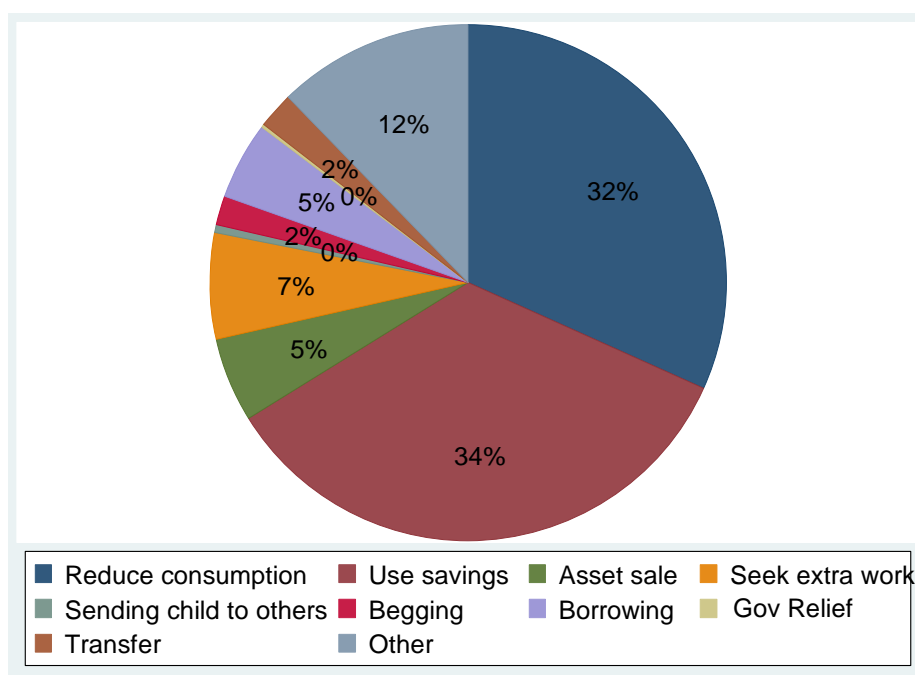

Figure 21: Mechanisms of Coping with Drought

The picture is a little different in the case of coping with idiosyncratic shocks such as serious illness of a household member, as Figure 22 illustrates. Using savings was the major coping mechanism for nearly half of households, and only 11 percent of households reduced consumption in the face of illness. Fifteen percent of households were able to borrow funds or receive transfers, in comparison with only seven percent of households in the face of drought. Households are also more likely to sell assets to cope, possibly because they may need cash urgently for treatment. These coping mechanisms have important policy implications especially in the consideration of micro-insurance products as a possible means to mitigate the adverse impact of shocks.
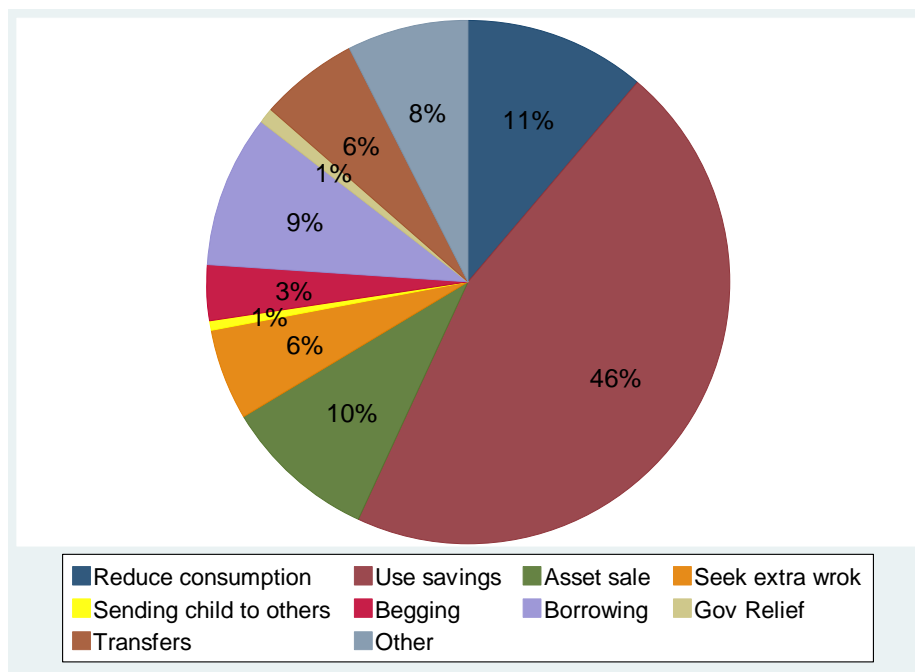
Figure 22: Mechanisms of coping with illness

