

LIFT Household Survey 2017



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L i v e l i h o o d s a n d F o o d S e c u r i t y F u n d



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HOUSEHOLD SURVEY 2017

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Abbreviations and acronyms

CBO	Community-based organisation
GoUM	Government of the Union of Myanmar
FANTA	Food and Nutrition Technical Assistance
FAO	Food and Agriculture Organization of the United Nations
FGD	Focus group discussion
HAZ	Height-for-age Z score
HDDS	Household Dietary Diversity Score
IP	Implementing partner
LIFT	Livelihoods and Food Security Fund
MAD	Minimum Acceptable Diet
MDD-W	Minimum Acceptable Diet for Women
MCCT	Maternal and Child Cash Transfer
MFI	Microfinance institution
MSR	Myanmar Survey Research
MUAC	Mid-upper arm circumference
NGO	Non-governmental organisation
PPP	Purchasing power parity
SBCC	Social Behaviour Change Communication
SDG	Sustainable Development Goal
UNOPS	United Nations Office for Project Services
WAZ	Weight-for-age Z score
WHO	World Health Organization
WHZ	Weight-for-height Z score

Executive Summary

The Livelihoods and Food Security Fund (LIFT) is a multi-donor fund established in 2009 to address food insecurity and income poverty in Myanmar. LIFT works to help poor, rural people to reach their full economic potential and resilience through improved nutrition, income diversification and skills development. LIFT aims to ensure no one is left behind in the rural transition occurring in Myanmar and that the poorest and most vulnerable benefit from the growth, change and opportunities the structural transformation of Myanmar's economy brings. LIFT does this by designing and implementing programmes that target the most vulnerable people and the hard-to-reach geographies of the country.

To monitor effectiveness of its programmes, LIFT has conducted large-scale biennial household surveys since 2011, along with smaller tracking surveys taking place in interim years. The 2015 survey acted as an endline for the previous LIFT strategy, and as a baseline for the 2015-2018 programme strategy.

Study purpose and approach

The 2017 household survey report has two main objectives:

- (1) To provide a descriptive analysis of livelihoods and key outcomes of households in LIFT programme areas in 2015 and 2017. This includes description of data by LIFT region, sex of head of household, landownership and by LIFT's two *tiers*. *Tier 1*, is used for 'core programme villages', where all types of LIFT-supported programmes take place, including nutrition, agriculture, financial inclusion projects, and any other types of programmes. *Tier 2* is used for villages where only financial inclusion support takes place.
- (2) To explore potential programme effects by examining and comparing changes to key outcomes between households that received support and those that did not.

The report sheds light on trends and directions through presentation of summary statistics and graphical illustration of change in key outcomes for the two groups over time. It does not attempt to make robust inferences about causality.

Findings

Overall Progress

Almost three-quarters of households in LIFT-supported villages received some kind of development assistance in the year leading up to the 2017 household survey, including training, advice, material support or group membership. Data on exposure to development assistance indicate that the majority of support in LIFT villages was provided by LIFT-supported NGOs.

Overall, livelihoods improved on many fronts in LIFT-supported villages between 2015 and 2017. Real wages, asset ownership, and consumption expenditure, a proxy for living standards, increased, whilst poverty decreased. There were noteworthy improvements in nutritional

outcomes such as household dietary diversity, minimum acceptable diets for children and exclusive breastfeeding.

The improvements were not universal however, as food security and the share of households reporting a perceived increase in incomes in the last year decreased. With increased access to credit however, such instability seemed not to affect nutritional outcomes.

In general, improvements over time were larger for households that received support in the year leading up to the 2017 survey, and where change was negative, such as for perceived increase in income, it was less so for households that received support. Although causal effects cannot be established, this pattern is visible across different aspects of livelihoods.

Livelihoods

Households in LIFT-supported villages are highly dependent on farm income. Eighty per cent of households reported having some kind of farm income in 2017 and just over half of households grew a crop in any of the three agricultural seasons prior to the household survey in 2017.

Close to half of crop-growing households in 2017 reported experiencing some kind of **constraint to agricultural production**. Twenty-four per cent of households had received farm-related assistance in 2017 and 16 per cent of these households had trialled or adopted new practices or technologies in the past year. Of all households, just 8 per cent said they had trialled or adopted new practices or technologies in the past year.

Data on **perceived income change** show that incomes either increased or remained stable in the last 12 months for the majority of households. This was true for 73 per cent of households in 2015, and 67 per cent in 2017. The proportion of households reporting having increased their income since last year however decreased noticeably between 2015 and 2017 whilst the proportion reporting a decrease grew, although by a smaller share. Notably, households that received development assistance were slightly more likely to report an increase in incomes than were those who received no support.

Although fewer households reported perceived income increases, **per capita daily consumption** which is used for measuring poverty, and often used as proxy for income, increased by 23 per cent in real terms over the two-year period.

Ownership of household assets also increased between 2015 and 2017. Ownership of several assets increased in the range of 10 to 20 per cent over the two years. This was the case for assets such as a cell phone, which was owned by 59 per cent of households in 2015 and by 79 per cent in 2017, making it the most commonly owned asset in 2017. Although survey questions on specific asset ownership showed a clear overall increase, there was substantial regional variation when asked about their **perception of change**. In particular, the share of households in Rakhine reporting a decrease in 2017 was much larger than the share reporting an increase, and much larger than those who reported decreases in other regions.

The **proportion of households living in extreme poverty** (below USD 1.90/day) was relatively low and remained close to unchanged at 15 per cent in both years. However, using the local poverty

line estimated by Government of the Union of Myanmar (GoUM) and the World Bank the population of households living in poverty in LIFT-supported villages decreased by 11 percentage points between 2015 and 2017.

Financial services

Microfinance was one of the most common sources of credit in both years, supplying credit to 24 per cent of households in LIFT's core programme areas, and 30 per cent of households in financial inclusion only areas, showing that households in the latter programme areas were more likely to borrow from a microfinance provider.

Microfinance loans were more likely than other loans to be used for productive purposes such as business investment and agricultural inputs than were loans from other sources. Microfinance was also the most gender equal form of credit with an equal proportion of male- and female-headed households reporting taking such a loan in 2017.

Nutrition and food security

Food security, measured as 12 months of adequate food supply in the last year, was 96 per cent in the 2015 survey, and 85 per cent in 2017, a reduction which was particularly large for the landless.

Despite a decrease in food availability, the proportion of households with an acceptable **household dietary diversity** score grew from 62 per cent in 2015 to 70 per cent in 2017. Qualitative reports suggested that this was not necessarily a contradiction as households were able to maintain food consumption levels through buying food on credit and borrowing food from peers.

Households that received support were close to 12 per cent better off over time than those who received no support.

Although low in absolute terms, the proportion of **children with a minimum acceptable diet** also increased substantially from just 18 per cent in 2015 to 31 per cent in 2017.

Exclusive breastfeeding improved substantially, increasing from 51 per cent of children in 2015 to 65 per cent in 2017. Women in households that received nutrition-related development assistance were substantially more likely to exclusively breastfeed their infants under six months of age than were women in households who received no such support. Whereas the coverage was 56 per cent for households with no support, it was 20 percentage points higher, 76 per cent, for those who received support in the last year.

Stunting in children under the age of five in LIFT-supported villages in new programme areas increased from 26.8 per cent in 2015 to 29.6 per cent in 2017, an increase, which appears to be driven largely by an expansion of LIFT programmes into areas with a high prevalence of malnutrition, particularly in Chin State. The regional stunting rate for the Uplands increased by 14 percentage points to 41 per cent in 2017, whereas no significant change was observed in other regions.

Data on **women's nutritional status** in 2017 showed a 19 per cent prevalence of underweight among women with children under two years of age. Women in Rakhine were more likely to be underweight, as were women residing in female-headed households. Nearly half of women who reported having received nutrition-related assistance in 2017 met the minimum dietary diversity and were substantially more likely to do so than were women who did not receive such support for whom just 30 per cent met the minimum dietary standard.

Water and sanitation

A total of 76 per cent of households in LIFT-supported villages were using a protected water source in 2017 while 82 per cent of households used improved sanitation. Neither of the two changed significantly from 2015. However, looking at the panel survey only, there was a 'net increase' of roughly 5 per cent in protected drinking water usage, and of 8 per cent in improved sanitation usage for households who received WASH support in between the two survey years, suggesting a positive effect of receiving WASH-related development assistance.

Regional differences

Regional differences were visible for most indicators, and differences were often large. On most parameters, households in Rakhine were worse off, and often substantially so, than households in other regions. Households in the Delta also fared poorly on many fronts, although the region did better on some indicators such as average income, driven by a small number of wealthy landowners. Households in the Dry Zone were generally best off, with better nutritional standards and higher levels of wealth than households elsewhere.

Gender

Overall, in 2017, female-headed households were materially worse off than their male counterparts. They were on average, poorer, had lower household incomes (although this was partially driven by smaller household size), and were more likely to include a disabled household member, yet they were less likely to receive any kind of development assistance. Although daily wages increased for both men and women, the increase was smaller for women, in turn widening the gender wage gap.

Female-headed households were also less likely to seek financial assistance in the form of a loan, but when they did, they were more likely than male counterparts to spend it on health emergencies or food. They were less likely to be food secure and more likely to be underweight. They were however, more likely to meet minimum dietary diversity for both children and mothers and slightly more likely to use protected water sources and improved sanitation.

Core Programme vs. Financial inclusion

LIFT *Tier 2*, financial inclusion only areas, had on average better access to infrastructure such as roads and electricity, as well as protected water and improved sanitation and were, as expected, more likely to report the presence of microfinance providers and VSLAs than households in *Tier 1*, core programme areas. *Tier 2* households were also on average wealthier and less likely to experience food insecurity. They were, however, also less likely to receive WASH and nutrition

related assistance and did worse on nutritional outcomes than households in *Tier 1*, particularly those related to behaviour such as exclusive breastfeeding and dietary diversity.

LIFT programme effect

The study does not allow for robust counterfactual analysis of programme effect, and it is recommended that LIFT integrates methodologically robust impact evaluation designs in future programmes if wishing to draw stronger conclusions on attribution of specific LIFT support.

Nevertheless, the household survey findings point to some trends of interest for LIFT's continued planning. Changes to several key outcomes were explored by whether households received support, or not, using panel data: (1) increased and decreased incomes; (2) increased yields; (3) adoption of new marketing practices; (4) household dietary diversity; (5) improved sanitation usage; and (6) protected drinking water usage. Changes to consumption expenditure were similarly explored using panel data. In addition, the following were explored by whether households received support or not, using cross-sectional nutrition data: (7) exclusive breastfeeding; (8) children with acceptable dietary diversity; and (9) women's dietary diversity.

For all of the selected outcomes the data show a positive relationship between receiving support and improving outcomes over time. Some results are substantial and significant. While not drawing conclusions about causality, there is a strong indication that households in LIFT villages that receive development assistance are more likely to see important improvements on key health, livelihoods and nutrition outcomes than households that do not receive such support. Further work is needed to understand why some households within a village receive support while others do not.

1. Introduction

The Livelihoods and Food Security Fund (LIFT) is a multi-donor fund established in 2009 to address food insecurity and income poverty in Myanmar. LIFT works to help poor, rural people to reach their full economic potential and resilience through improved nutrition, income diversification and skills development. LIFT aims to ensure no one is left behind in the rural transition occurring in Myanmar and that the poorest and most vulnerable benefit from the growth, change and opportunities the structural transformation of Myanmar's economy brings. LIFT does this by designing and implementing programmes that target the most vulnerable people and the hard-to-reach geographies of the country.

To monitor effectiveness of its programmes, LIFT has conducted large-scale biennial household surveys since 2011, along with smaller tracking surveys taking place in interim years. Previous household survey reports have described the state and development of rural livelihoods since 2011 and have discussed observed change over time.

The 2015 survey acted as an endline for the previous LIFT strategy, which was in place from 2010-2014, as well as a baseline for the new programme strategy, which began in 2015. This report explores developments in LIFT-supported villages and for LIFT-supported households in new programme areas between 2015 and 2017.

The remainder of Chapter One describes LIFT's purpose and programmes, Chapter Two describes the study design and methodology, Chapter Three presents findings and discusses development over time in LIFT-supported villages and for LIFT-supported households, and Chapter Four concludes.

1.1 Background on LIFT

LIFT, a multi-donor fund, has received funding from 14 donors – the United Kingdom, the European Union, Australia, Switzerland, Denmark, the United States, the Netherlands, Sweden, France, Luxembourg, Italy, New Zealand, Ireland and Mitsubishi Corporation.

The overall goal of LIFT is to contribute to the national goal of sustainably reducing the number of people living in poverty and hunger in Myanmar. LIFT's purpose is to strengthen the resilience and sustainable livelihoods of poor people in Myanmar. LIFT's purpose-level outcomes are increased income, reduced vulnerability, improved nutrition, and pro-poor policy developments.

LIFT works with implementing partners that include international and national non-government organisations, United Nations agencies, the Government of Myanmar, private sector organisations, and academic and research institutions.

LIFT is active in the four main agro-ecological zones of Myanmar: the Ayeyarwady Delta, Rakhine State, the central Dry Zone (including Mandalay, Magway and southern Sagaing), and the Upland areas (including Chin, Kachin, Kayah, Kayin and Shan States and Tanintharyi Region).

As well as the four geographic programmes, LIFT has thematic programmes on financial inclusion, civil society strengthening and migration. Policy, nutrition, social protection, gender and resilience are focus areas for LIFT that reach across all programmes.

So far, LIFT has reached more than 9.2 million people or roughly 26 per cent of rural Myanmar's population; and is active in two-thirds of the country's townships.

1.1.1 LIFT 2010–2015

LIFT was originally designed as a livelihoods and food security programme to support Millennium Development Goal 1, the eradication of extreme poverty and hunger in Myanmar. The first activities funded were projects to help people in the Delta whose livelihoods were devastated by Cyclone Nargis. These 22 projects predominantly involved the distribution of boats, nets, buffalo and other livestock, seeds and fertiliser, and cash for work.

By the end of 2010, LIFT had expanded into the Dry Zone and the Uplands and was funding projects across Myanmar on financial inclusion, agriculture advisory services, access to markets, access to water, skills development for off-farm income generation, community development, and social protection.

In 2012, LIFT introduced a learning and innovation funding window to support a greater emphasis on applied research in its programmes. In 2013, projects also began in the four townships that were the worst hit by Cyclone Giri in Rakhine State focusing on agriculture, fisheries, village savings and loan associations, governance, and nutrition.

1.1.2 LIFT 2015–2018

In light of Myanmar's political, social, and economic transformation, and with substantial new funding, LIFT developed a new strategy and new programmes in late 2014. This new strategy supported the transformation of Myanmar's rural economy by promoting inclusive growth and providing new knowledge, technologies, and access to finance and markets with more opportunities for agribusiness with the private sector.

The new programmes reached across four agro-ecological zones—the Delta, Dry Zone, Uplands and Rakhine State. With its 2014-2018 strategy, LIFT sought to strengthen the resilience and sustainable livelihoods of the rural poor population in Myanmar. The overall strategy focused on helping target beneficiary groups to **'step up'** in commercial value chains, to **'step out'** of

Box 1: LIFT outputs 2010-2015

- Increased agricultural production and incomes through improved production and post-harvest technologies, and improved access to inputs and markets.
- Support for non-agricultural livelihood activities and training in livelihood skills for employment.
- Protection of local livelihoods through support for sustainable natural resource management and environmental rehabilitation.
- Increased incomes, enhanced livelihood opportunities, and protection of the livelihood assets of chronically poor households through effective social protection measures.
- Promotion of food and livelihoods security for the poor through support and strengthening of civil society.

marginalised farming and into more profitable non-farm support jobs, and to **'hang in'**, using agriculture as a safety net to reduce stunting and gain better nutrition and skills that would enable these groups to later step up or step out.

The refined programme outcomes were similar to LIFT's previous objectives, with the addition of improved nutrition, sanitation, and hygiene practices and the generation of policy-relevant evidence to raise people out of poverty.¹ The

2014-2018 LIFT strategy includes interventions at the village, system and policy levels, and nationwide programmes on financial inclusion, migration, gender and civil society strengthening. It places greater emphasis on learning and accountability through its Monitoring and Evaluation for Accountability and Learning (MEAL) framework, which supports the generation of evidence and knowledge to inform decision making and policies. The LIFT household studies contribute to this learning.

Box 2: LIFT purpose-level outcomes 2014-2018

- **Increased incomes** of rural households
- **Decreased vulnerability** of poor rural households and communities to shocks, stresses, and adverse trends
- **Improved nutrition** for women and children
- **Improved policies** and effective public expenditure for pro-poor rural development

1.2 The LIFT household surveys

LIFT has carried out four large scale household surveys completed in 2011, 2013, 2015 and 2017, as well as smaller scale tracking surveys completed in 2012, 2014 and 2016.

The initial survey was conducted as a baseline in 2011 to enable an evaluation of the effectiveness and outcomes of LIFT support to households, particularly focusing on livelihoods and food security.² The 2013 and 2015 surveys collected additional information to gain an understanding of the living conditions of rural inhabitants in the programme areas, including nutritional information and anthropometry measurements for children under age five.

The household surveys have followed a broadly similar sampling strategy between 2011 and 2015 with an expansion of the sample in 2015 to carry out a baseline survey for the new LIFT programme strategy, 2015-2018. The sampling strategy in each round aimed to ensure a survey, which was representative of LIFT-supported villages at the level of each of the LIFT geographical areas operational at the time. In 2011, this was the Delta/coastal area covering the Ayeyarwady and coastal Rakhine, the Dry Zone, and the Uplands, along with a sample of households in Cyclone Giri-affected areas of Rakhine in which LIFT was yet to begin operations. In 2013, the survey covered only the three former zones, and in 2015 and 2017 it covered the Delta, the Dry Zone, the Uplands and Rakhine.

Each survey round also included a smaller comparison group intended to allow for measuring differences in developments of key indicators between LIFT and comparison villages over time. The study design and sampling strategy for 2017 is detailed in Chapter 2.

¹ LIFT's full Theory of Change (TOC) is available in Annex A

² See LIFT "Baseline Survey Results 2012".

1.2.1 The 2017 survey and report

The Household Survey 2017 report has two main objectives:

- (1) To provide a descriptive analysis of livelihoods and key outcomes of households in LIFT villages in 2015 and 2017. This includes description of data by LIFT region, sex of head of household, landownership and by LIFT *Tier*.

Tier 1 refers to 'core programme villages', where all types of LIFT-supported programmes take place, including nutrition, agriculture, financial inclusion projects, and any other types of programmes. *Tier 2* refers to villages where only financial inclusion support takes place.

- (2) To explore potential programme effects by examining and comparing changes to key outcomes between households that received support and those that did not.

Chapter 2 describes the approach used for each of the objectives.

2. Study design and methodology

2.1 Study overview

The Household Survey 2017 report contains two parts:

(1) Descriptive analysis of livelihoods and key outcomes of households in LIFT villages in 2015 and 2017:

This component uses the full datasets for LIFT villages in the new programme areas for both years: A regionally representative sample of new programme areas in 2015 totalling 3,184 households, and a regionally representative sample of new programme support as of 2017, consisting of 5,564 households including 1,584 households belonging to LIFT *Tier 2*.

The descriptive analysis of 2017 data includes illustration and description of data by:

- Sex of head of household
- Landownership
- LIFT regions
- LIFT *Tier*

In addition, this section illustrates LIFT-wide changes between 2015 and 2017. Due to substantial growth in LIFT support over the two-year period, the 2017 sample covers a larger geographical area, and includes a larger number of villages and households. As such, observed changes may reflect expansion of LIFT support as well as changes within areas covered in both years. See Section 2.6 for further discussion on how to interpret results.

(2) Analysis of change and possible programme effect for the new LIFT programme 2015-2017:

This component uses the panel dataset of 2,446 LIFT households that were surveyed in 2015 and 2017. Changes within-households on a select number of LIFT indicators over time are explored, comparing changes for households that received development assistance in the 12 months prior to the 2017 survey to changes for households that received no such assistance. Survey data indicate that most of the development assistance in LIFT villages was provided by LIFT-supported implementing partners.

Observed changes are illustrated using graphs and tables.

2.2 Survey sampling design

To meet the objectives presented in section 1.2.1, the 2017 **sample includes 5,564 households**, which constitute:^{3,4}

³ The sample also included a follow up survey for 495 “old” LIFT villages surveyed in 2011, 2013 and 2015, which were not included in the new LIFT strategy and therefore not in the baseline survey sample described in (1). These data have not been included in analysis for the Household Survey 2017 report.

⁴ Note that the samples described in 1, 2, and 3 overlap, and the numbers if added therefore exceed the total sample size of 5,564.

(1) A **regionally** representative sample of current support for LIFT *Tier 1* – core programme areas, consisting of 3,980 households.⁵

(2) A **nationally** representative sample of current support for LIFT *Tier 2* – financial inclusion only programme areas, consisting of 1,584 households.⁶

(3) A **follow up to the 2015 baseline survey**: By following up with as many households surveyed in 2015 as possible, a panel data set was created for 2,449 households to be used for examining changes within households in villages covered by the new LIFT strategy, and to explore possible programme effects. Panel data means data on the same households collected at two points in time or more, in this case in 2015 and 2017.

In addition to the general household survey questionnaire, the survey contains a child nutrition module and an expenditure module, which were administered to a subset of households.⁷

The nutrition survey covered 5,445 households which included 6,493 children between 0-5 years of age, and 2,453 mothers surveyed for women’s nutrition. In order to obtain a child sample size at least equivalent to the household sample size, the child nutrition module was administered to all children under five identified in the 16 households participating in the main survey. Additional households were randomly selected for screening of membership of at least one child under age five, until a total of at least 16 children had been included in each village.

The expenditure module was administered to five households in each village, for a total sample size of 1,786 households in LIFT-supported villages. Efforts were made to ensure that households who were interviewed for the expenditure module in 2015 also received it in 2017. In villages not surveyed in 2015, five households were randomly selected for inclusion in the expenditure survey.

The final sample size for households in LIFT supported villages is shown in Tables 1 to 3 below.

Table 1. Total sample of LIFT-supported households by panel and new

	Panel	New	Total HHs	Total villages
Delta	666	822	1,488	93
Dry Zone	790	810	1,600	100
Uplands	517	763	1,280	80
Rakhine	276	920	1,196	75
Total	2,249	3,315	5,564	348

⁵ The actual *Tier 1* sample size in the Dry Zone and the Delta is slightly smaller than originally planned for. Weights are applied when analysing the full sample to ensure that the proportion sampled in each region corresponds to the proportion of actual LIFT support.

⁶ Conversely, the actual *Tier 2* sample size in the Dry Zone and the Delta is slightly larger than originally planned for. Weights are applied as for *Tier 1*.

⁷ See “Review of sampling approach for LIFT 2015 HH survey” for further details on the sampling frame for these modules in past surveys.

Table 2. Total sample of LIFT-supported households by LIFT tier

	Tier 1	Tier 2	Total
Delta	992	496	1,488
Dryzone	816	784	1,600
Uplands	1,088	192	1,280
Rakhine	1,084	112	1,196
Total	3,980	1,584	5,564

Table 3. Total sample of LIFT nutrition and expenditure surveys

	Nutrition HHS	Nutrition children	Nutrition women	Expenditure
Delta	1,451	1,664	741	476
Dryzone	1,780	2,000	879	512
Uplands	1,448	1,919	846	412
Rakhine	1,150	1,333	570	386
Total	5,829	6,916	3,036	1,786

The sampling strategy was multi-layered as it needed to include households surveyed in 2015 and 2016, and to survey additional households to generate a full representative sample for *Tiers 1 and 2* and the regional and national level respectively. The approach is described in detail elsewhere,⁸ whereas the sample size calculations are available in Annex B.

2.3 Measuring programme effect

Robust analysis of programme effect, often referred to as impact evaluation, requires a study design that is specifically designed to measure the causal effect of predefined outcomes. This can be done when carrying out a well-specified project with pre-determined outcomes, in which case project implementers work with evaluators to design the evaluation that will measure programme effect.

In general, this type of design requires a methodologically sound, and clearly identified, control or comparison group, which either receives a different version of assistance than does the treatment group, or no assistance at all. Ideally the assistance, or different versions of assistance, will be randomly assigned within a given target population with those who receive the assistance of interest constituting a so-called treatment group, and those who receive different or no assistance constituting a control group.⁹ This type of impact evaluation is typically referred to as a randomised controlled trial (RCT), or experimental evaluation. Where random assignment is not feasible, comparison groups may be identified using statistical matching, which is referred to as quasi-experimental impact evaluation. In both cases treatment and comparison groups should (at least) be surveyed at baseline, prior to project implementation, and at project completion.

⁸ LIFT HHS sampling note.

⁹ Note that the term control group is used when there is random assignment to both treatment and observation whereas comparison group is used for with non-random assignment.

Where no valid control or comparison group exists, programme effect can rarely be reliably estimated.¹⁰ Other approaches to measuring change over time may be used, but the ability to attribute changes to a specific programme or intervention will be limited.

2.3.1 Planned approach 2017

The LIFT household survey in 2015 included 1,072 comparison households residing in 67 villages, of which 784 households in 49 villages were also surveyed in 2017. Even if imperfect due to the non-random selection and a relatively small sample size, these were meant to act as a comparison group to help estimate programme effect using the panel data set of households surveyed in 2015 and again in 2017. Programme effect was to be estimated, with some methodological caveats, using a difference-in-differences approach with panel data, also referred to as first differencing, or fixed effects estimation.

However, in examining the 2017 data it was found that a substantial proportion of the comparison villages had in fact received LIFT support in the interim period. The remaining sample was deemed too small to be useful for statistical purposes, and as such the 784 households were dropped from the sample entirely and are excluded from the sample size provided in Tables 1-3.

2.3.2 Actual approach

The household survey collected data on whether households had participated in development assistance activities in the last year, and if so, what type of activities they had participated in.

That allows for identifying key outcomes for ‘households with support’ vs. ‘households with no support’, over time. The panel component of the dataset allows for analysis of changes taking place within households that received support, and for comparing these to changes within households that did not.

It should be noted however, that any econometric estimation of programme effect using non-supported households as a comparison group would suffer from a number of biases: First, there is likely to be a high degree of selection bias stemming from systematic differences between those who choose – or are chosen – to participate in programme activities within a village, and those who do not. In addition, there is likely to be spill-over effects within villages, which means non-participants may also be partially “treated”, watering down the detectable effect. Finally, the vast majority of households in the sample received some kind of support, which means the sample size of non-supported households is relatively small, which is likely to further limit the robustness of any such estimation.

Based on these considerations, it was deemed likely that attempts to estimate programme effect using the current sample, might result in unreliable results and in turn possibly mislead the reader.

¹⁰ A few exceptions exist, e.g. “natural experiments” – when the introduction of infrastructure, a policy, or other well-identified treatment is directly followed by a clear and significant change in outcomes which cannot be explained by other means.

The report therefore stops at presenting summary statistics and graphical illustration of change in key outcomes for the two groups over time, thus shedding light on trends and directions, whilst not attempting to make robust inferences about causality.

2.4 Survey tools and components

The household survey is comprised of several components, and includes a number of survey tools:

- Village questionnaire
- Household general questionnaire
- Household nutrition and anthropometry questionnaire
- Household expenditure survey
- Focus Group Discussions

Each of these is described below. The full survey tools are available on LIFT’s website (<https://www.lift-fund.org/lift-2017-householdsurvey>), and upon request.

2.4.1 Village profiles

Key information on village characteristics was collected through a village survey, administered by survey team leaders through key informant interviews with representatives from village authorities and leaders. Data was collected on key topics related to village infrastructure, population and activities as listed in Box 3.

2.4.2 Household questionnaire

The household survey questionnaire used in 2017 was based on the questionnaire used in previous survey rounds with some modifications. The original questionnaire was designed and developed by LIFT and the research firm, Myanmar Survey Research (MSR) in 2015 with support from the Food and Agriculture Organization of the United Nations (FAO). The questionnaire incorporates standard Food and Nutrition Technical Assistance (FANTA) food security questions used globally by international aid agencies.

The household questionnaire was edited for use with LIFT’s tracking survey in 2016, and

Box 3: Village profile topics

- Average daily local wages
- Access and proximity to services
- Infrastructure and facilities
- Presence and activity of NGOs and CBOs
- Sources of credit
- Sources of water availability
- Village resource management
- Maternity and child cash transfers
- Market linkages

Box 4. Household questionnaire topics

- Demographic information
- Participation in development assistance activities
- Household income
- Farming practices
- Food security
- Financial services
- Ownership of livestock, agricultural equipment, and other household assets
- Water and sanitation
- Shocks and stresses

again for use with the 2017 household survey to ensure correct capture of LIFT indicators, and other key socio-economic information. Care was taken to keep wording identical to the wording used in 2015 in order to allow for direct comparison, however in some instances, editing was done to ensure the quality and correctness of information collected, and as such was prioritised over being able to compare directly with 2015.

2.4.3 Expenditure survey

The consumption expenditure survey was developed for previous survey rounds. It was based on the World Bank Living Standards Measurement Study survey¹¹ and adapted to the Myanmar context. The survey collected detailed information on food consumption and expenditure, non-food expenditure, housing and value of household assets, all of which were used for calculating daily per capita food and non-food consumption expenditure,¹² measures used for comparing living standards across households and regions, and for identifying households above and below the poverty line.

2.4.4 Nutrition and anthropometry survey

The nutrition survey included survey questions on child health and nutrition administered to mothers or caregivers of children under the age of five as well as anthropometric measurements of the related children. Nutrition-related questions included detailed information on breastfeeding and diets, whereas anthropometric measurements consisted of weight and length/height of the child – data which were in turn used for generating measures of child stunting and wasting as discussed further in Chapter 3. The survey also collected information on dietary diversity score and an anthropometric measure referred to as mid-upper arm circumference (MUAC) of women with children under the age of two who were covered by the survey.

2.4.5 Focus group discussions (FGDs)

FGDs were used to collect qualitative information on the topics included in each of the quantitative surveys. Participants were representatives of various community subgroups and were asked open-ended questions on themes related to key topics covered in the quantitative survey.

A total of 48 FGDs were completed in current LIFT programme areas – 12 FGDs in three villages in each of the four LIFT regions. In each village, four separate FGDs were conducted with:

- Agricultural producers
- People involved in non-agricultural activities/livelihoods
- Women from the poorest and most vulnerable households
- Men from the poorest and most vulnerable households

Table 4 shows an overview of FGDs.

¹¹ <http://surveys.worldbank.org/lsm>

¹² Daily consumption expenditure is the average daily value of all goods consumed in the household whether home produced, purchased or received as gifts.

Table 4. Focus group discussion design

Participant Type	No. of FGDs per LIFT region ¹³	Total
Farmer	3	12
Non- farmer	3	12
Poor Males	3	12
Poor Females	3	12
Total	12	48

Selection of participants for focus group discussions in each village was purposive in nature. A snowball sampling approach was applied to identify agricultural producers and people involved in non-agricultural activities, ensuring a balanced participation of men and women in the focus group. Focus groups were limited to eight participants in order to ensure engaging discussion within an adequate time frame. Groups were composed to be as homogenous as possible and excluded village authorities, leaders and community-based organisation members to ensure participation on equal terms.

2.5 Limitations to the household survey report

A number of limitations to the approach and methodology of the household survey study should be noted.

2.5.1 Planned vs. actual sample

The final sample was both smaller and different from the original plan. This was primarily due to:

- (a) The loss of a number of villages, particularly in the Uplands, which had been sampled as LIFT programme villages in 2015, but had since been dropped. These villages were replaced by new programme villages randomly drawn from the 2017 village lists.
- (b) The loss of a large part of the Rakhine panel sample due to security issues. These villages too were replaced by new programme villages from the 2017 village lists, however, the survey team were only allowed access to villages in certain areas and within a certain timeframe making the replacement not entirely random.
- (c) Other ad-hoc changes to village status, turning some programme villages into comparison villages and vice-versa over the two-year period.
- (d) Slight oversampling of *Tier 2* villages in the Delta and Rakhine vis-à-vis *Tier 2* villages.

Any imbalances in the sample were corrected for using survey weights in order to ensure the numbers presented were representative of the LIFT population; however, loss of sample size, particularly loss of a quarter of the panel survey sample could not be addressed.

¹³ New LIFT programme areas only. An additional 12 FGDs were conducted in "old LIFT" programme villages – four in the Delta, the Dry Zone and the Uplands respectively.

2.5.2 Rakhine bias

By extension of the security issues and ensuing sample replacement in Rakhine mentioned above, it is likely that the population sampled in Rakhine in 2017 is not representative of the full area receiving LIFT support, and thus may be significantly different from the population surveyed in 2015. Care should therefore be taken when interpreting numbers presenting changes in Rakhine between 2015 and 2017 as changes may reflect changes in the sample composition, as well as change taking place within households.

2.5.3 Loss of comparison group

Finally, analysis of the 2017 data revealed that a large proportion of the comparison group had become LIFT-supported villages over time, resulting in the exclusion of these villages from the analysis entirely. That in turn, had implications for the ability to measure programme effect as discussed in section 2.3.

2.6 How to interpret results

The following should be noted when interpreting the statistics presented in Chapter 3:

2.6.1 Change over time

The Household Survey 2017 report explores changes over time using two different approaches.

First, it reports on the situation in LIFT's programme areas in 2015 and 2017, respectively, by comparing summary statistics for representative samples of the areas receiving LIFT support in each of the two years. Due to substantial growth in LIFT support over the two-year period, the 2017 sample covers a larger geographical area, and includes a larger number of villages and households.

Any observed difference in the numbers reported in 2015 and 2017 therefore reflect not only a development within villages and households surveyed in both years, but also a geographical expansion of LIFT supported programmes. We should interpret observed changes as stemming from a combination of the two.

Second, it examines changes within households for a panel survey of households taking part in both 2015 and 2017 household surveys. Unlike the numbers reported when using the full sample, these results are not representative of LIFT-supported areas in either year, however they allow us to decouple developments within households from change caused by expansion of programme areas. This allows for comparison of change within households that received development assistance in the period between surveys, and households that did not.

2.6.2 Confidence intervals and margin of error

When calculating the appropriate sample size for a representative survey, a number of factors are considered to ensure that the sample correctly reflects the population. This includes the coverage rate of particular indicators, the desired level of confidence and margin of error, and when sampling to detect change over time, the magnitude of change the researcher wishes to be able to detect.¹⁴ As such, the sample size required to interpret results with a 95 per cent confidence level, and a 5 per cent margin of error, varies for different indicators.

Conversely, with the present sample size and a 95 per cent confidence interval the margin of error varies between indicators and subgroups. For smaller sub-groups, or for indicators with large variance within the population, the margin of error is likely to be larger, and may very well substantially exceed 5 per cent.

Given the large number of statistics presented, and the wish to present these mostly graphically, individual confidence intervals, standard errors and margin of errors are not presented except for when presenting changes in key indicators over time using panel data. Significance tests are carried out for panel surveys results and key nutrition indicators. As a rule of thumb therefore, small changes of a few percentage points over time, or equally minor differences between regions in either direction should be interpreted with caution.

¹⁴ See further details and discussion of sample size calculations in Annex B.

3. Household survey findings

Following the approach laid out in Chapter 2, section 3.1 provides a general overview of LIFT villages and section 3.2 provides a broad overview of the population in LIFT-supported villages. Section 3.3 illustrates the nature and extent of development assistance received by households, section 3.4 describes household income, asset ownership and the level of poverty amongst households in LIFT supported villages. Section 3.5 discusses the coverage and use of financial services and section 3.6 lays out data on agriculture and farm-based production. Section 3.7 describes the nutrition and food security situation, and section 3.8 presents data on sanitation and hygiene practices.

3.1 LIFT villages

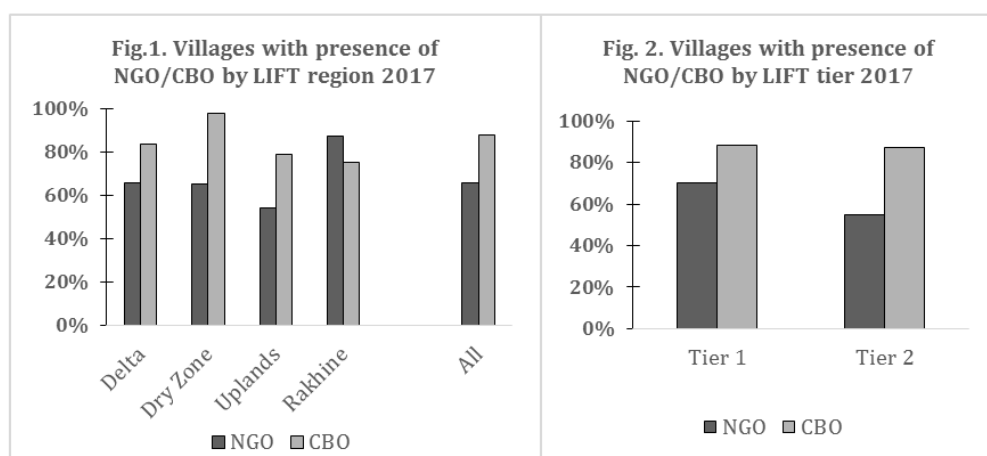
LIFT-supported interventions are likely to affect households differently depending on the circumstances and context in which the interventions take place. This includes the location of villages, the infrastructure and the services available within each village. To provide context for the household level results presented throughout this report, this section highlights how such characteristics differ between LIFT villages by region, and LIFT tier.

3.1.1 Presence of NGOs and CBOs

Non-governmental organisations (NGOs) and community-based organisations (CBOs) were present in most LIFT-supported villages in 2017 – 88 per cent of villages had at least one CBO and 66 per cent of villages had at least one NGO, as shown in Fig. 1. NGOs were most often LIFT implementing partners and CBOs were generally village volunteer groups, mostly engaged in issues such as health, disaster preparedness, and social welfare services.

Villages in the Dry Zone were more likely than villages in other LIFT regions to have an active CBO within the village – in fact almost all, 98 per cent did. The same was true for 84 per cent in the Delta, 79 per cent in the Uplands and 75 per cent of villages in Rakhine. Qualitative findings from the the Delta and the Dry Zone showed that most village residents were active in community groups and that community groups were generally seen as bringing the community together and promoting social cohesion. Communities explained that active participation created stronger unity among the village population. The presence and activity of CBOs may influence the effectiveness of LIFT support within a village.

Whereas villages in Rakhine were the least likely to have active CBOs they



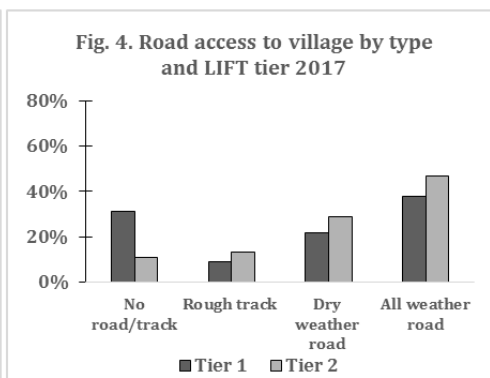
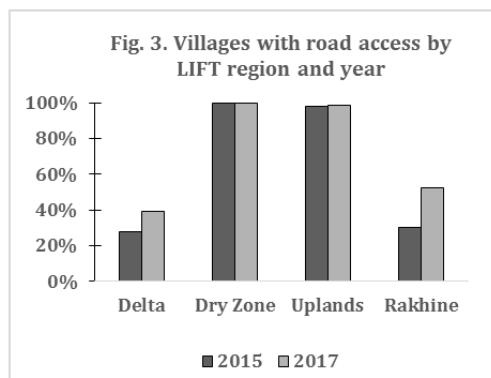
were more likely than other regions to have an active NGO in the village, with 88 per cent of villages reporting the presence of at least one active NGO, which is substantially more than the Delta and the Dry Zone where this was true for 66 per cent of villages, and the Uplands with 54 per cent.

The presence of CBOs did not differ by LIFT tier, but villages in *Tier 1*, core programme villages, were significantly more likely to have an active NGO operating in the village than were villages in *Tier 2* as shown in Fig.2. Whereas 55 per cent of *Tier 2* villages reported NGO presence, 70 per cent of *Tier 1* villages did so.

3.1.2 Roads and electricity

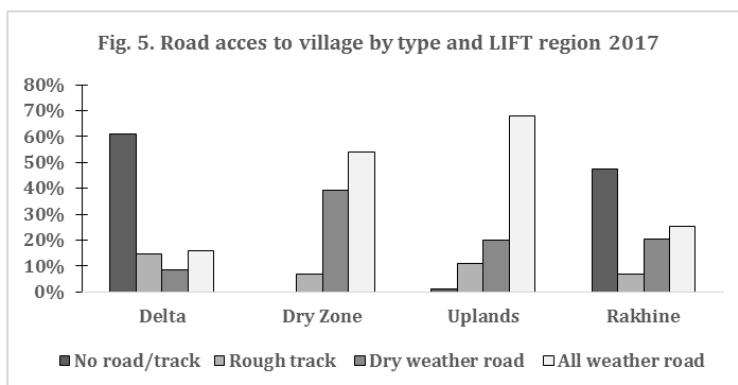
In 2015, 68 per cent of LIFT villages had access to a road. In 2017, the number had increased to 75 per cent, an increase which was driven primarily by a greater proportion of villages sampled in the Delta and Rakhine having road access in 2017, as shown in Fig. 3. This corresponds well with qualitative findings where villagers overall report road improvement as a major change over the past two years. These roads, they reported, have resulted in better transportation and access to health care facilities and schools.

While all LIFT villages surveyed in the Dry Zone, and all but 1 per cent of those in the Uplands had some kind of road access in 2017, which was true for just 39 per cent of villages in the Delta and 53

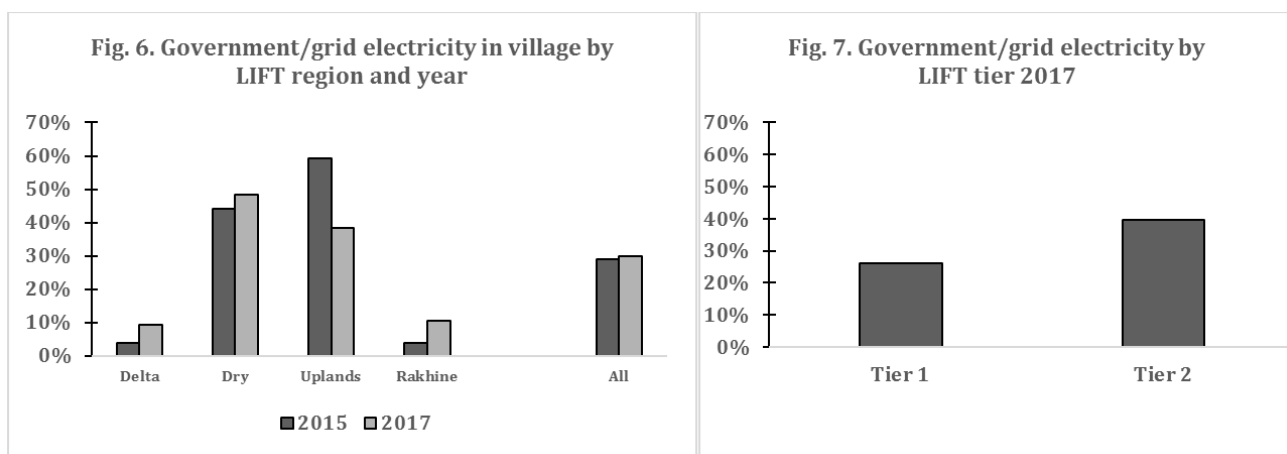


per cent in Rakhine. Although the roads reaching the majority of villages in the Dry Zone and the Uplands were dry- or all-weather roads, a minor proportion were rough track roads. This was true for 7 per cent of villages in the Dry Zone and 11 per cent in the Uplands. In the Delta, 15 per cent of villages had access to a rough track road, just 8 per cent to a dry weather road, and 16 per cent to an all-weather road as shown in Fig. 5. In Rakhine, seven per cent had access to a rough track road, 20 per cent to a dry weather road, and 25 per cent to an all-weather road.

Examining road access by LIFT tier reveals that a substantially smaller proportion of *Tier 1* villages had road access in 2017 than did *Tier 2* villages. Close to a third, 31 per cent, of *Tier 1* villages had no road access, whilst this was true for just 11 per cent of *Tier 2* villages. The majority of roads in both tiers were all-weather roads (Fig. 4).