Findings Highlights

Droughts were the most frequent and costly shocks to the households. One in ten households had been robbed in the six months prior to the survey.

The main coping mechanisms for dealing with a covariant shock were using savings and reducing consumption.

In the case of idiosyncratic shocks like serious illness, households used savings, but were much less likely to reduce consumption.

Differences by Programme Group

As Table 32 illustrates, households in Control areas are more likely to have suffered from drought than all three other areas, as well as more likely to have experienced pests than "Microfinance Only" and "Microfinance and Agriculture" areas. The average losses are not significantly different at 95 percent level across all four areas.

Table 32: Event Incidence and Average Losses by Programme Group

	MF Only	Agriculture Only	MF & Agriculture	None (Control)	Total
Drought	0.49***	0.54***	0.49**	0.58	0.52
Loss	145,948	122,655	150,979	169,824	151,574
Pest	0.10***	0.15	0.12***	0.15	0.13
Loss	60,603	72,042	42,026	50,443	54,642
Robbery	0.10	0.10	0.10	0.10	0.10
Loss	128,439	159,789	123,743	93,019	120,727
Bad Seed	0.07*	0.10	0.07	0.08	0.08
Loss	23,080	34,230*	22,799	21,443	24,156
Major Illness	0.07	0.07	0.08	0.07	0.07
Loss	123,627	48,258	51,682	107,178	92,644
Flood	0.06	0.06	0.08	0.06	0.07
Loss	80,214	77,822	62,272	47,040	65,862
Epidemic	0.03	0.05**	0.04	0.04	0.04
Loss	39,628	33,694	39,049	34,563	37,251
Member Died	0.04	0.04	0.03	0.04	0.04
Loss	164,892	88,331	106,705	102,655	126,293

Note: ***$p < 0.01$, **$p < 0.05$ *$p < 0.10$ (stars signify difference from Control group)

3. SUMMARY AND CONCLUSIONS

The survey has revealed the disadvantages faced by female-headed households, the importance of subsistence agriculture in securing livelihoods, and the low levels of formal financial services across survey areas.

There has been progress in narrowing the gender gap in literacy, school enrolment and educational attainment that exists in the non-youth group (25+). This gender gap gets considerably narrower amongst the youth group and practically disappears for children. While there have been improvements in school enrolment, dropout remains a serious problem for young people.

Children, regardless of their sex, were the most vulnerable to malaria and male youth were least likely to use bed nets. In terms of health-seeking behaviour, of those that suffered illness, over 80 percent had consulted somebody. People were much more likely to go to clinics and hospitals in case of illness or injury than to consult a traditional healer.

Over half of the households depend on subsistence farming as their primary source of income. Non-farm enterprise is the next most important source of income, more so for female-headed households. The latter are also more likely to depend on transfers than male-headed households, who are more likely to be engaged in wage employment and less likely to depend on external sources for income.

A third of all surveyed households owned or operated some kind of enterprise. Female-headed households were more likely to choose the sales, hospitality and hairdressing industries and less likely than male-headed households to run an enterprise in construction, transport or agricultural sectors.