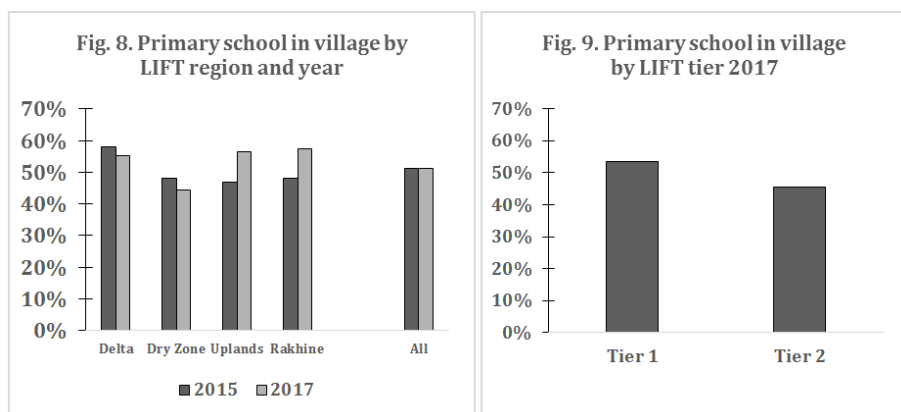
An overall proportion of 30 per cent of villages had access to the electricity grid in 2017 and was almost identical in 2015 at 29 per cent. The proportion of villages with grid access in the Uplands however differed substantially between the 2015 and 2017 samples, decreasing from 59 per cent to 38 per cent in 2017 as shown in Fig. 6. This is possibly due to the change in sampling frame and the fact that a portion of Uplands villages included in the 2017 were more remote than those included in 2015. Regional differences were also substantial within years, with close to half of Dry Zone villages being reached by grid electricity in 2017, followed by 38 per cent in the Uplands, 10 per cent in Rakhine, and 9 per cent in the Delta. Again, a larger share of villages in LIFT's *Tier 2*, financial inclusion programme, had grid access in 2017. This was true for 40 per cent of *Tier 2*, and 26 per cent of *Tier 1* villages (Fig. 7).



3.1.3 Primary schools and Sub-Rural Health Centres

Half of LIFT-supported villages in both 2015 and 2017 had a primary school located within the village. The proportion of villages with a primary school was similar across regions, except for the Dry Zone, where just 44 per cent of villages had one (Fig. 8). The vast majority of Dry Zone villages that did not have a school located within the villages however, had one within a mile of the village. The proportion of primary schools within the village was highest in *Tier 1*, where 54 per cent of villages had a school as opposed to 46 per cent in *Tier 2* as seen in Fig. 9. If counting schools within a mile of the village the difference however, is negligible.

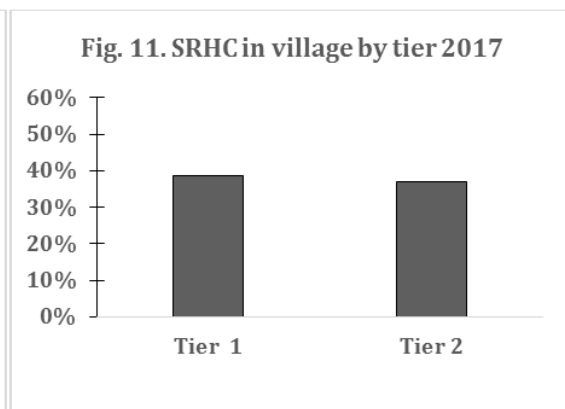
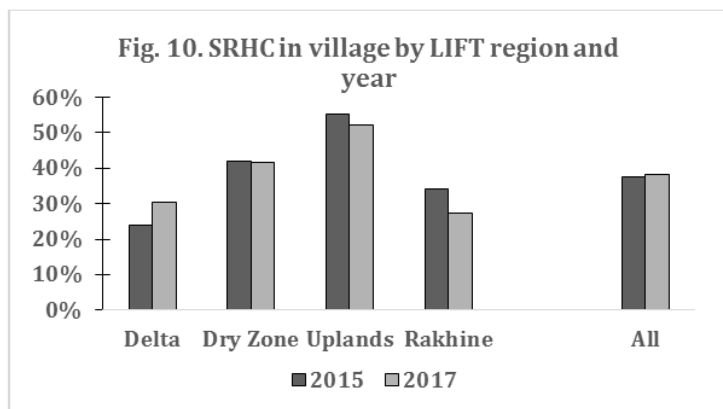
Although the numbers of schools within villages has remained unchanged overall, qualitative findings showed villagers reporting that access to schools had improved alongside improvement in roads and bridges, enabling children to go to school safely.



The proportion of villages with a Sub-Rural Health Centre (SRHC) located within the villages was also practically the same in 2015 and 2017.

Just over half of households in the Uplands region could stay within their village when visiting the SRHC – the same was true for a lower 42 percent in the Dry Zone, 30 per cent in the Delta and 27 per cent in Rakhine as shown in Fig. 10.

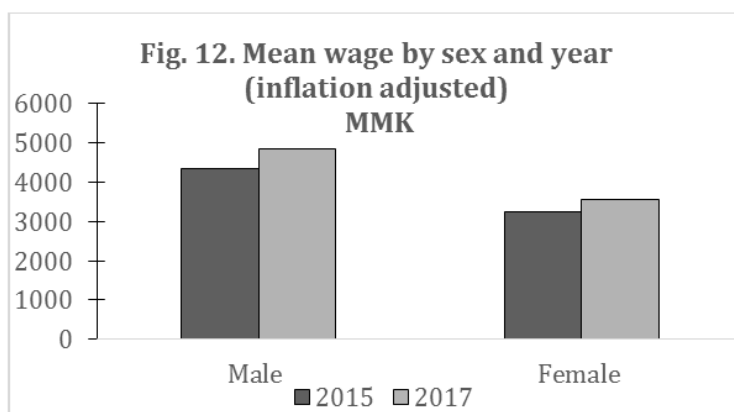
The share of villages with a SRHC was almost the same in the two LIFT tiers – 39 per cent in *Tier 1*, and 37 in *Tier 2* (Fig. 11).



3.1.4 Wages and financial services

Village level wages increased between 2015 and 2017 for both male and female workers. Fig. 12 and Table 5 show daily wages for both years in 2017 in Myanmar Kyat (MMK). As shown, with an inflation adjusted average male wage of MMK 4,335 (around USD 3) in 2015 and a corresponding wage of MMK 4,842 in 2017, male wages increased by 12 per cent over the two-year period. Female wages in both years were substantially lower and saw a slightly smaller increase of 10 per cent from MMK 3,246 inflation adjusted in 2015 to MMK 3,559 in 2017. The difference between male and female wages referred to in Table 5 as the gender wage gap, increased by 18 per cent, or MMK 194, over the two-year period, and as such increased more percentage-wise than did wages.¹⁵

In sum, although real wages increased noticeably for both male and female workers, gender wage disparity in LIFT-supported villages was larger in 2017 than in 2015.¹⁶



¹⁵ The increase in the gender wage gap is statistically significant at 5%.

¹⁶ As for other results the increase may be partially driven by changes within villages supported by LIFT in both years, and partially by an expansion of LIFT support into new and different areas. To test that the increase was not mainly driven by the latter, the summary statistics presented below were also conducted on the panel of 156 villages surveyed in both years. In those villages the increased gender disparity was even stronger than for the full sample.

Table 5. Village level wages by year and sex¹⁷

	Male wages MMK	Female wages MMK	Wage gender gap MMK	Wage gender gap %
2015	4335	3246	1089	25%
2017	4842	3559	1283	26%
Change	507	313	194	
Change %	12%	10%	18%	

Regional wages show that male wages in 2017 were highest in Rakhine with MMK 5,484 (USD 4), followed by the Delta, Uplands and finally the Dry Zone where the average daily male wage was MMK 1,000 or close to 20 per cent lower than in Rakhine (Fig. 13). Average female wages however, were highest in the Uplands at MMK 4,060 (USD 2.90), and were very nearly the same in Rakhine, followed by the Delta and finally the Dry Zone with an average female day wage of MMK 3,199 (USD 2.40). The gender wage gap was 29 per cent in both the Delta and the Dry Zone, and essentially the same with 28 per cent in Rakhine. Only the Uplands, which also had the highest absolute female wage, had a smaller gender wage gap with 17 per cent difference between male and female wages as shown in Table 6.

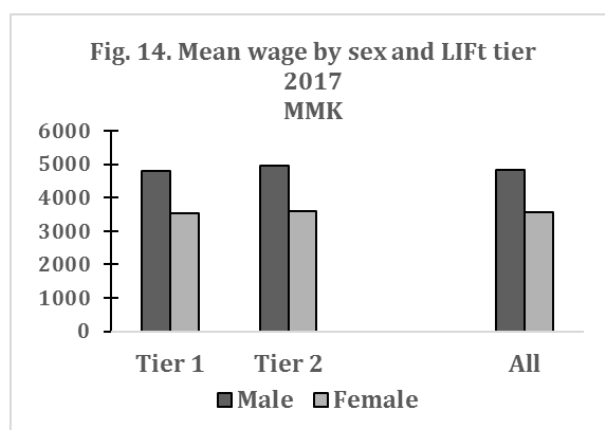
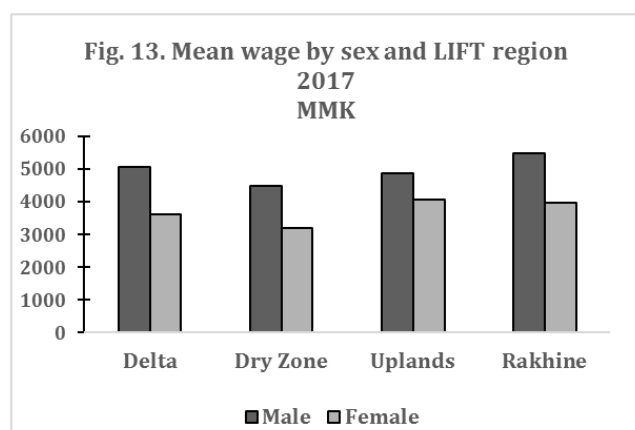


Table 6. Village level wages by LIFT region and sex

	Male wages MMK	Female wages MMK	Gender gap MMK	Gender gap %
Delta	5072	3624	1448	29%
Dry Zone	4482	3199	1284	29%
Uplands	4873	4060	812	17%
Rakhine	5484	3974	1510	28%
Tier 1	4793	3541	1252	26%
Tier 2	4966	3605	1361	27%

¹⁷ Inflation adjusted. Numbers reported are in 2017 MMK.

Finally, wage differences between *Tiers 1* and 2 were relatively small with average *Tier 2* wages slightly higher for both males and females (Fig. 14). The gender wage gap was similarly equivalent at 26 and 27 per cent, respectively as shown in Table 6.

According to qualitative information the wage increase was caused by labour shortages stemming from increased migration. Migration combined with a lack of mechanisation is likely to be behind the high wages in Rakhine.

“Since there are less workers here, we have to get the workers from other places and it costs more ... wages grow higher. Here we have to pay 7,000 or 8,000 Kyats per day. You cannot get them with 5,000 Kyats. If you can’t pay that much, you don’t hire them.”

— Farmer, Delta.

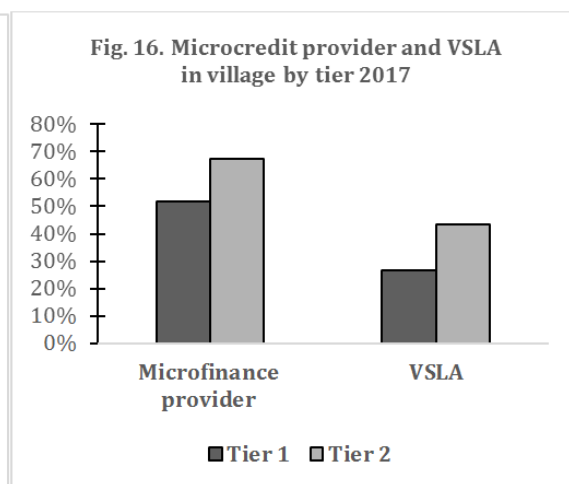
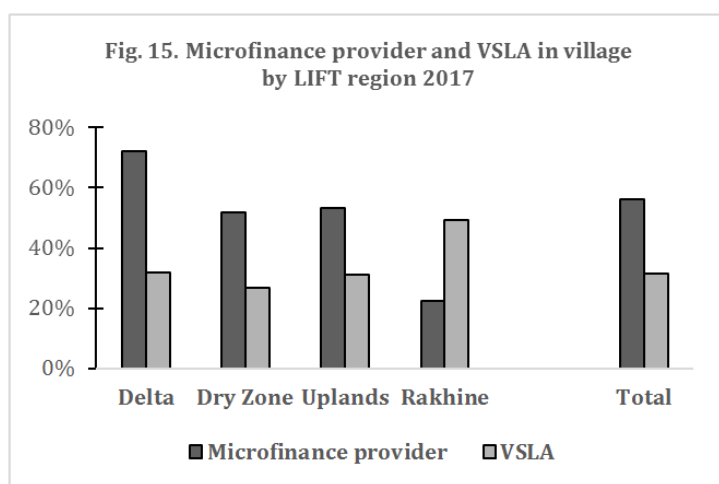
However, according to information relayed during FGDs, the increased wages did not translate into improved living conditions. While wages increased over the two-year period so did commodity prices, leading to statements such as the following:

“We used to get 3,000 Kyats. But since the past two years we have been getting 3,500 Kyats. But the commodity prices increased at the same rate, so really the wage is the same.” — Poor female farmer in the Uplands.

3.1.5 Financial services

There was a microfinance provider in just over half of *Tier 1* villages and in 68 per cent of *Tier 2* villages in 2017. Twenty-seven per cent of *Tier 1* villages had a Village Savings and Loan Association (VSLA) whilst the same was true for 43 per cent of *Tier 2* villages as shown in Fig. 16.

The Delta had by far the largest proportion of villages with a microfinance provider – 72 per cent of villages in the Delta had a microfinance provider compared to 53 per cent in the Uplands, 52 per cent in the Dry Zone, and just 22 per cent in Rakhine. Rakhine, on the other hand, had the largest share of villages with a VSLA, which were present in 49 per cent of villages surveyed. The same was true for 32 per cent of villages in the Delta, 31 per cent in the Uplands, and 27 per cent in the Dry Zone (Fig. 15).

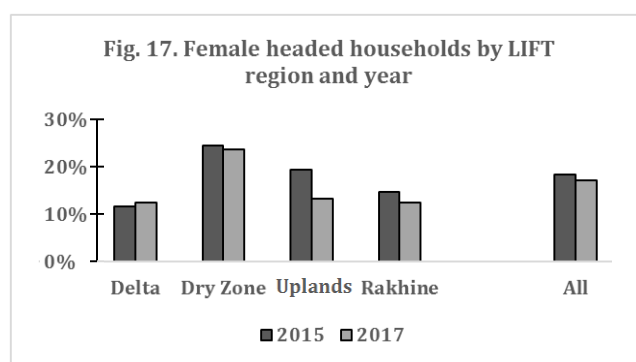


3.2 The LIFT population

Just as village characteristics differ by region and LIFT tier, so do key household characteristics. Understanding to what extent household characteristics such as sex of household head, land ownership and disability vary across regions is helpful for understanding why and how LIFT interventions may work differently across regions and LIFT tiers, as well as for interpreting the findings presented throughout the remainder of this report.

3.2.1 Sex of household head

The vast majority of households in both 2015 and 2017 were headed by males, with just 17 per cent headed by females in 2017. The majority of these were in the Dry Zone where close to a quarter of households were headed by females. This was almost twice the proportion in the Delta where just 13 per cent of households were headed by women. The share of female-headed households remained roughly constant between 2015 and 2017, although there was a five percentage point decrease in the Uplands between the two survey rounds as illustrated in Fig. 17.

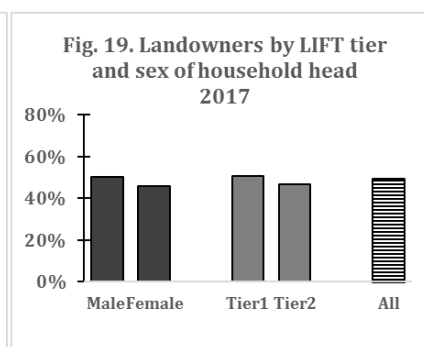
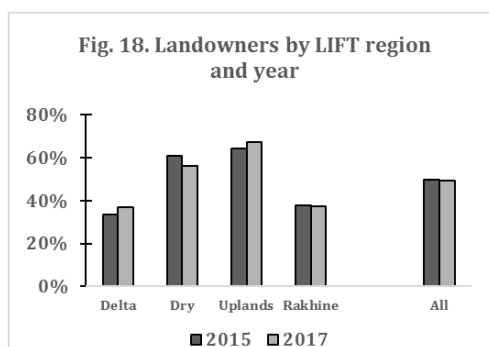


Programme and qualitative information suggests that many households are headed by women due to out migration of the male household head. According to participants in focus group discussions, males are reported to be the main group migrating to neighbouring areas of economic prosperity, mining towns and abroad. Females were said to be less likely to migrate, although in the Dry Zone and Delta in-country migration was described as a way for women to find work in factories.

3.2.2 Landownership

Half of surveyed households were landowners in both years, with the proportion varying substantially between regions (Fig. 18). In the Uplands just over two-thirds of households in LIFT-supported villages owned land in 2017, which was substantially more than in other LIFT regions. In the Dry Zone, 56 per cent of households owned land, followed by 37 per cent in both the Delta and Rakhine. The share of landowners increased very slightly between the two years in the Delta and the Uplands and decreased slightly in the Dry Zone but remained practically constant overall.

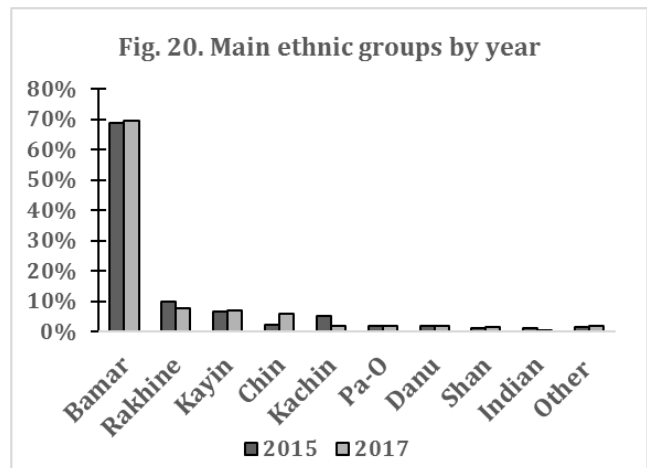
Female-headed households were slightly less likely to own land than their male counterparts. Forty-six – percent of female heads of household owned land in 2017 as compared to



just over 50 per cent of male heads. There was an equally small difference between landowners in *Tier 1* and *Tier 2*, with a slightly higher proportion of landowners in *Tier 1*, LIFT’s core programme areas, as shown in Fig. 19.

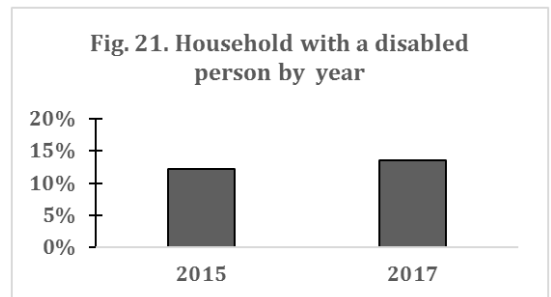
3.2.3 Ethnicity

The population in LIFT-supported villages in both years was mainly Bamar, with the share at just under 70 per cent as shown in Fig. 20. The second most common ethnic group were Rakhine, with the proportion of Rakhine decreasing a few percentage points from 9.7 per cent to 7.7 per cent between 2015 and 2017. This is possibly due to not gaining access to all Rakhine baseline villages in 2017. The third most common group were Kayin with close to seven per cent of the population, followed in 2017 by Chin, which made up close to six per cent in 2017, an increase from just 2 per cent in 2015. Conversely, Kachin people made up five per cent of the population in 2015 but decreased to 2 per cent in 2017. Other ethnic groups which made up between 1 and 2 per cent of the sample were Pa-O, Danu, Shan, and Indian, the latter making up just 0.4 per cent in 2017.

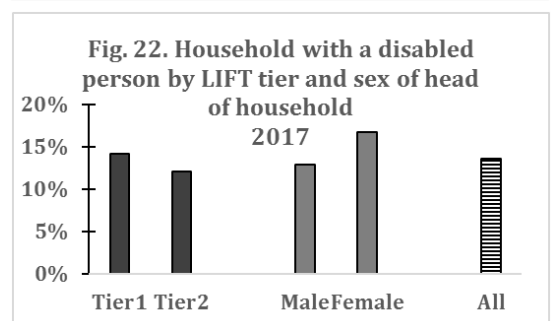


3.2.4 Disability

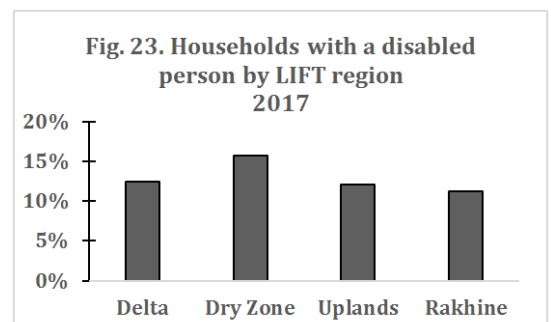
Just under 14 per cent of households in LIFT-supported villages included at least one person with a disability in 2017, up from 12 per cent in 2015 (Fig. 21).



The portion was higher for female-headed households for whom nearly 17 per cent included a person with disability as opposed to 13 per cent of male-headed households. The prevalence in *Tier 1*, core programme areas, and *Tier 2*, were close with 14 per cent and 12 per cent respectively, as seen in Fig. 22.



Finally, the prevalence was very similar across LIFT regions although slightly higher in the Dry Zone where 16 per cent of households included a person with disability as illustrated in Fig. 23.



When looking not at household level but at individuals, the proportion of individuals with any kind of disability was 3.1 per cent, which is somewhat lower than the national average of 4.8 per cent reported in *the 2014 Myanmar Population and*

Housing Census, but somewhat higher than the prevalence reported in the *Myanmar Living Conditions Survey 2017*, which was just 2.8 per cent. It should be noted that comparison across surveys is difficult due to differences in methodology.

Of the 3.1 per cent of individuals with a reported disability, almost half said they had a physical disability, followed by 18 per cent with a visual impairment, 14 per cent with an intellectual disability, 10 per cent with a hearing impairment and 9 per cent with a combination of the above.

3.3 Development assistance

The household survey collected data on household participation in development assistance programmes. In LIFT villages the data show that the majority of such support is funded by LIFT and carried out by LIFT implementing partners (IPs). Although a minor share of support, primarily from government programmes, is not supported by LIFT, and although the source of support received by households could not always be identified, the data indicate that LIFT is responsible for providing the bulk of support received within LIFT-supported villages.

The household survey data allow for analysis of household exposure to three broad types of support:

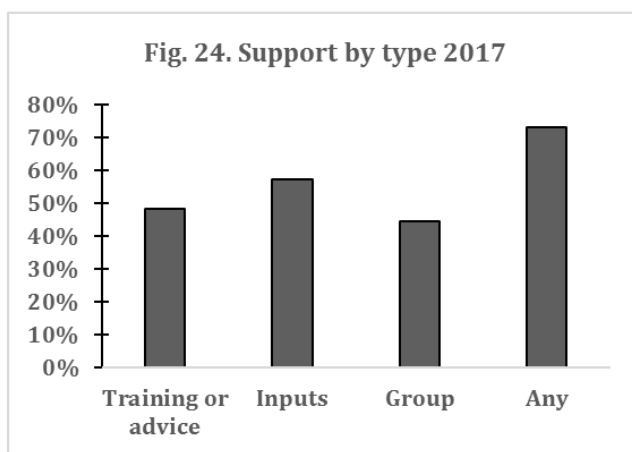
- 1) Receiving training or advice
- 2) Receiving material support
- 3) Group membership

Material support refers to:

- Seeds, fertiliser, pesticides or equipment for agriculture, livestock, fishery and other on-farm activities, either given or supported through cash grants or revolving funds
- Loan provision under microfinance schemes
- Cash for work to construct or renovate paths, roads, bridges, embankments piers or pond rehabilitation
- Maternal and child cash transfers (MCCT)
- Water and sanitation facilities or grants for such facilities

3.3.1 Overview of assistance

Seventy-three per cent of households reported having received some kind of development assistance in the 12 months prior to the survey in 2017 as shown in Fig. 24. There is no comparable data for 2015 as the question was asked for a five-year reference period in 2015. However, in 2015, 69 per cent of households had received some kind of support in the past five years which was lower than the proportion who had received support in the last 12 months in 2017, suggesting that there had indeed been a notable increase in support.



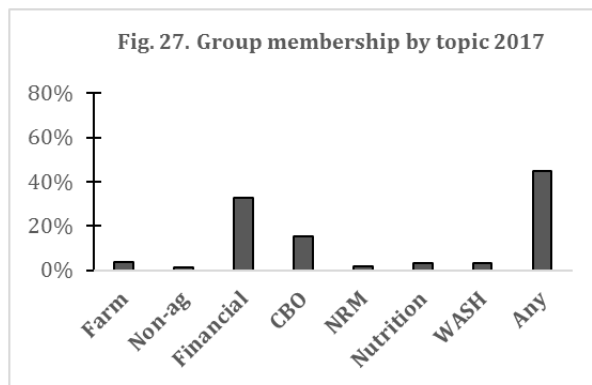
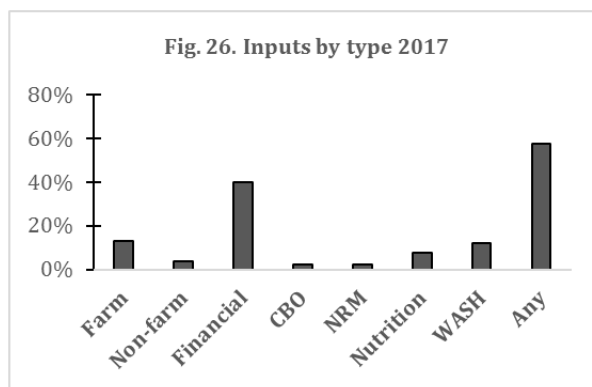
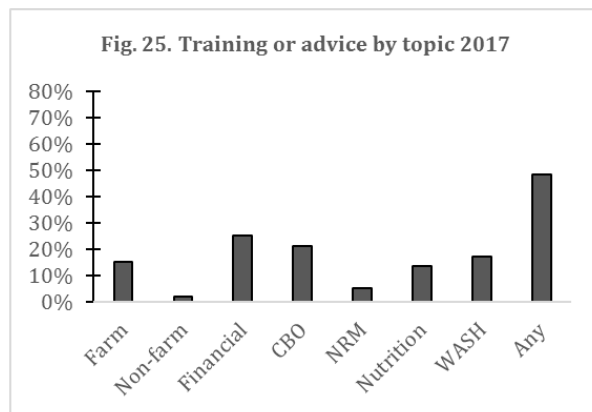
Overall, material support was the most common form of support in 2017, reported by 57 per cent of respondents (Fig. 24). The majority of this category however, consisted of those who report having received a microfinance loan, which was the case for over 40 per cent of households (Fig. 26).

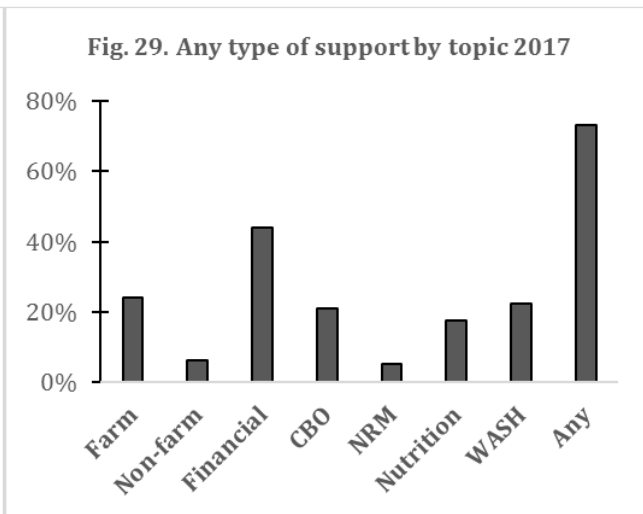
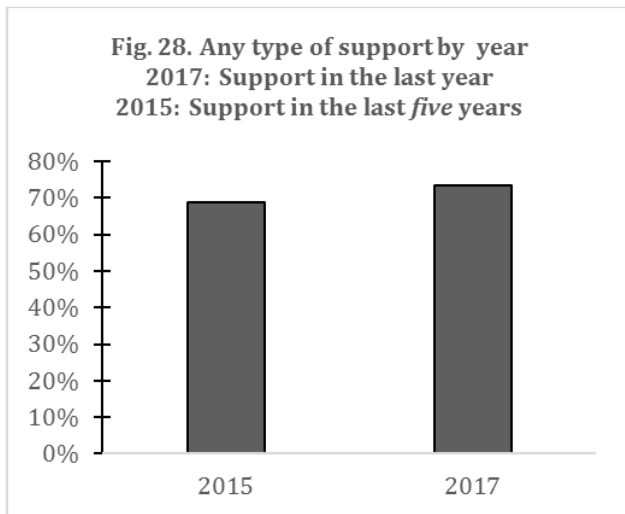
The second most common type of support was training or advice, which 49 per cent of households received. Almost as many, 45 per cent, reported being members of a group in the last 12 months, with the majority of group membership coming from households that were members of financial inclusion groups such as microfinance groups, village cooperatives or VSLAs. A third of households reported being members of such groups in 2017 (Fig. 27).

Overall, financial inclusion assistance was the most common type of support with over 44 per cent of households receiving financial inclusion services, followed by farm support, which was received by almost a quarter of households (Fig. 29). The third most common area of support was water, sanitation and hygiene (WASH), which 23 per cent of households reporting participation in WASH activities.

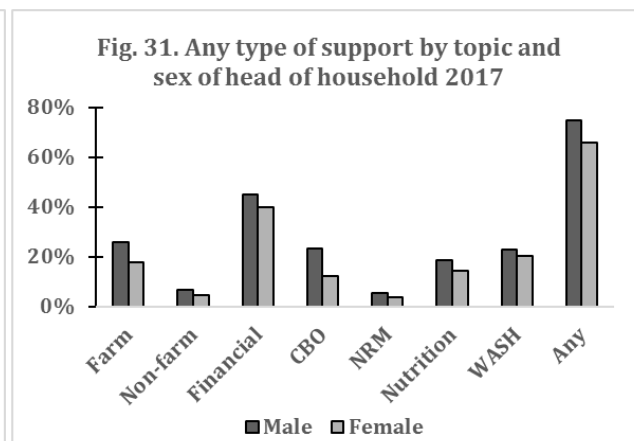
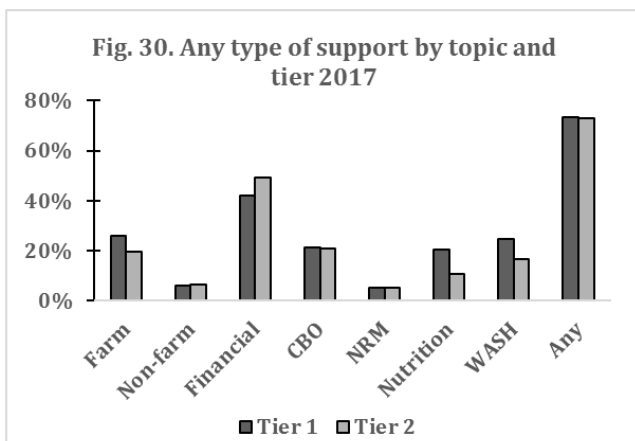
The majority of WASH support consisted of training and advice, which was obtained by 17 per cent of households (Fig. 25), followed by material support such as facilities, obtained by 12 per cent (Fig. 26). Support for community-based organisations (CBOs) was almost as common with 21 per cent of households receiving such support, also shown in Fig. 29.

Just under 18 per cent of households in LIFT-supported villages reported receiving nutrition assistance in 2017, the majority of which came from households that received training and advice (Fig. 25). In addition, 8 per cent reported receiving maternal and child cash transfers (MCCT). Just 3 per cent however, reported being members of a nutrition-related group (Fig. 27). Support for natural resource management (NRM) and non-farm activity were both low with 5 and 6 per cent of households, respectively, receiving such support as seen in Fig. 29.



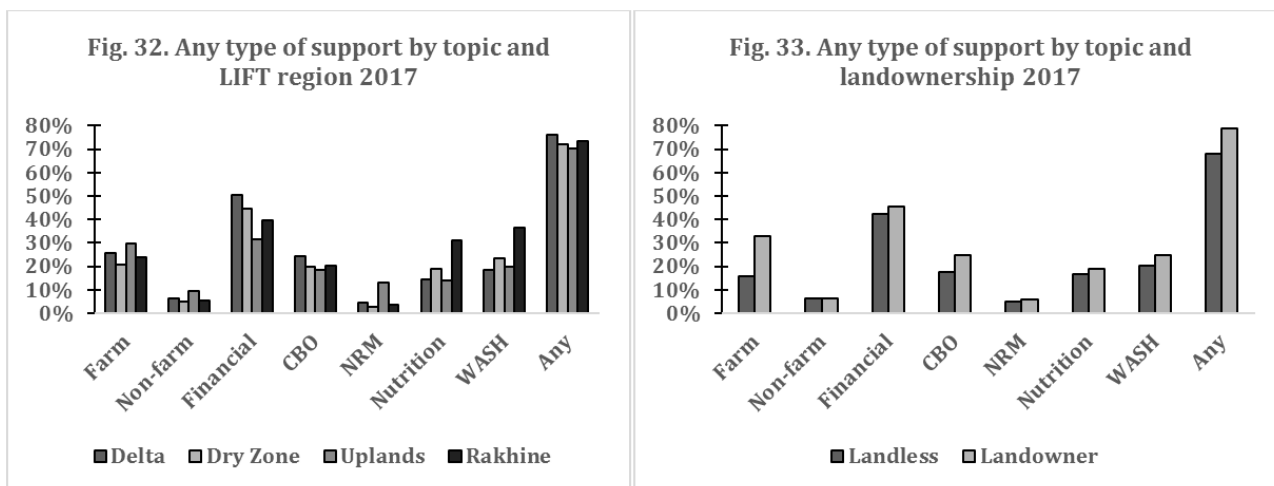


Examining assistance by LIFT tier, we see that the overall proportion of households receiving support was similar in LIFT core programme areas and LIFT financial inclusion only areas, although the proportion of households that reported receiving financial inclusion assistance was somewhat higher in *Tier 2* where 49 per cent said they had received such support as opposed to 42 per cent in *Tier 1* (Fig. 30). As expected, farm, nutrition and WASH assistance were all more common in *Tier 1*.



Overall, male-headed households were more likely to receive assistance than female-headed ones in 2017. Seventy-five per cent of male-headed households received support as opposed to 66 per cent of women-run households. In fact, there was no single type of support where female-headed households were more likely to receive support as shown in Fig. 31. The development assistance gender gap was particularly noticeable for CBO support, where male-headed households were almost twice as likely to receive support.

Regional differences in development assistance are also visible as illustrated in Fig. 32. Overall support was similar in the four regions, but different types of support varied between regions. Households in Rakhine were much more likely to have received nutrition or WASH support than those in other regions, whereas households in the Uplands were slightly more likely to have benefited from farm support, non-farm support and NRM than households elsewhere. Financial inclusion support was most prevalent in the Delta, as was CBO support.



Finally, landowners were more likely than landless to receive support (Fig.33). In total, 79 per cent of landowners and 68 per cent of landless reported receiving some kind of assistance in 2017. Indeed, landowners were more likely than landless to receive all types of support, except for non-farm support, which 6 per cent of both landless and landowners received.

3.3.2 Benefits of assistance

The benefits of assistance are explored quantitatively through the remainder of Chapter 3 where a number of outcomes are compared over time for households that receive support and households that do not. In addition, the nature and benefits of LIFT support were discussed by community members participating in focus groups discussions. Microfinance loans, MCCT programmes, livestock support and agriculture support were highlighted as areas of support that participating households had benefited from.

MCCT was discussed by community members in the Delta and Rakhine. In the Delta, training for mothers on nutrition was said to have contributed to healthier children and the subsidy and regular weighing of children under two years of age reportedly had positive impacts on child health. In Rakhine however, the subsidy of MMK 15,000 (USD 11) was deemed insufficient to cover the daily cost of food.

“In the past, we were not aware of health information. As a result, our children were sick very often. The (LIFT-supported) organisation gave us training about nutrition and health care. That’s why it feels the health sector is developing and better than before.”

— Non-farmer in the Delta.

Livestock, such as pigs and chickens, provided by organisations was reported particularly to benefit casual labourers as it enabled them to increase income without large capital investment or debt.

“The loan program for animal breeding is beneficial. We can buy a pig with 50,000 Kyats. We can pay the money back after we’ve sold it when the pig is grown-up.”

— Poor female in the Uplands.

“They lend MMK 200,000 (USD 148) to those who breed goats, so they don’t have to sell the young goats and can sell them when they get bigger.” — Non-farmer in the Dry Zone.

Agricultural support, particularly in the Delta, was reported to impact the whole village positively. High quality seeds provided to farmers had increased yields and quality, which in turn increased sale prices. Seed provision was viewed as having long-term impacts as farming was the main livelihood and affected the whole village. Farmer groups established in the Delta were described as improving connections to input suppliers and traders enhancing farming production.

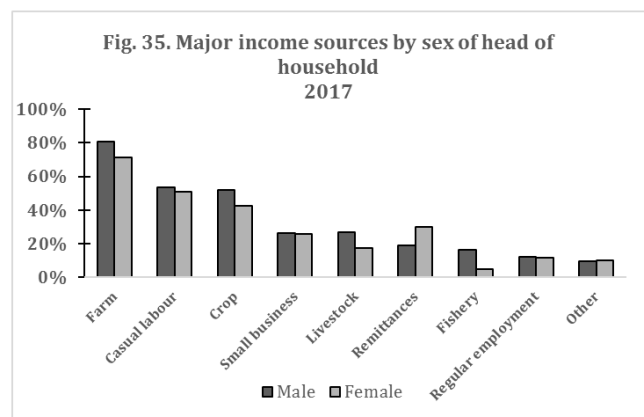
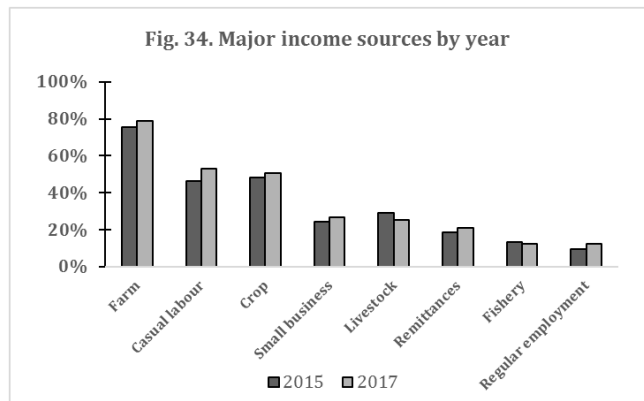
“I think that the provision of good quality seeds is the best. Only if farmers are doing well are casual labourers better off. For the whole village community, this activity is the most relevant.” — Poor female in the Delta.

Regarding financial inclusion, recipients did not distinguish between LIFT-supported loans and government programmes, but they said it was common for households to have borrowed from either source recently, and that both types were beneficial, as both had more favourable terms than other sources of finance. More detailed experiences with microfinance loans are discussed in section 3.6.

3.4 Incomes, asset ownership and poverty

3.4.1 Income sources

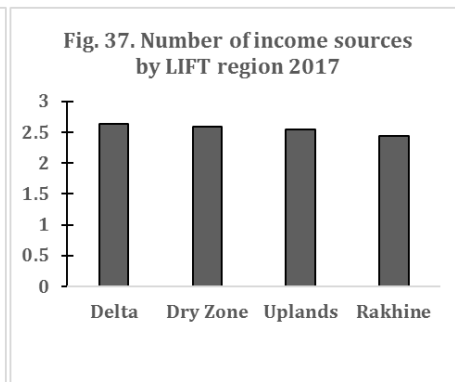
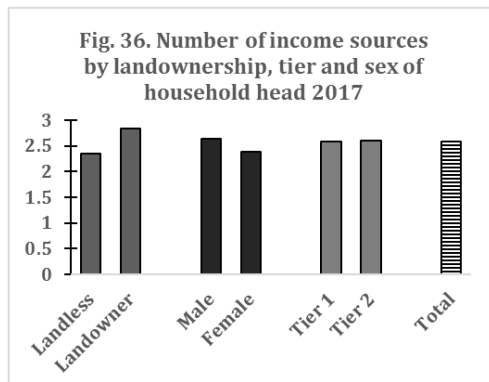
Households in LIFT-supported villages are to a large extent dependent on farm income. A full 80 per cent of households reported having some kind of farm income in 2017, including crop income, livestock, aquaculture/farmed fish, and on-farm casual labour as shown in Fig. 34. The most common single income sources reported in 2017 were casual labour, which was a source of income for 53 per cent of households in LIFT-supported villages, and sale of agricultural crops, which was an income source for 51 per cent. Other main income sources were livestock rearing and small businesses both of which contributed to the incomes of 27 per cent of households. Remittances were also a major and significant income source with 19 per cent reporting this as a source. Fishery and regular employment followed next with 12 per cent. As shown in Fig. 34, main income sources were by and large the same in 2015 and 2017, albeit with an increase in the proportion of people engaged in casual labour from 46 per cent in 2015 to 53 per cent in 2017.



Female-headed households were slightly less likely to earn income from on-farm activities than were male-headed households and conversely were more likely to receive remittances as illustrated in Fig. 35. Seventy-one per cent of female-headed households in 2017 reported having farm income as compared to 80 per cent of male-headed households. Whereas 30 per cent of female-headed households received remittances the same was true for just 19 per cent of their male counterparts. Male- and female-headed households were equally likely to operate small businesses or to hold regular employment.

3.4.2 Income diversity

Most households had more than one source of income in 2017. On average, households had 2.6 sources of income in 2017, as compared to 2.3 sources in 2015 with the number in 2017 being slightly higher for landowners than



for landless, and slightly higher for male-headed households than for female-headed households as shown in Fig. 36. There was no difference between LIFT tiers and only negligible difference between regions; households in Rakhine had slightly fewer sources, and households in the Delta had slightly more than average (Fig. 37).

Whereas the quantitative results show a small increase in income sources between 2015 and 2017, qualitative interviews described how changes in livelihoods particularly for casual workers had occurred, mostly taking the form of an addition of jobs rather than a complete shift in livelihood. This, community members reported, had come about through training being implemented in villages, allowing casual workers to become sellers, make handicrafts and drive transport for passengers and goods. In addition, the raising of pigs and chickens was reported to have increased through loans and programmes implemented by organisations, providing an additional form of livelihood to casual laborer households.

3.4.3 Income levels

Household income in 2017 was highest in the Delta with an average annual income of MMK 3.6 million (USD 2,650) and median income of MMK 2.04 million (USD 1,500), followed by the Dry Zone with an average income of MMK 2.8 million (USD 2,079) and a median of MMK 1.92 million (USD 1,400); the Uplands with average income of MMK 2.1 million (USD 1,550) and a median of MMK 1.32 million (USD 970), and was lowest in Rakhine with an average annual income of MMK 2 million (USD 1,470) and a median income of MMK 1.56 million (USD 1,150) as shown in Fig. 38. Regional income differences are smaller when looking at median incomes, revealing that part of the differences in mean incomes is driven by a small proportion of households with very large incomes, particularly in the Delta.

While the difference between *Tier 1* and *Tier 2* was negligible, there was a large gender gap in incomes as shown in Table 7. Again, the particularly large gender gap in the Delta appears to be partly caused by a small proportion of male-headed households with very large incomes (Fig. 40).