Female-headed households are at a significant disadvantage over male-headed households in terms of food consumption and asset ownership (except housing) but do not lag behind in terms physical welfare indicators such as type of latrine, walls material, or ownership of shoes by all household members.

Low levels of formal financial services were revealed in both savings and borrowing behaviour. In terms of financial assets, the majority of households save in their homes. Male- and female-headed households were equally likely to save, but the average savings amount was half the amount for female-headed households. Male-headed households were more likely to apply for a loan to any type of institution (formal, semiformal, informal), but among applicants, female-headed households had an equal opportunity to be granted a loan. Although male-headed households took more loans (the difference is significant only for bank loans), there is no significant difference in the total average amount of loans except for loans from friends and MFIs other than BRAC. Female-headed households are as likely as male-headed ones to borrow for non-farm enterprise but less likely for agriculture inputs. They are also more likely to borrow for smoothing consumption and for paying school fees.

Households find their communities quite peaceful and helpful overall, but the level of mistrust is considerably higher towards members of tribes other than one's own living in their community. A tenth of households have a member representative in the Local Committee. Community group participation is not high, and in the vast majority of cases people are involved in burial and festival societies rather than political, civic groups or NGOs.

Households are vulnerable to shocks and crisis events. In terms of covariant shocks, droughts are the most common shock, as well as that which causes the greatest loss. Robberies are the most widespread idiosyncratic event, but they cause less loss to the household than less frequent events such as death of a household member. The main coping mechanisms in case of covariant shocks are reducing consumption and using savings. In case of idiosyncratic shocks such as illness of member, households use savings too, but also are more likely to borrow or receive transfers from friends and relatives.

As for the differences based on survey areas, households in the Control group are at a significant disadvantage over almost all the main indicators except social capital. Households in Agriculture areas are also worse off in many of these outcomes. These differences indicate the geographical disadvantage of more isolated communities, as control and agriculture areas are those that are furthest away from BRAC branch offices, and therefore town centres. This means that we are not dealing with perfect comparison groups, and during the impact evaluation difference-in-difference and other statistical tools should be used to control for these initial differences so that programme effects are not confounded with already existing advantages (and disadvantages) of programme areas.

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5. APPENDIX
Appendix A:

Geographical Locations of Surveyed Households

Appendix B: Summary table across four survey areas: deviations from the control group

Attribute	Survey Area / Treatment Group			
	Microfinance Only (compared to control)	Agriculture Only (compared to control)	Microfinance *and* Agriculture	Control Group (None)
Demographic characteristics: i) age ii) household size iii) education iv) health	i. No significant difference in age distribution (from control) ii. Fewer household members (than control) iii. Advantages in literacy and school enrolment (over control). iv. More likely to use bed net (than control); lowest malaria incidence.	i. No significant difference in age distribution (from control) ii. Greater number of household members and children (than control) iii. Advantages in literacy and school enrolment (over control). iv. Few consistent differences	i. No significant difference in age distribution (from control). ii. Fewer household (than control) iii. No significant advantage in literacy and illiteracy; small advantage in school enrolment (over control). iv. More likely to use bed net (than control); most likely to have used deworming drugs.	i. No significant difference in age distribution ii. See other groups. iii. Control group tends to have significant disadvantage in terms of illiteracy, school enrolment and attainment. iv. Few consistent differences in programme groups.
Consumption and Welfare: i) Monthly consumption expenditure ii) Welfare indicators (housing, sanitation, cooking fuel, clothes).	i. Display highest consumption level in all categories; also have higher health expenditures. ii. Perform best in all welfare indicators.	i. No significant differences ii. Similarly disadvantaged as control group in fuel and latrine types.	i. No significant differences. ii. Only similar to control in roof quality.	i. Lowest level of consumption welfare ii. Strong disadvantage in all welfare indicators except clothing.
Physical Assets:	Households are better-off (than control) in terms of *all* physical assets except housing.	Households better-off (than control) only in motorcycles, radios and mobile phones.	Households are better-off (than control) in terms of *all* physical assets except housing.	With exception of house ownership, control group is at a significant disadvantage in terms of physical assets.
Financial Assets: i) Savings	i. Savings are double that of households in control areas.	i. Savings not significantly larger than control areas.	i. Savings are double that of households in control areas.	i. Households less likely to have savings.