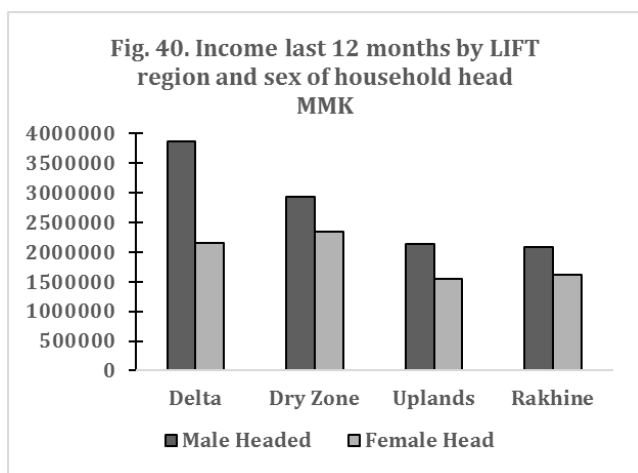
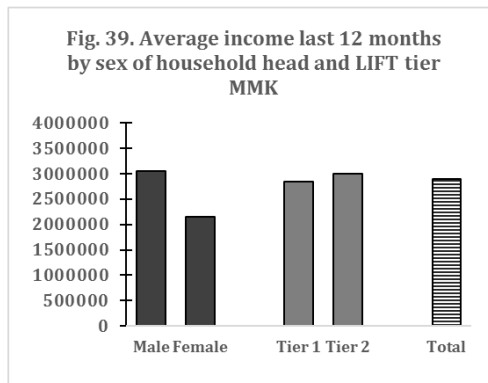
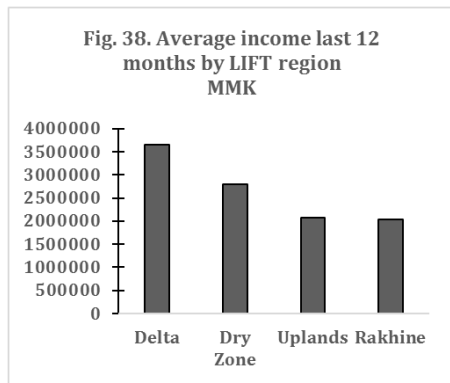


Table 7. Mean annual household income by sex of household head

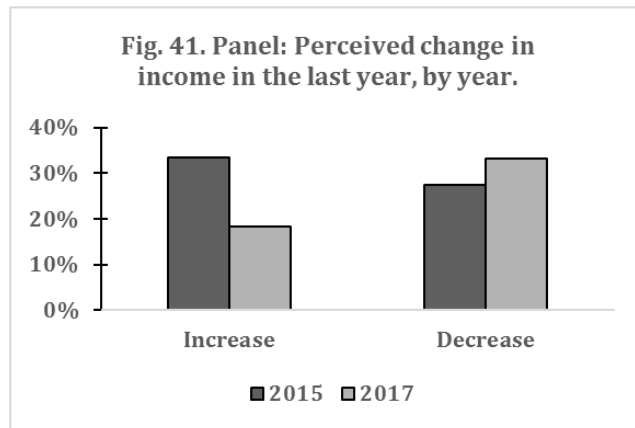
	Income male headed	Income female headed	Difference	Difference %
Delta	3,860,591	2,157,667	1,702,924	44%
Dry Zone	2,925,879	2,344,683	581,196	20%
Uplands	2,146,022	1,552,992	593,030	28%
Rakhine	2,087,066	1,622,509	464,557	22%

3.4.4 Perceived income change

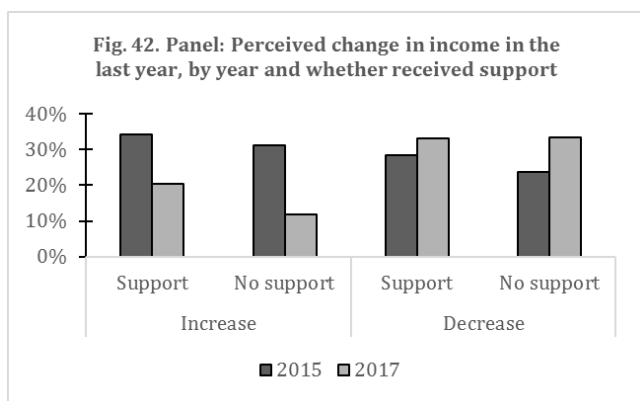
While there is no data on mean income from 2015 to compare changes in mean income over time, data on perceived income changes reveal that the majority of households in both years reported that incomes either increased or remained stable in the last 12 months. This was true for 73 per cent of households in 2015, and 67 per cent in 2017. The proportion of households reporting having increased their income since last year however, decreased noticeably between 2015 and 2017 while the proportion reporting a decrease grew, although by a smaller share (Fig. 41).

The proportion of households that reported an increase in incomes dropped from 34 per cent in 2015 to just 18 per cent in 2017. Meanwhile, the proportion reporting a decrease in income rose from 27 per cent in 2015 to 33 per cent in 2017.

Looking at these results by whether or not households received some kind of development assistance in Fig. 42, we see that households that received assistance were slightly more likely to report an increase in incomes than were those who received no support, particularly so in 2017. Although the proportion of households who reported increased incomes dropped substantially in 2017, the drop was 6 per cent lower for households that received support.



In 2015, households that received support were slightly more likely to experience a decrease in incomes than those that did not. Between 2015 and 2017 the proportion of households that experienced a decrease grew for households in both groups, but it grew less among those who received assistance. As such, over time, households that received support were comparatively five percentage points better off than those that did not (Table 8a and 8b). However, the results are not statistically significant.¹⁸



Overall, the results on income change appear to indicate that households that received support were better able to maintain or increase their incomes than households without support, and conversely, were better able to avoid income decreases.

Table 8a. Panel survey: Income change by whether received development assistance

	Income increase			Income decrease		
	Support	No support	Difference	Support	No support	Difference
2015	34%	31%	3%	29%	24%	5%
2017	20%	12%	9%	33%	33%	0%
Change	-14%	-19%	6%	5%	10%	-5%
n	1708	541		1708	541	

Table 8b. T-test: Probability that difference in differences is ≠ 0

	Mean	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]
Income increase	(1)	0,055912	0,033781	1,66	0,100	-0,010819 0,122642
Income decrease	(1)	-0,05104	0,030736	-1,66	0,099	-0,1117526 0,00968

¹⁸ As only a small proportion of households reported experiencing either an increase or a decrease respectively, the sample size for these indicators is small. This in turn increases the margin of error and affects ability to establish statistical significance.

3.4.4 Consumption Expenditure

The household survey collected detailed data on consumption expenditure for a subset of households as described in Chapter 2. These data were used for calculating daily per capita consumption expenditure as well as daily per capita food and non-food consumption expenditure, respectively, which in turn were used for identifying households living below the poverty line. The sample size for expenditure data does not allow for disaggregation by region, tier or sex of household head and are therefore presented jointly.

Overall, as shown in Fig. 43, per capita daily consumption increased from MMK 1,478 in 2015 to MMK 1,804 in 2017 in real terms, corresponding to a 22 percent increase over the two-year period.¹⁹ Food consumption made up just under 60 per cent of total consumption expenditure in both years indicating that although levels of consumption expenditure increased, the share of food expenditure remained the same.

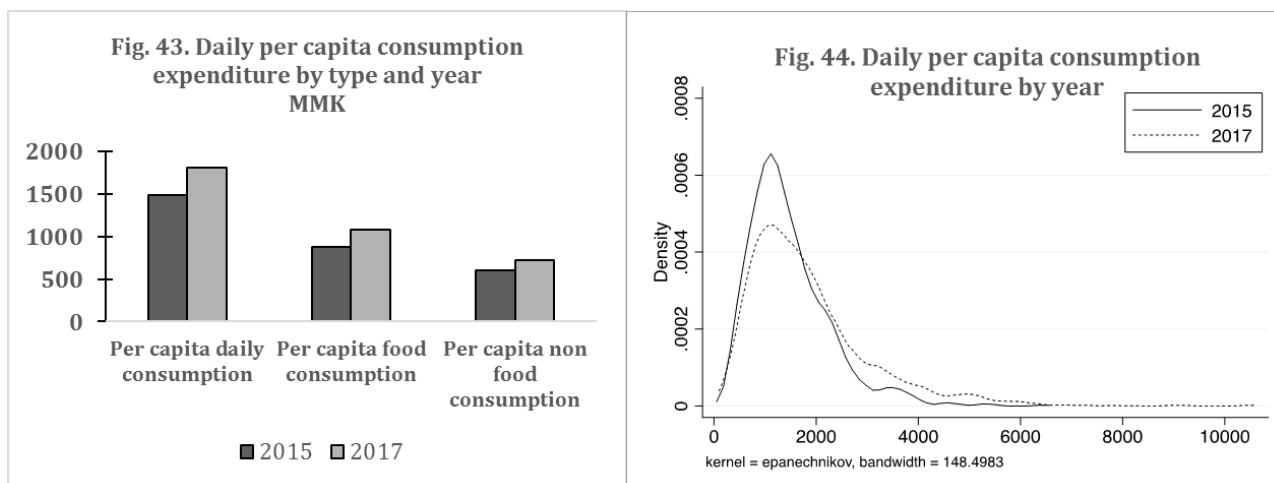
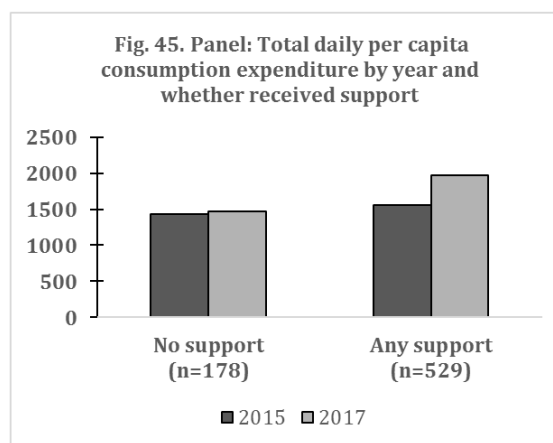


Fig. 44 shows a density function for consumption expenditure by year. The improvement over time is visible as the distribution for 2017 is lower and wider, with a lower density of households with a daily per capita consumption between MMK 1,000-2,000, and a higher density between MMK 2,000-6,000.

Turning to the panel data only, in Fig. 45 and Table 9a, we see that households that received support in 2017 saw a substantially larger increase in consumption expenditure than did households that received no support. The difference in change over time was a full three times as large amongst households that received support, which was also found to be strongly statistically significant.



¹⁹ 2015 values are adjusted for inflation and reported in 2017 MMK.

Table 9a. Panel: Total daily per capita consumption expenditure by year and whether received support

	Support	No support	Difference
2015	1556	1432	124
2017	1964	1469	495
Change	408	37	371
Change %	26%	3%	299%
N	529	178	

Table 9b. T-test: Probability that difference in differences is $\neq 0$

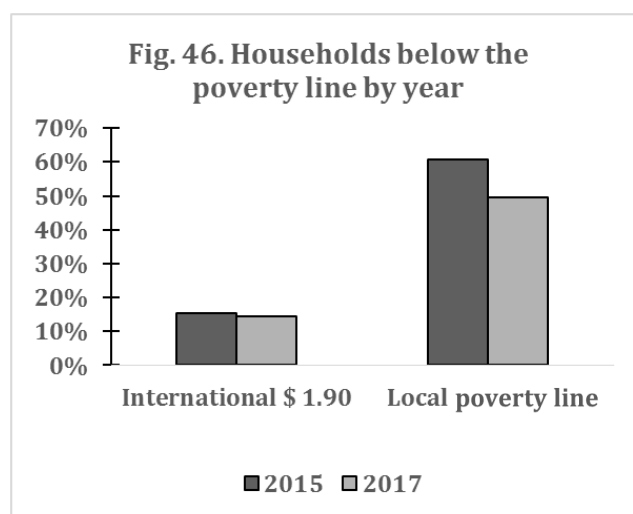
Mean	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
-1	370.783	99.31471	3.73	0	174.598	566.968

3.4.5 Poverty line estimates

Just over 15 per cent of households in LIFT-supported villages lived below the international extreme poverty line of USD 1.90 in 2015.²⁰ In 2017, the proportion had only decreased marginally to just under 15 per cent (Fig. 46).²¹

In addition, a local poverty line was constructed by the Government of Myanmar (GoUM) and the World Bank, published in 2017. This poverty line corresponded to a per capita consumption expenditure of MMK 1,360 in December 2015 and MMK 1,514 in 2017, almost twice as much as the international poverty line.²² Using the latter poverty line, 61 per cent of the population in LIFT supported villages were poor in 2015, and 50 percent were so in 2017 (Fig. 46). These numbers, however, are twice the poverty rates estimated by GoUM and the World Bank using the same local poverty line and are likely to reflect differences in the calculation of consumption expenditure.

The important take away therefore is the fact that the proportion of people living in poverty in LIFT-supported areas in each of the two years decreased over the two-year period although the proportion of people living below the extreme poverty line of USD 1.90 remained practically constant.



²⁰ The poverty line at USD 1.90 corresponded to MMK 720 in 2015 and MMK 779 in 2017 using 2011 PPP and adjusting for inflation.

²¹ These numbers are marginally different from the numbers provided in the 2017 Annual Report. This is due to weighting and revised expenditure data .

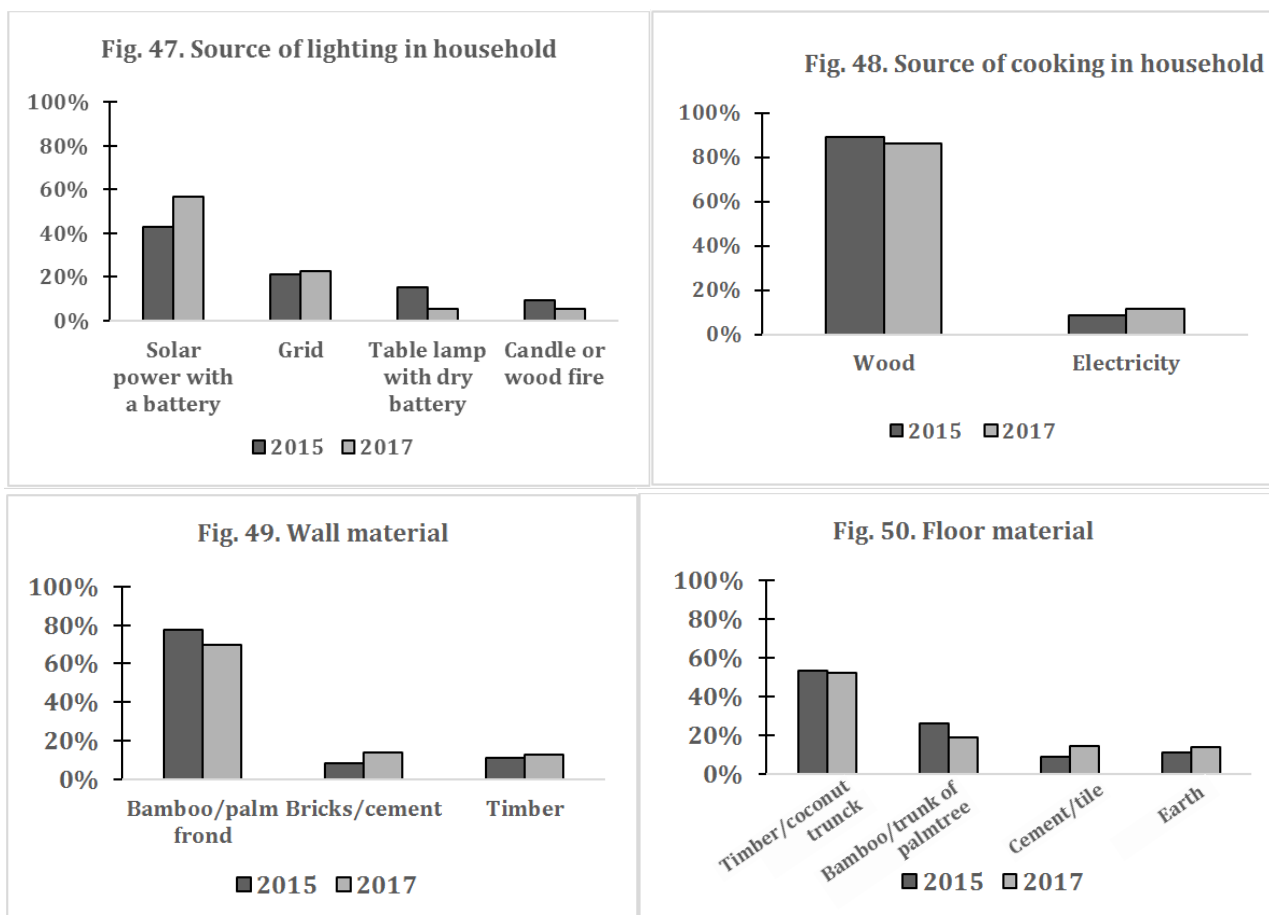
²² All values based on 2011 PPP and adjusted for inflation.

3.5 Ownership of Assets

The household survey collects a wide range of data on asset ownership, including durable assets, agricultural assets, livestock ownership, landownership and housing. In 2017, an asset index was composed, using all available categories to generate an index which correlated as much as possible to both incomes and consumption expenditure.²³ The index is used here to create wealth quintiles to help illustrate the wealth status of the population in LIFT-supported villages.

3.5.1 Housing

Housing conditions in LIFT-supported villages appear to have improved slightly between 2015 and 2017. The most noticeable change was source of lighting with the proportion of households using solar power increasing from 43 per cent in 2015 to 57 per cent in 2017. This mostly substituted table lamps with dry batteries, but for some replaced candle or wood fire as shown in Fig. 47. Sources of cooking however, remained practically unchanged with the vast majority – 86 per cent in 2017 - using wood, and 12 per cent using electricity (Fig. 48).



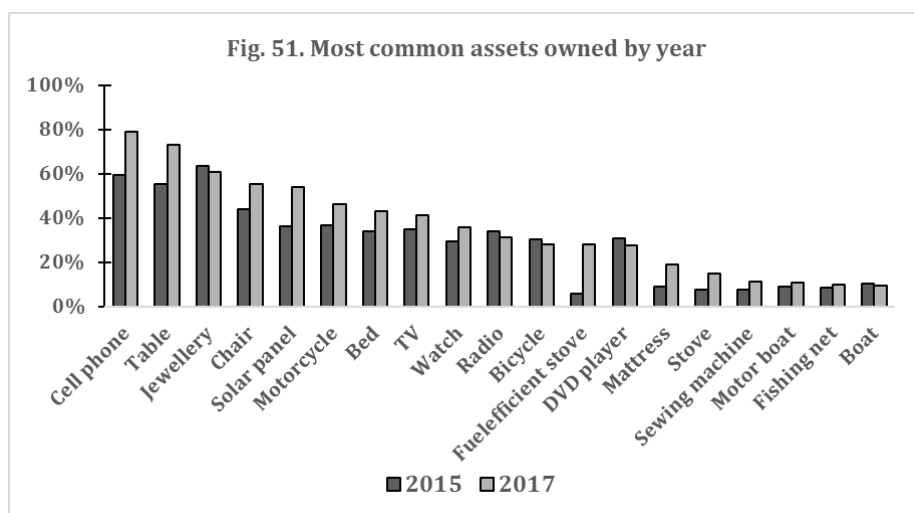
There was a small improvement in wall materials with the proportion of households having walls of brick or cement increasing from 9 per cent in 2015 to 14 per cent in 2017, mainly replacing bamboo, palm frond or thatch as seen in Fig. 49. Finally, there was a 5 per cent increase in the use

²³ Reference to Working Note on Asset Index, July 2018.

of cement or tile for flooring, and conversely a 7per cent decrease in the use of bamboo or trunk of palm tree (Fig. 50).

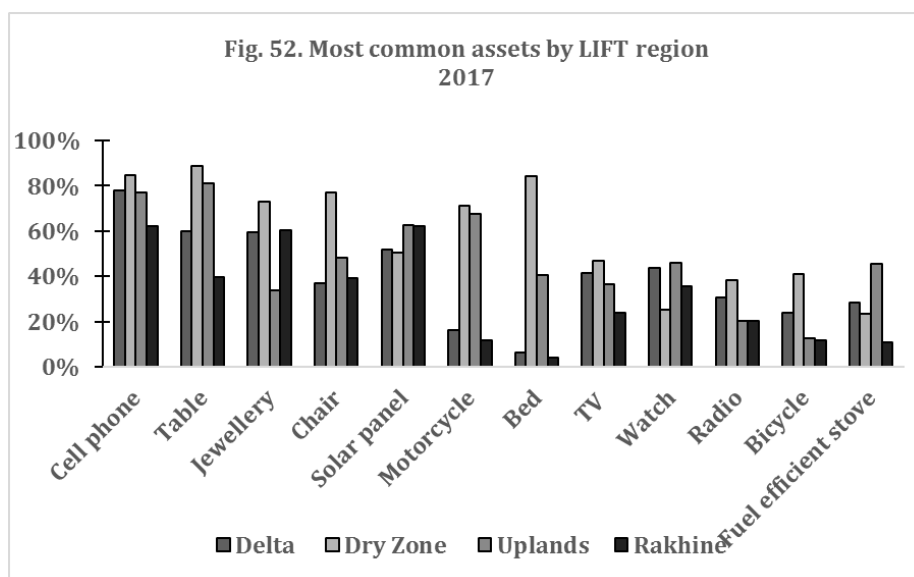
3.5.2 Durable Assets

Ownership of durable assets was higher in 2017 than in 2015. Ownership of several assets increased 10 or 20 per cent over the two years. This was the case for assets such as a cell phone, which was owned by 59 per cent of households in 2015 and by 79 per cent in 2017, making it the most commonly owned asset in 2017. The second most common asset was a table followed by jewellery, chair, and a solar panel, all of which were owned by more than half of the population in 2017. Fig. 51 shows all durable assets that were owned by more than 10 per cent of the population in LIFT-supported villages in 2017.²⁴



There was visible regional variation in asset ownership with some assets varying substantially as illustrated in Fig. 52.

While cell phone was the most commonly owned asset overall, and the most commonly owned asset in the Delta and Rakhine in 2017, it was owned by just 62 per cent in Rakhine as opposed to 85 per cent in the Dry Zone and 77 per cent in the Delta and 78 per cent in the Uplands.



Households in the Dry Zone and the Uplands were much more likely to own furniture than households in the Delta and Rakhine whereas the items most commonly owned by households in Rakhine in addition to a cell phone were jewellery, solar panel, and a watch.

²⁴ The numbers discussed here use the full sample of LIFT supported households in 2015 and 2017. The same numbers were examined for the panel data only and changes were much the same except for (a) solar panels which were slightly more widespread amongst the panel in 2015 and saw a correspondingly lower growth, (b) fuel efficient stoves, ownership of which grew slightly less in panel areas, and (c) ordinary stoves which in contrast grew slightly more in panel areas.

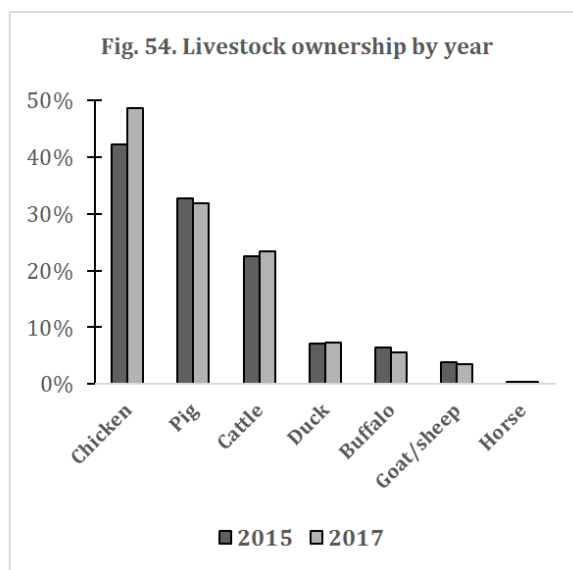
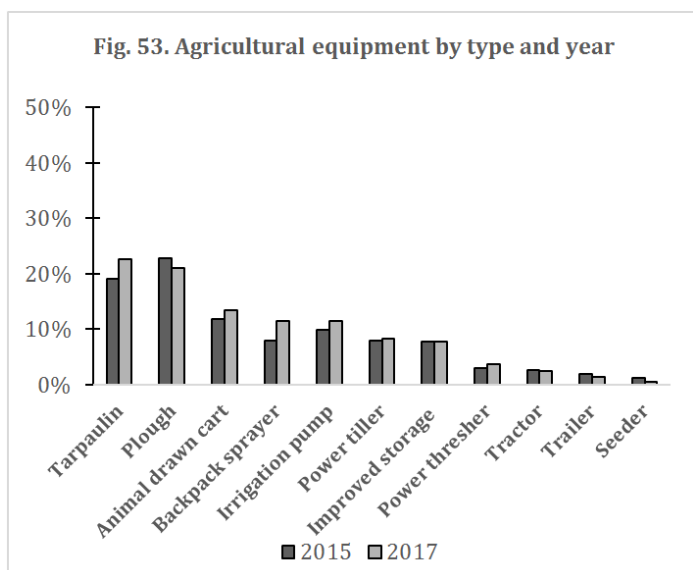
Focus group discussions supported the quantitative findings with participants describing an increase in asset ownership and highlighting specifically mobile phones, solar panels, motorbikes, livestock and house materials.

Mobile phones were said to have become more affordable and therefore more youths, casual labourers and households were able to purchase phones by saving. Motorbike ownership had increased in some villages, mostly in the Delta and Dry Zone, with respondents stating this was due to road improvements as well as availability of loans and installment plans. In the Dry Zone solar panels were said to have increased primarily due to government providing panels and batteries, whereas elsewhere it was said to increase when community members realised that solar panels are more cost-efficient when compared to buying candles daily.

“We received solar panels and batteries from the government ... the minister gave them to us ... We had to use candles in the past but now it is pretty bright in the village and on the streets. As soon as it gets a little dark, we switch them on.” — Poor female in the Dry Zone.

3.5.3 Agricultural assets and livestock

Ownership of agricultural assets remained more stable with only a few percentage points change between the two years (Fig. 53).²⁵ Similarly, livestock ownership remained practically constant, with a minor increase in households that own chickens as shown in Fig. 54.



In focus group discussions villagers reported seeing an increase in machinery for farmers which, in turn, meant buffalos and cattle were needed less and therefore sold.

²⁵ In this case too, numbers for the panel survey were similar. Looking at the panel sample only, the two largest changes were just over 5 per cent increase in households owning tarpaulin, and just under 5 per cent decrease in ownership of a plough.

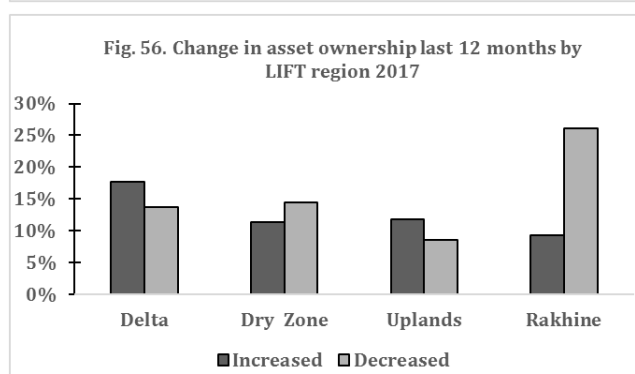
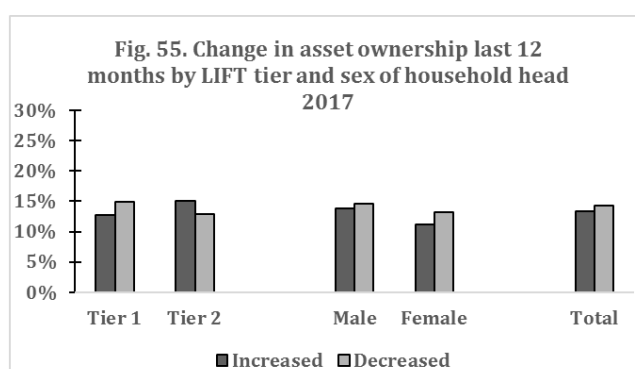
“I think there is some change in agriculture and in industry. Lately we have come to use machines more and we own more and more machines. The use of machinery in agriculture has really improved.” — Non-farmer, Delta.

Households also said development organisations had provided livestock like chickens and pigs, which had increased livestock ownership that further increased through animal breeding.

3.5.4 Perceived change in asset ownership

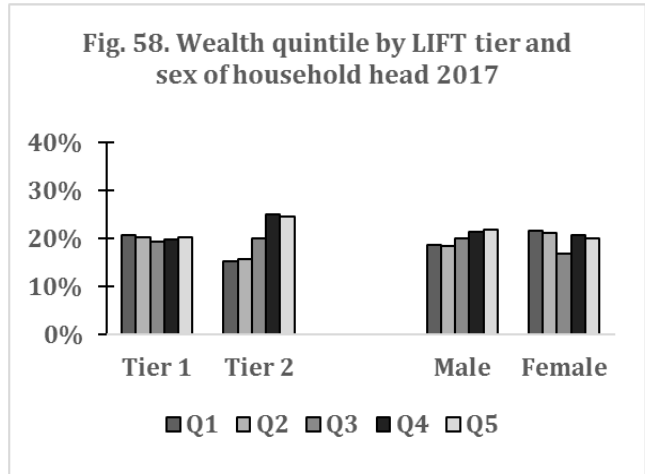
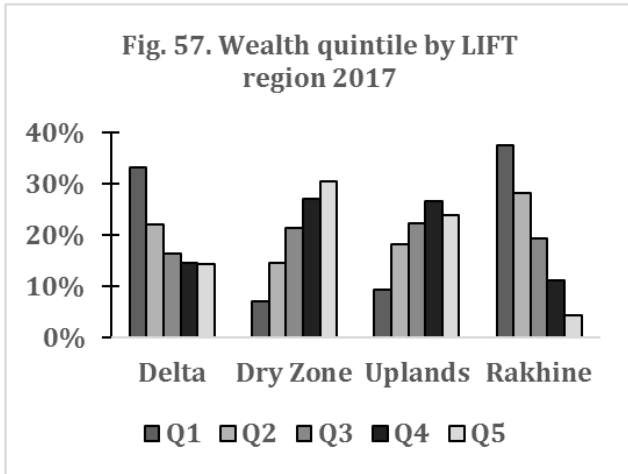
Exploring respondents’ perception of change in asset ownership, we see that the majority of households in 2017 said it had remained the same with the proportion saying it had increased almost the same as the proportion reporting a decrease. The numbers show that the proportion of households in *Tier 1* reporting a decrease was slightly higher than those reporting an increase and vice versa for *Tier 2*, although the size of these differences leaves it within the level of statistical uncertainty. Similarly, there appears to be a slightly larger proportion of female-headed households reporting a decrease, although this should be interpreted equally cautiously (Fig. 55).

Of greater significance is the regional variation in perceived change in asset ownership shown in Fig. 56. In particular, the share of households in Rakhine reporting a decrease was much larger than the share reporting an increase, and much larger than those who reported decreases in other regions. More than a quarter of households in Rakhine reported a decrease in assets, as opposed to 9 per cent reporting an increase, and as opposed to 14 per cent reporting a decrease in the Dry Zone and the Delta, and just 9 per cent in the Uplands.



3.5.5 Wealth quintiles

Exploring wealth quintiles by region in Fig. 57, we see that a greater share of households in the Delta and Rakhine belonged to the poorest quintile in 2017. A full 37 per cent of households in Rakhine and 33 per cent in the Delta belonged to the poorest quintile, whereas the opposite was true for the Uplands and particularly the Dry Zone, where 30 per cent of households belonged to the wealthiest quintile.



While regional differences are stark, there is little difference between male- and female-headed households. Looking at the distribution in Fig. 58 we see a slight tendency for male-headed households to be wealthier than female-headed households, but the difference is within a few percentage points for each quintile. Greater difference is found between LIFT’s *Tier 1* and *Tier 2*. As shown in Fig. 58 there is a greater share of wealthier households in *Tier 2* with half of households in that tier belonging to the two wealthiest quintiles.

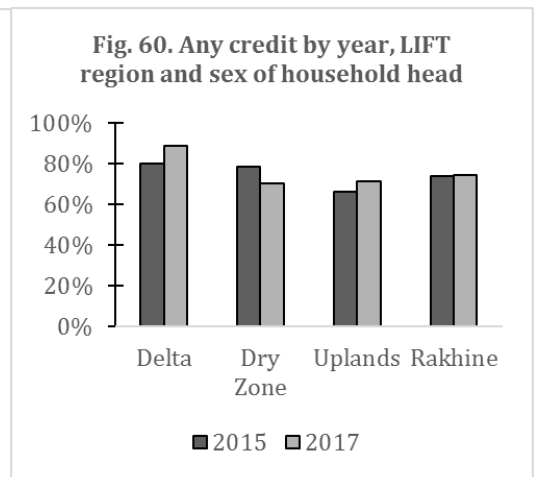
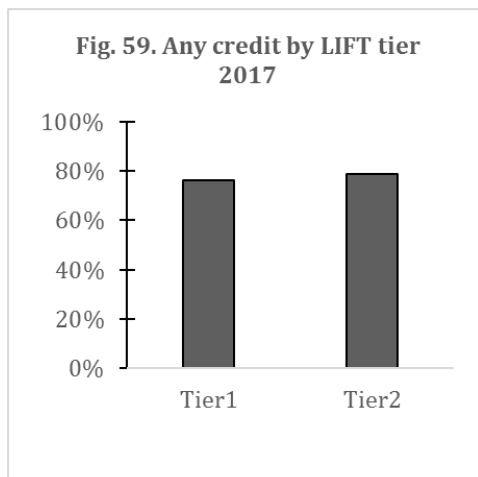
3.6 Financial services

As described in Chapter 1, LIFT’s Financial Inclusion programme has grown substantially since the onset of LIFT’s 2015-2018 programme. The extent to which households in LIFT-supported villages reported receiving financial assistance from development partners was reported in section 3.3. This section looks more generally at credit, and to a lesser extent, savings and behaviours.

3.6.1 Any credit

Overall, 76 per cent of households in 2015 and 77 per cent in 2017 had taken some kind of loan from any source – including from formal sources, money lenders and family –in the past 12 months as shown in Fig. 59. The difference between *Tier 1*, core programme, and *Tier 2*, financial inclusion programme only, was small, with only a few per cent more households in *Tier 2* taking a loan.

More male-headed households than female-headed households reported taking a loan: 79 per cent



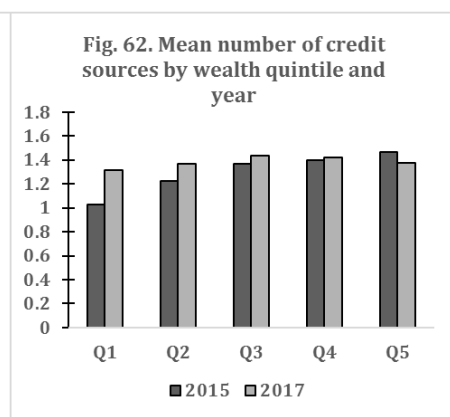
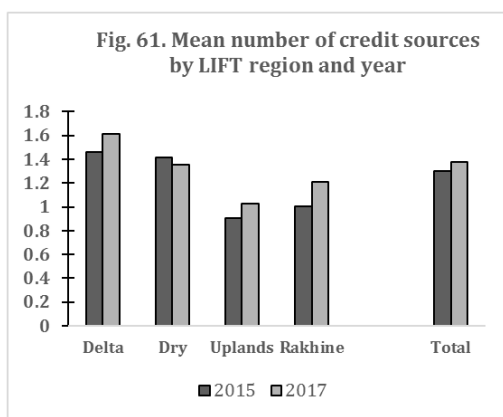
of male-headed, and 69 per cent of female-headed households did so in 2017. The proportion of households with any loan was highest in the Delta where 88 per cent had taken a loan in 2017, an increase of eight percentage points from 2015. In the Dry Zone on the other hand, the proportion decreased over the two years from 79 to 70 per cent. In contrast, the Uplands saw a minor increase and Rakhine remained constant at 74 per cent (Fig. 60).

Finally, landowners were slightly more likely than landless to have taken a loan, though the difference had evened out somewhat in 2017.

3.6.2 Credit sources

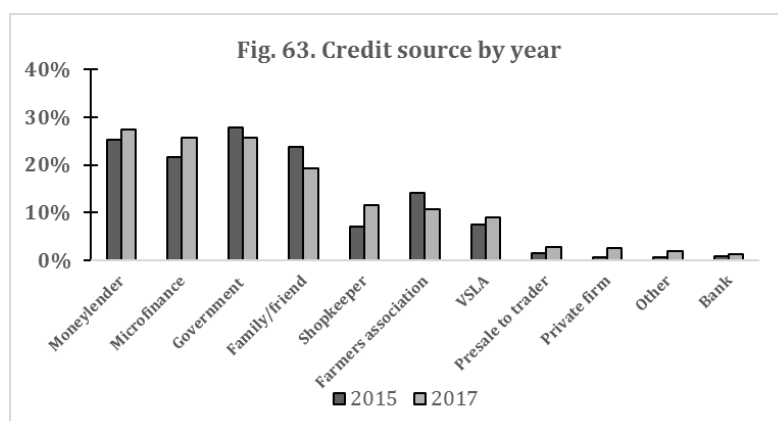
Rural households in Myanmar take loans from a variety of sources and often have multiple loans. On average, households in LIFT-supported villages had taken loans from 1.4 sources in 2017 up from 1.3 sources in 2015, stemming mainly from an increase in number of sources in the Delta and Rakhine. All numbers include those who had taken no loan at all. Fig. 62 shows the mean number of credit sources per household by wealth quintile and year, revealing an increase in number of credit sources for poorer quintiles.

Credit sources were examined to understand which lenders made up these additional credit sources. Fig. 63 shows that the most common credit sources in 2017 were moneylenders which provided loans to 27 per cent of loan takers, as well as

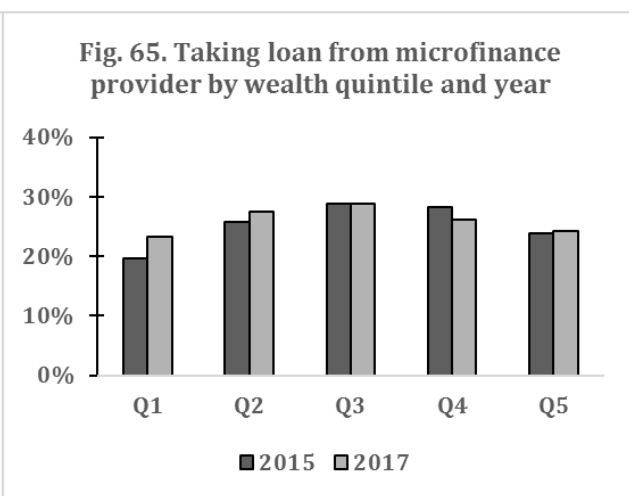
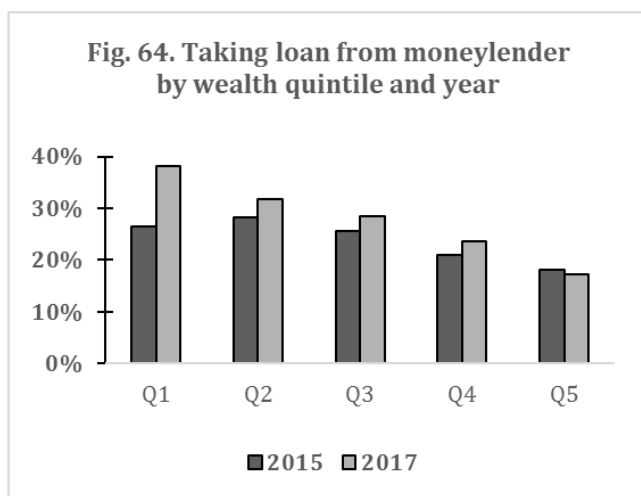


microfinance providers and government loans both of which provided loans to 26 per cent of loan takers. There were very minor increases in the overall proportion of households taking a loan from a moneylender, a microfinance provider, and from shopkeepers, between 2015 and 2017, whereas government loans, loans from farmers associations and family and friends saw a minor decrease.

However, by looking at households taking loans from the three most common credit sources by wealth quintile, it can be seen that the increase in households borrowing from a moneylender was driven primarily by an increase in households in the poorest quintile who took such loans as shown in Fig. 64. Whereas 26 per cent of the poorest quintile did so in 2015, this

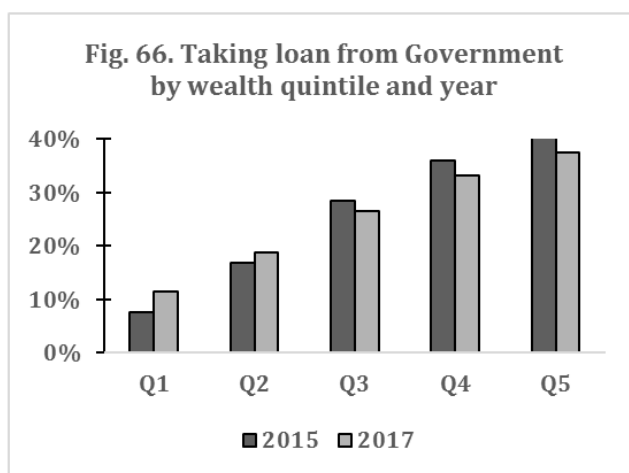


was true for 38 per cent in 2017, making the poorest the largest group of clients for moneylenders. Borrowing from moneylenders also increased for other wealth quintiles, but both the proportion and the increase over time was largest for the poorest group, and smallest for the wealthiest.

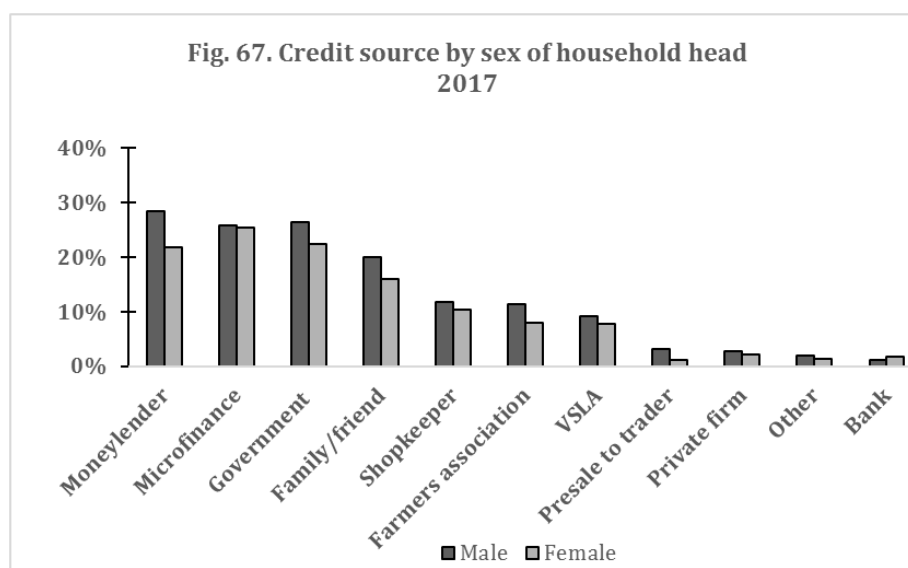


Borrowing from microfinance providers on the other hand, was distributed more equally across wealth groups with those in the middle of the wealth distribution most likely to take a loan from a microfinance provider as shown in Fig. 65. The increase in microfinance lending was also derived from a small increase in this type of borrowing among the poorest wealth quintile.

Finally, government loans were far more prevalent among wealthier households with the prevalence of these loans increasing steadily by wealth quintile. There was however, a decline in households taking these loans over time, with the decline largest for the wealthiest quintile as shown in Fig. 66.