ii) Loan demand iii) Loan obtainment	ii. Households were more likely to have applied for formal loans (than control). As likely to apply for informal loans, but not as likely to get them (as control). iii. More likely to have borrowed cash in last 12 months (compared with control). More likely to have borrowed from banks and MFIs (than control). Borrowed significantly higher amounts from banks and BRAC than control areas.	ii. As likely to apply for informal loans, but not as likely to get them (as control). iii. Few significant differences with control group.	ii. Households more likely to have applied for formal loans (than control). As likely to apply for informal loans, but not as likely to get them (as control). iii. More likely to have borrowed cash in last 12 months (compared with control). More likely to have borrowed from banks and MFIs (than control). Borrowed significantly larger amounts from BRAC than control areas.	ii. Households less likely to have applied for loan from formal and semi-formal institutions, but those that did apply were more likely to receive it. Also as likely to apply for informal loans, but more likely to get them. iii. Least likely to have borrowed cash, least likely to borrow from banks or MFIs, but more likely to have borrowed from shops and friends. Control areas borrowed smallest amount.
Social Assets:	Less likely than control group to have social assets and involvement, and has significantly lower social capital.	Significantly more likely to have social assets (involvement in local council or groups), and to have attended more ceremonies. Same level of high social capital as control group.	Less likely than control group to have social assets and involvement, and has significantly lower social capital.	Significantly more likely to have social assets (involvement in local council or groups), and to have attended more ceremonies. Higher social capital than mf and mf&agric groups (in terms of trust and peace).
Economic Activities: i) Main income source ii) Agriculture iii) Self-employment iv) Income transfers	i. Significantly higher change of working in wage employment and non-farm enterprise and less likely to depend on subsistence farming (than control). ii. Less likely to be engaged in agriculture and rear livestock (then control). More likely to vaccinate poultry and use extension officers where	i. Similar distribution of employment as control areas (with exception of subsistence farming and wage employment) ii. Households equally as likely to rear livestock as control group, but more likely to be visited by extension officers. iii. Equally as unlikely to	i. Significantly higher change of working in wage employment and non-farm enterprise and less likely to depend on subsistence farming (than control). ii. Less likely to be engaged in agriculture and rear livestock (then control). More likely to vaccinate poultry and use extension officers where	i. Overwhelmingly more likely to depend on subsistence farming. ii. Households more likely to be involved in agriculture and livestock, but least likely to be visited by livestock extension officers. iii. Significantly less likely to have small enterprise, and where applicable, less likely to finance enterprise with a loan.

	applicable. iii. More likely to have small enterprise (than control), and less likely to have enterprise involved in agriculture. Where loans were taken, more likely (than control) to take loans from SACCOs and Credit Unions. iv) Few significant differences, but households more likely to have given cash gift (than control)	have small enterprise as control group. iv. Few significant differences.	applicable. iii. More likely to have small enterprise (than control). Where loans were taken, more likely (than control) areas to take loans from MFIs. iv) Few significant differences, but more likely (than control) to receive remittances from abroad.	iv) Few significant differences, but slightly less likely to receive local remittances and to less likely to give local remittances than other three groups.
Shocks and Events	Less likely to have experienced drought and pests (than control). Average losses not significant.	Less likely to have experienced drought (than control). Average losses not significant.	Less likely to have experienced drought and pests (than control). Average losses not significant.	Households more likely to have experienced droughts and pests. Average losses are not significant.