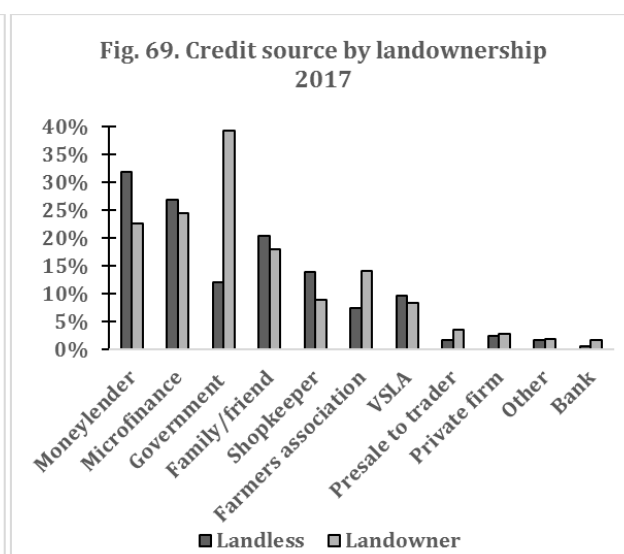
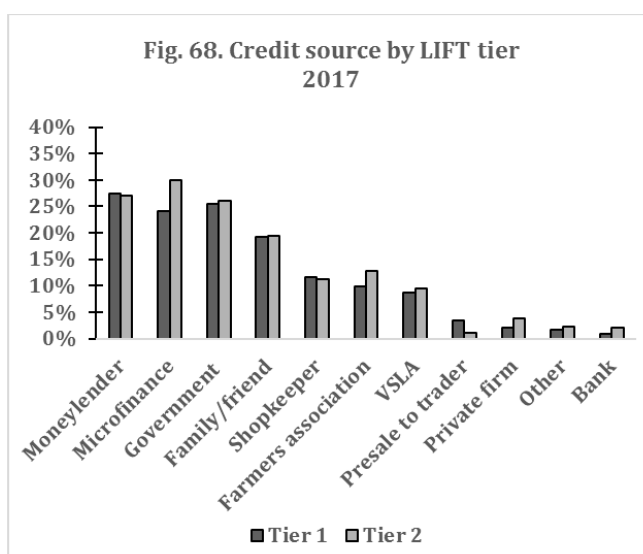
Examining credit sources by sex of household head in Fig. 67, we see that female-headed households are less likely to borrow from any source. Whereas the



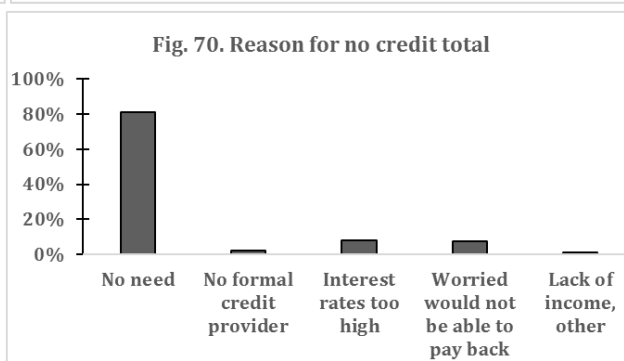
gender difference is particularly large for loans from moneylenders, it is almost non-existent for loans taken from microfinance providers, which is the most gender-equal source of lending.

Households in LIFT’s *Tier 2*, financial inclusion only programme, were more likely to borrow from a microfinance provider than were households in LIFT’s *Tier 1*, core programme areas (Fig. 68). Whereas 24 per cent of households in *Tier 1* reported having taken a loan from a microfinance provider in the last year, this was true for 30 per cent of households in *Tier 2*.

Finally, as shown in Fig. 69, landowners were more than three times more likely to have taken a government loan than were landless, with this being the case for 39 per cent of landowners and just 12 per cent of landless. Landless on the other hand were more likely to borrow from a moneylender, but also slightly more likely to borrow from a microfinance provider with 25 per cent of landless and 27 per cent of landowners doing so in 2017.



As described above, 77 per cent took a loan in 2017. Of the 33 per cent who did not take a loan, the vast majority – 81 per cent – said they had not done so because there was no need. A minority, 8 per cent, said interest rates were too high, and 7 per cent were worried they would not be able to pay back their loan as shown in Fig. 70.



Focus groups participants expressed that it was common for households to have borrowed from organisations and governmental programmers recently. Males were reported to rely more on government loans than on LIFT partner organisations, as the latter mostly targeted to women. Loans from organisations were described as preferable to money lenders because of low interest rates and because no collateral was needed.

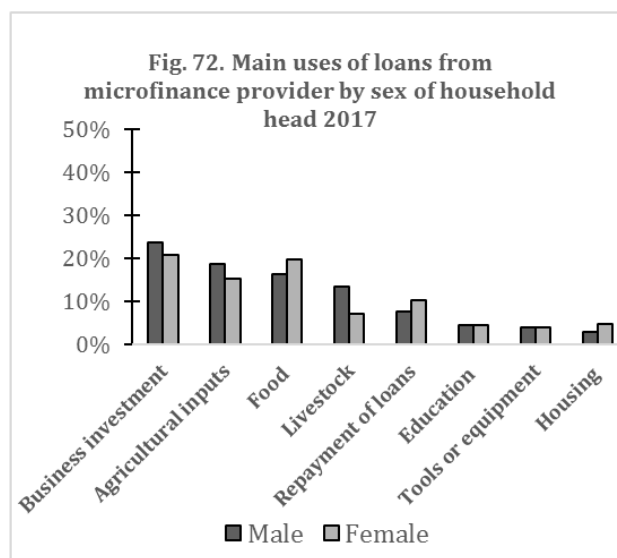
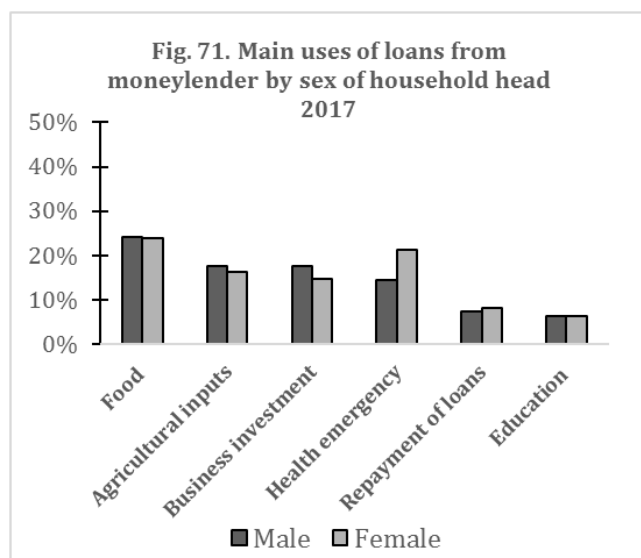
Many households however report debt and the inability to become debt-free as an obstacle to improving the household situation. Repayment terms were for that reason an important factor in

assessing the benefit of loans, especially for poor households. Loans requiring frequent repayment, such as two week intervals, tend to incur further debt as households often find it necessary to take on additional and more expensive loans in order to repay. Other coping mechanisms such as selling paddy at reduced prices and pawning belongings to repay debt were also reported.

3.6.3 Loan use

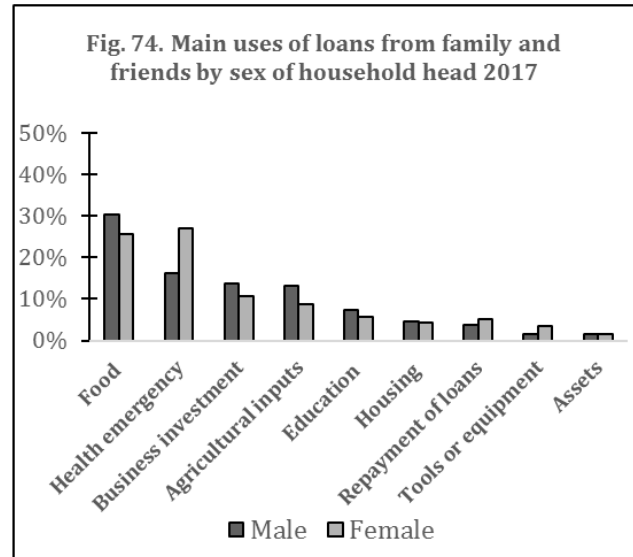
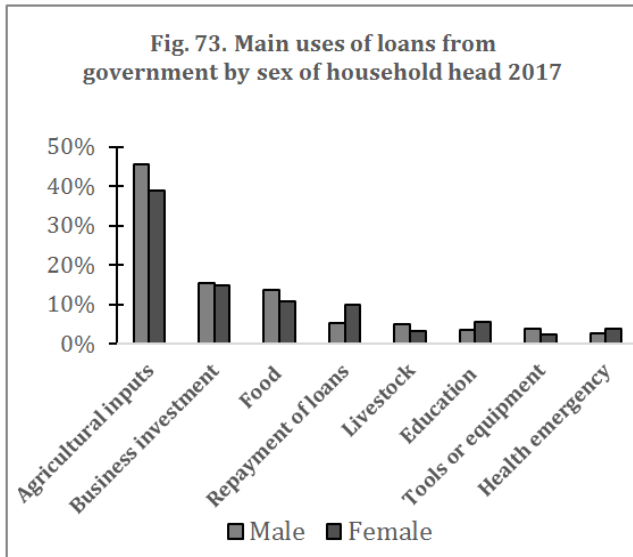
Uses of loans vary by sex of head of household, and by source of the loan. In 2017, data were collected on use of different types of loans. As shown in Fig. 71 moneylenders were used primarily for food purchases which was the case for almost a quarter of households with such loans, followed by purchase of agricultural inputs, business investments, and health emergencies.

Female-headed households were particularly likely to go to a moneylender for health emergency financing, with 21 per cent of female-headed households doing so, as opposed to 14 per cent of male-headed households. Just under 8 per cent of households with these loans used them to repay other loans.



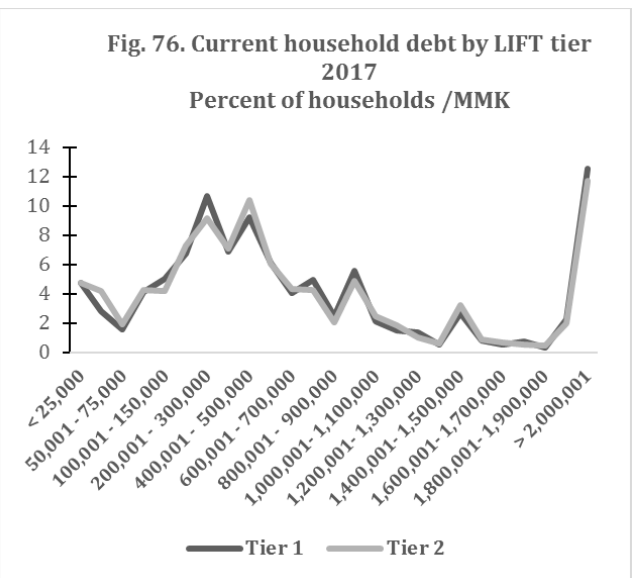
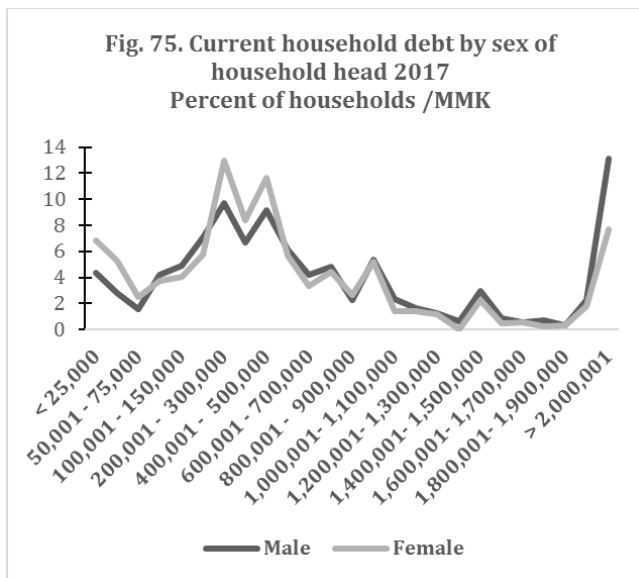
Notably, loans from microfinance providers (Fig. 72) were spread out on a greater variety of uses, with the primary use being business investment for both men and women. This was followed by agricultural inputs, food purchases, investment in livestock, and repayment of other loans. Government loans (Fig. 73) were far more likely to be used for agricultural inputs with 45 per cent of male-headed households and 39 per cent of female-headed households doing so, followed by a smaller percentage of households using the loans for business investment and food purchases.

Finally, those who have turned to family and friends for loans have done so particularly for the purpose of purchasing food, which was the main use of these loans for 30 per cent of male-headed households and 26 per cent of female-headed households (Fig. 74). The second main purpose was health emergencies, in particular for female-headed households.



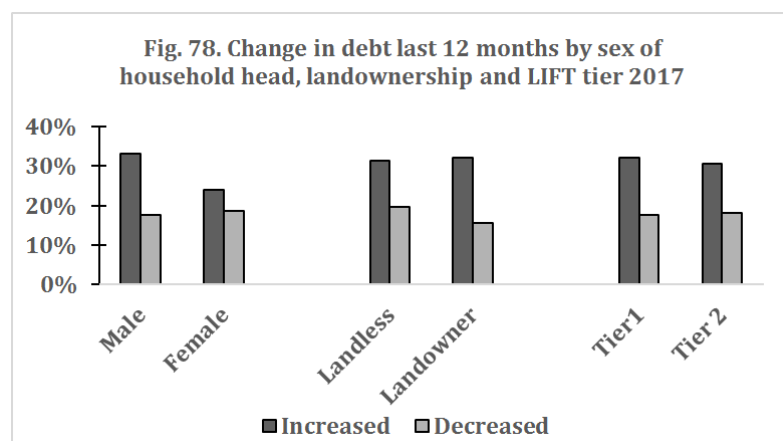
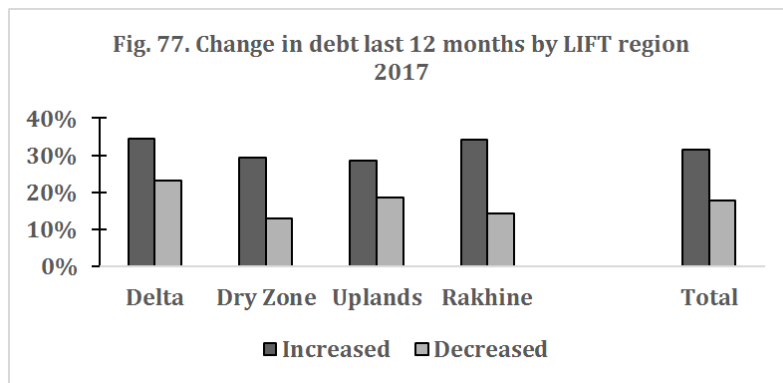
3.6.4 Household debt

While there is no exact data on household debt, the household survey data contains ranges of estimated debt. The most common level of household debt for both male- and female-headed households in 2017 was between MMK 200,000 – 500,000, equivalent to approximately USD 150-350 in December 2017, as shown in Fig. 75. The distribution of debt for male- and female-headed households is similar, although a larger share of female-headed households have lower levels of debt and a larger share of male-headed households having more than MMK 2 million in debt. Comparing *Tiers 1* and *2* (Fig. 76) reveals very similar levels of debt for households in the two programme areas.



Finally, when asked whether their debt had increased, decreased or stayed the same in the last 12 months, the share of households stating it had increased was notably higher than the share saying it had decreased. This was true for all LIFT regions with the largest “net increase” found in Rakhine where 34 per cent reported an increase in debt as opposed to just 14 per cent reporting a decrease (Fig. 77).

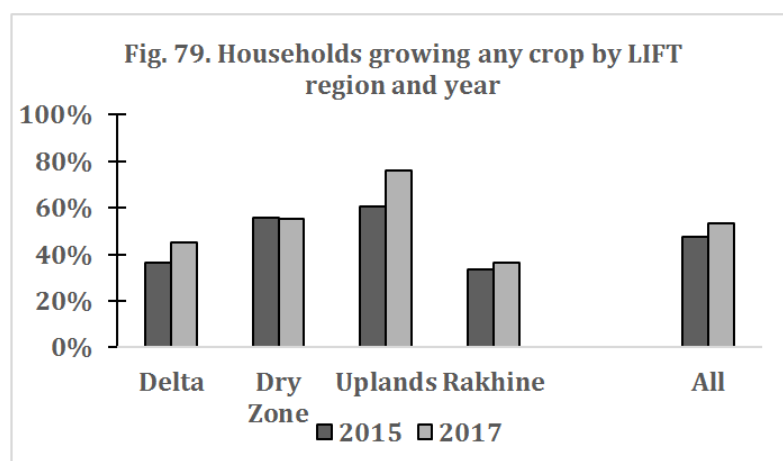
The net increase was also higher for male-headed households than for female-headed households with 24 per cent of women saying they had increased their debt vs. 19 per cent who said it had decreased (Fig. 78). Landowners also had a larger net increase in debt than did landless, whereas the figures for *Tiers 1* and 2 were very similar.



3.7 Agriculture and farm-based production

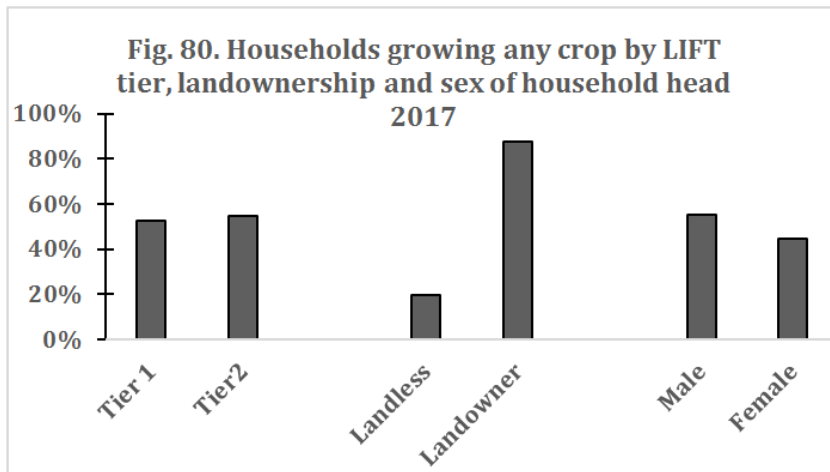
3.7.1 Agricultural practices and production

Just over half of households in LIFT-supported villages – 53 per cent – grew any crop in any of the three agricultural seasons prior to the household survey in 2017, which was a small increase from 2015 where 48 per cent of households did so. The increase was mainly driven by an increase in crop growing households in the Uplands where the proportion grew from 60 to 76 per cent, and by a smaller increase in the Delta as shown in Fig. 79.

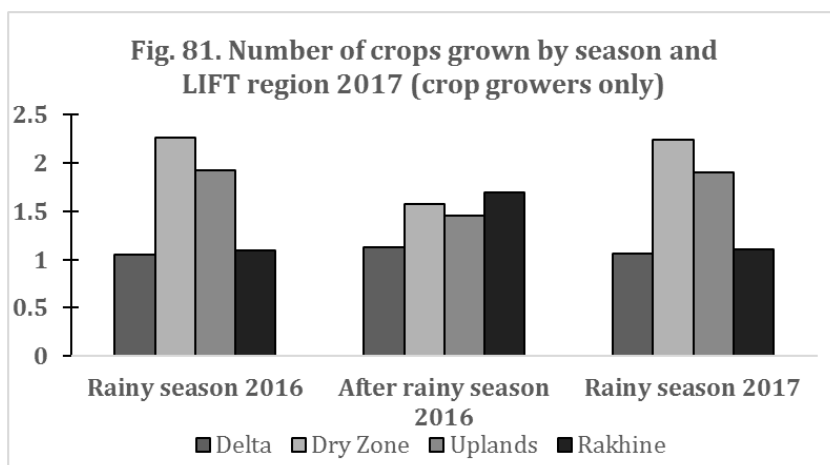


LIFT's *Tiers 1* and 2 saw an almost equal proportion of crop growing households in 2017. A larger difference was seen between male- and female-headed households with 55 per cent of male-headed households growing crops as compared to 45 per cent of female headed households (Fig. 80). Landowners of course were far more likely to grow crops than landless – a full 88 per cent of landowners grew crops, but a notable 20 per cent of landless also reported growing crops.

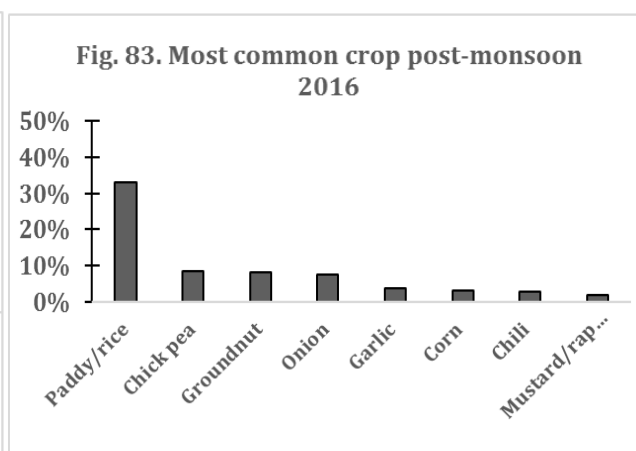
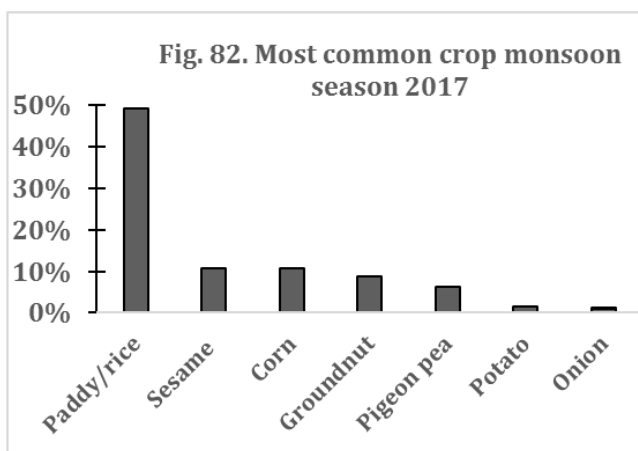
The number of crops grown varied by season and across regions as shown in Fig. 81. Households in the Dry Zone and the Uplands on average grew a larger number of crops in the rainy season than did households in the Delta and Rakhine. The numbers of crops grown in the dry and cool (post-monsoon) seasons were somewhat more equal.



The most common crop grown in the 2017 rainy season was paddy or rice, which was grown by just under half of households. This was followed by sesame and corn which were both grown by 11 per cent of those who grew crops. Groundnut and pigeon pea were grown by 9 and 6 per cent of crop-growing households respectively, while potato and onion were grown by less than 2 per cent of households (Fig. 82).



In the cool/dry season referred to in the household survey as post-monsoon season, paddy or rice was similarly the most common crop although grown by a smaller proportion of households than during the rainy season – 32 per cent as illustrated in Fig. 83. In addition to paddy, the season was used for cultivation of a wide variety of crops including vegetables, nuts, seeds and fruits with households reporting a total of 76 different crops grown during this season, many of them however, grown only by a tiny proportion of households.



The most common crops in addition to paddy were chick pea, groundnut and onion grown by close to 8 per cent of crop growing households respectively, followed by garlic grown by 4 per cent, and corn, chili and mustard/rape seed. Each of the remaining 70 crops reported were grown by less than 1 per cent of households.

The household survey collected data on perceived change in yield if, and when, the same crop was grown in the same season the year before. As shown in Fig. 84, a third of crop growers in rainy seasons 2016 and 2017 alike, reported experiencing an increased in yields compared to the same season last year. The proportions reporting a decrease in each of the rainy seasons were also practically identical with 28 per cent doing so in rainy season 2016 and 30 per cent in 2017.

The share of households reporting an increase in yield for their main cool/dry season crop was 26 per cent, as was the share reporting a decrease, with the majority of households experiencing no change.

In 2015, no data were collected on changes in yield since the last year. Rather, farmers were asked to compare yields of main crops in each of the last three seasons to a corresponding 'average' season. The same question was repeated in 2017 allowing for changes to reported yield over time to be explored using the panel data of households surveyed in both 2015 and 2017.

Fig. 85 shows first, that there was a small decline in households with increased productivity between 2015 and 2017 in both cool/dry season and rainy season. This decline however, as shown in Table 10a was very slightly larger for households receiving no development assistance in 2017. Although results are not statistically significant, this may in turn be a cautious indication that households that received support were slightly better equipped to maintain yield increases than were those that did not receive support.

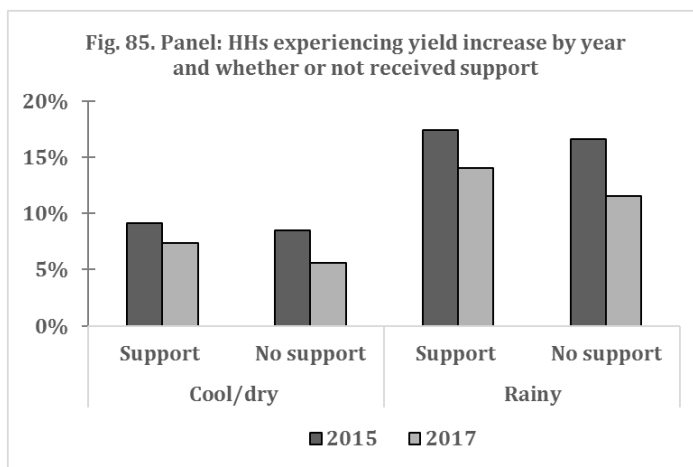
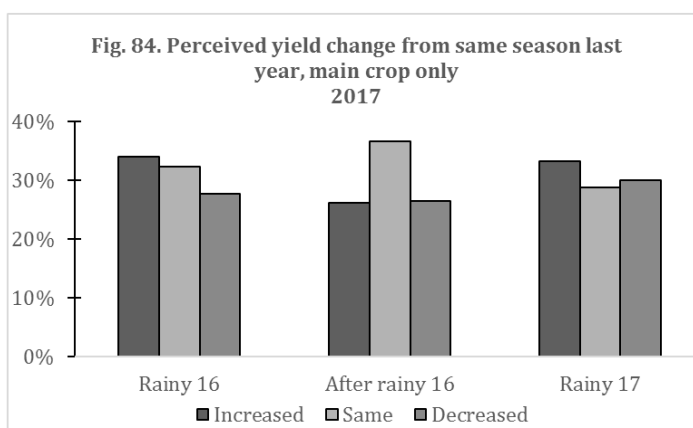


Table 10a. Panel survey: Yield increase by whether received development assistance

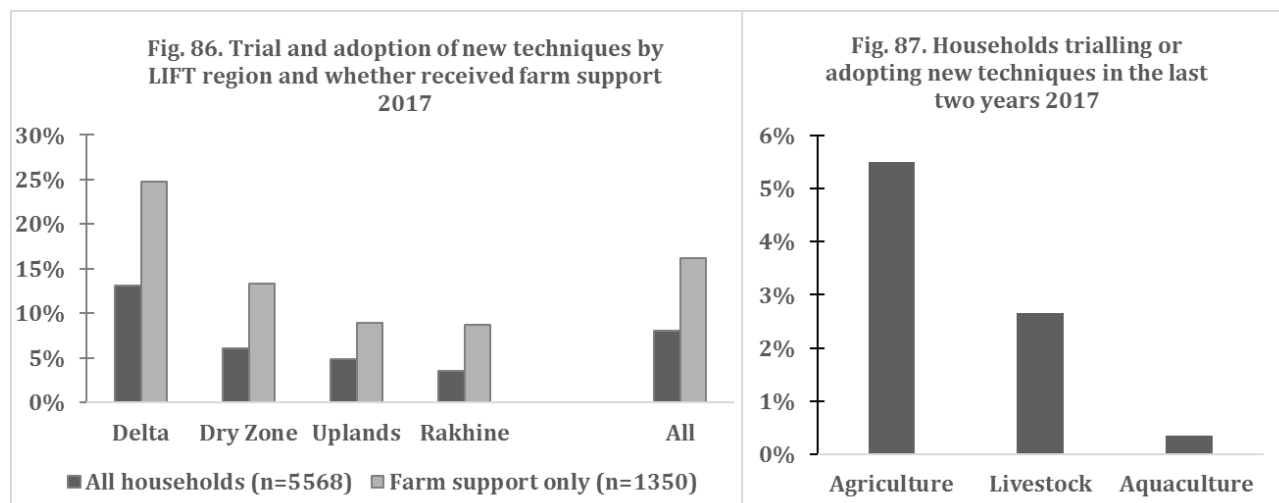
	Cool/dry			Monsoon		
	Support	No support	Difference	Support	No support	Difference
2015	9,1%	9,6%	-0,5%	18,3%	17,7%	0,6%
2017	7,7%	6,6%	1,1%	14,7%	11,1%	3,6%
Change	-1,6%	-3,0%	1,4%	-3,5%	-6,6%	3,0%

Table 10b. T-test: Probability that difference in differences is $\neq 0$

	Mean	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Cool/dry	(1)	0,0144687	0,0306845	0,47	0,638	-0,0461643	0,075102
Monsoon	(1)	0,0303338	0,0392289	0,77	0,441	-0,0471831	0,107851

3.7.2 Trial and adoption of new farm practices

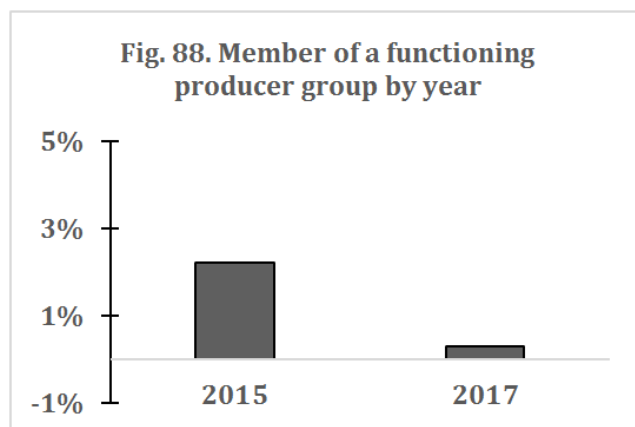
Households were asked whether they had trialled or adopted any new agriculture, livestock, or aquaculture techniques or practices in the last two years. In 2017, 8 per cent of all households said they had done so, with the proportion being twice as large, 16 per cent, for households who had received some type of farm assistance in the last year (Fig. 86). Households in the Delta region were most likely to trial or adopt new techniques, with 13 per cent of households doing so in the last two years or 25 per cent of households who received farm support. The likelihood that farmers in other LIFT regions had implemented new techniques was somewhat smaller with just 6 per cent of all farmers in the Dry Zone, or 13 per cent of those who received support. Number were fewer still in the Uplands and Rakhine.



Most of the techniques or practices implemented were in agriculture, with 5.5 per cent of households reported trialling or adopting new agricultural techniques, compared with just 2.6 per cent for livestock and a mere 0.4 per cent for aquaculture (Fig. 87).

3.7.3 Producer groups and marketing practices

Almost none of the households surveyed were members of a functional producer group. In 2017, just 16 households, or 0.3 per cent of the households surveyed said they were members of a functional producer group. This was a decrease from 2015, where just over 2 per cent of respondents reported being members of such groups as seen in Fig. 88.

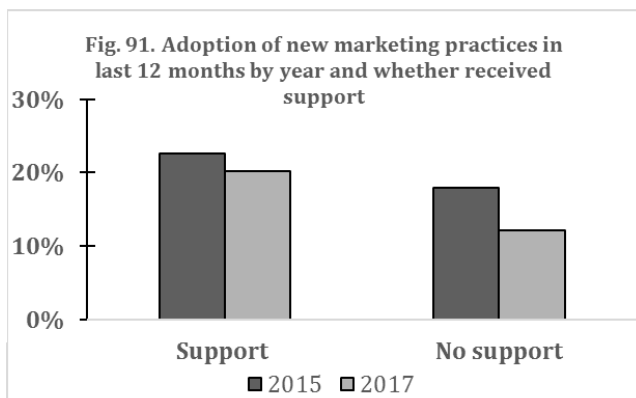
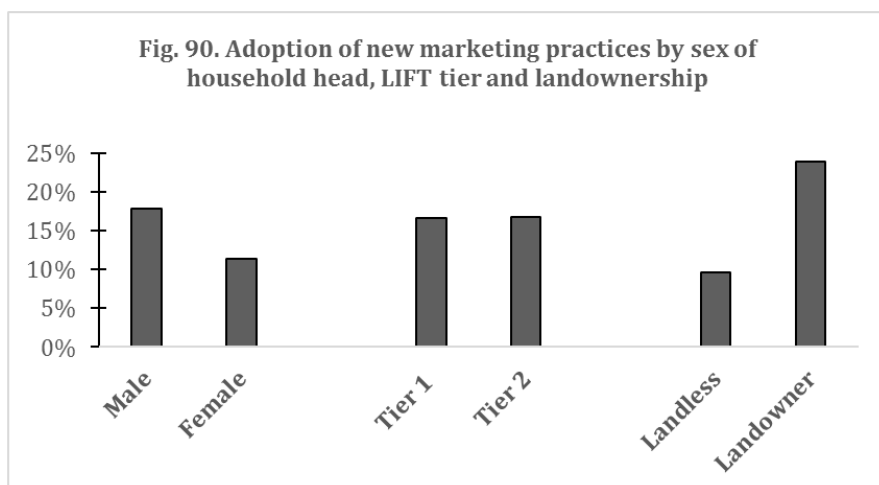
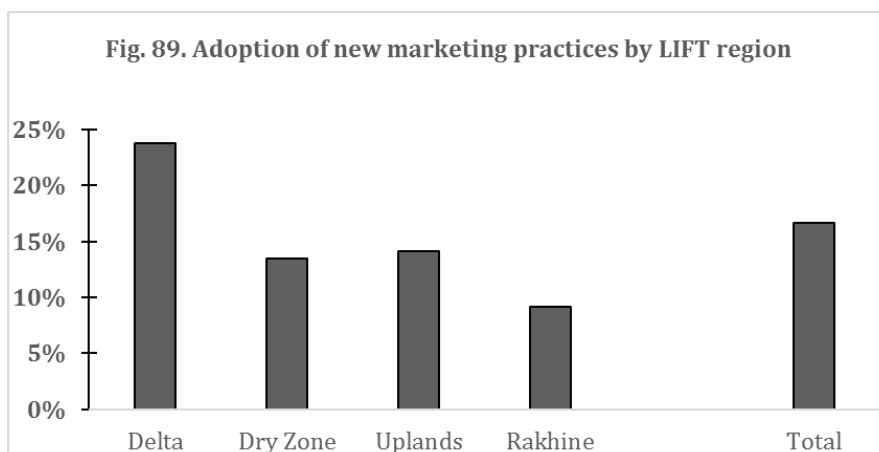


As such producer groups seem to be practically non-existent in LIFT villages in 2017, which corresponds with the lack of specific project activities to support such groups between 2015-2018.

A total of 17 per cent of households in LIFT-supported villages said they had adopted new marketing practices in the 12 months prior to the 2017 survey. The share of households doing so was largest in the Delta where almost a quarter of households did so. In the Dry Zone and the Uplands, the proportion was 13 and 14 per cent respectively, and finally in Rakhine just 9 per cent changed their marketing practices (Fig. 89).

Fig. 90 shows there was no difference between LIFT *Tiers 1* and 2, but that male-headed households were substantially more likely to change their marketing practices than were female-headed households. While 18 per cent of male-headed households did so, this was true for just 11 per cent of female-headed households. Finally, landowners were far more likely than landless to adopt new marketing, with 24 per cent of landowners doing, compared to 10 per cent of landless.

Looking at the panel survey of households responding in both 2015 and 2017, we see that those who received development assistance in 2017 were more likely to adopt new marketing in both 2015 and 2017 than were households who received no such assistance (Fig. 91).



For both groups, the share of households adopting new practices decreased slightly, from 23 per cent in 2015 to 20 per cent in 2017 for those who received support, and from 18 to 12 per cent for those who had no support as shown in Table 11a. Thus, the decrease was slightly larger for households that were not supported, leaving a net effect for households who received support of just over three

percentage points. The margin of error is high however, and results are not statistically significant, so results should be interpreted with a high degree of caution.

Table 11a. Adoption of new marketing practices by whether received development assistance

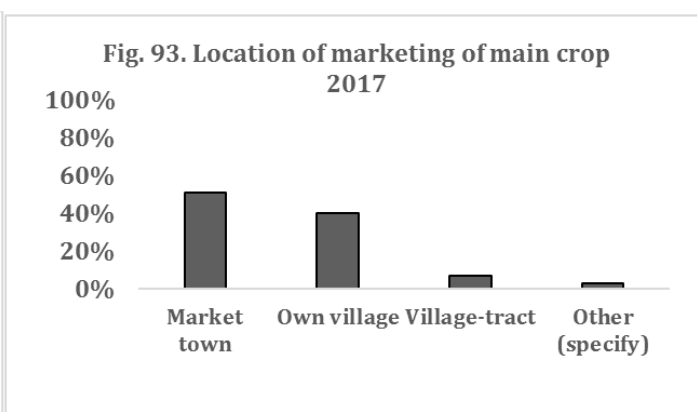
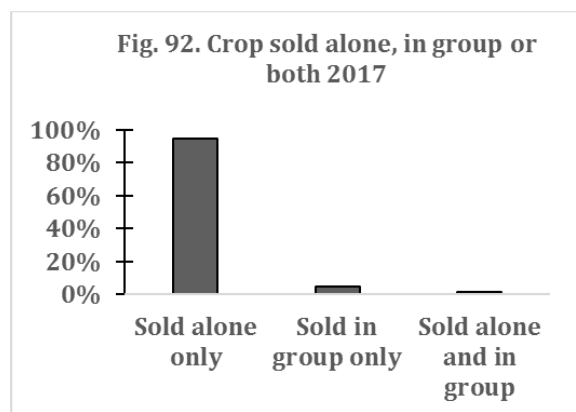
	Support	No support	Difference
2015	22.7%	17.9%	4.7%
2017	20.3%	12.2%	8.1%
Change	-2.4%	-5.7%	3.3%

Table 11b. T-test: Probability that difference in differences is $\neq 0$

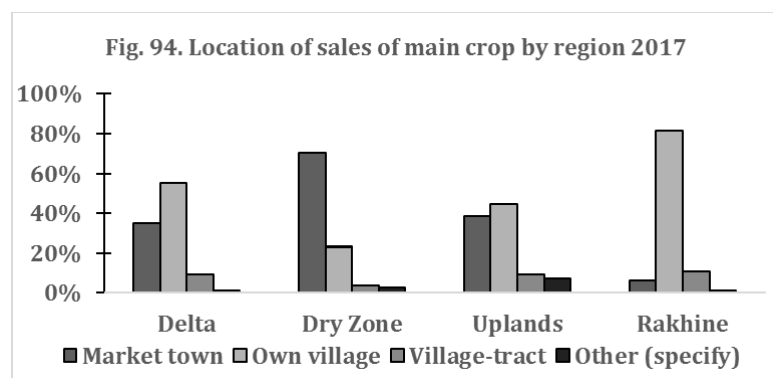
	Mean	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]
Adopt marketing	(1)	0,0332966	0,0279024	1,19	0,235	0,088415

3.7.4 Taking goods to market

Households in LIFT-supported villages were most likely to market their produce on their own. Almost 95 per cent of households did so in 2017 with just under 5 per cent saying they sold their produce in groups. Less than 1 per cent said they did both (Fig. 92). The majority of households said they sold their main crop in the nearest market town, which was the primary market location for just over half of households in 2017. Another 40 per cent however, said they mainly sold their produce within their own village and 7 per cent sold mainly within in the village tract (Fig. 93).



The location of marketing varied by region, most likely driven by ease of access to nearest market town. As shown in Fig. 94, households in Rakhine almost exclusively sold within their own village,

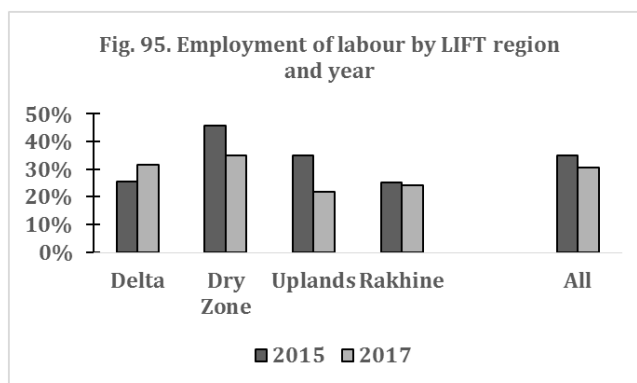


whereas the vast majority of households in the Dry Zone did their marketing in the nearest market town. Finally, villages in the Delta and the Uplands were somewhat more equally split between marketing in own village and the nearest market town.

3.7.5 Employment of farm labour

Around one-third of households in LIFT-supported villages reported hiring labour (Fig. 95). Thirty-five per cent did so in 2015 and 31 per cent in 2017, a decrease driven partly by a reduction from 46 to 35 per cent in the Dry Zone, which despite the reduction, was the region with the highest proportion of households hiring labour in both years. The Uplands also saw a decrease in employment from 35 to 22 per cent, whereas the Delta saw a smaller increase from 26 to 31 per cent. Employment of farm labour remained practically constant in Rakhine at 25 per cent.

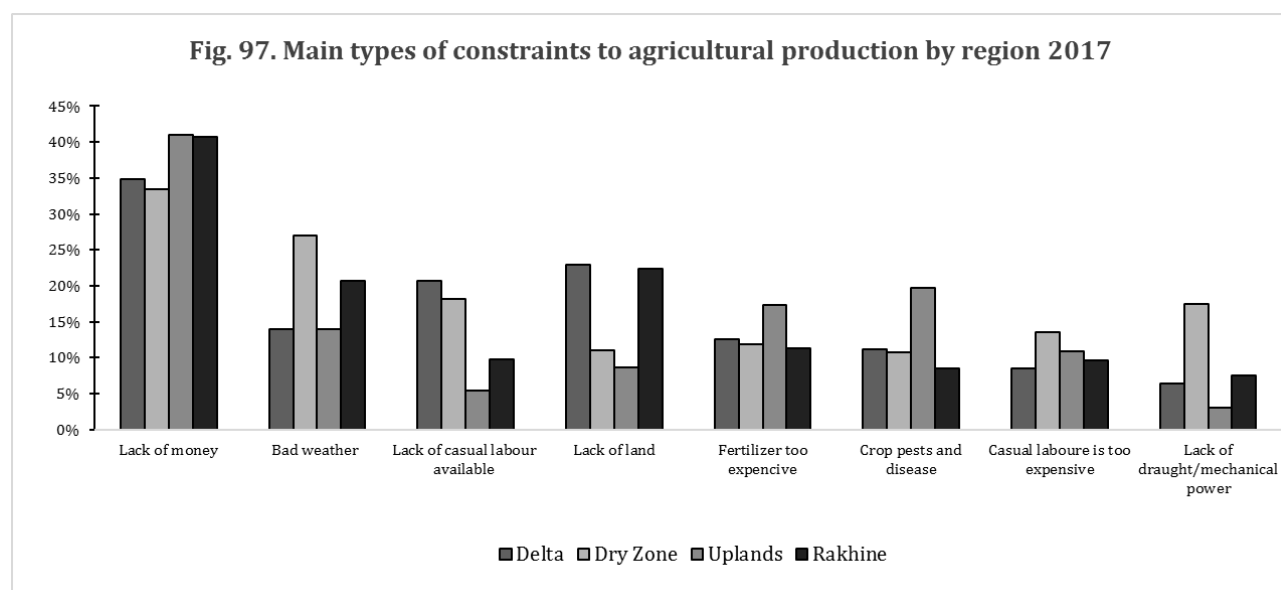
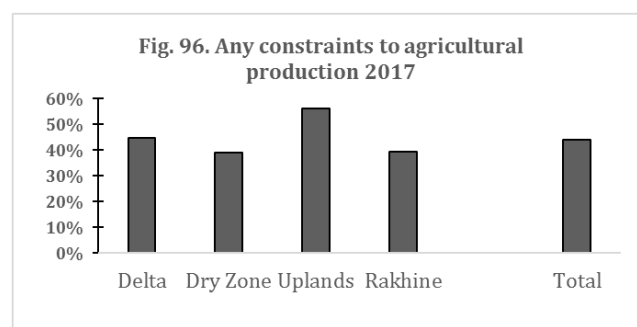
One explanation for the overall decrease in farm labour may be an increase in mechanisation. Farmers participating in FDGs reported observing increased investments in harvesting machines and tractors, and as a consequence reduced need for employment of farm labour.



3.7.6 Constraints to crop production

Close to half of households in 2017 reported experiencing some kind of constraint to agricultural production as shown in Fig. 96. The proportion was highest in the Uplands where 56 per cent said they experienced constraints, followed by the Delta with 45 per cent and finally the Dry Zone and Rakhine with 39 per cent of households.

The eight main types of constraints reported in 2017 were lack of money, bad or unreliable weather, lack of labour, lack of land, expensive fertiliser, pests and diseases, expensive casual labour and lack of draught or mechanical power (Fig. 97).



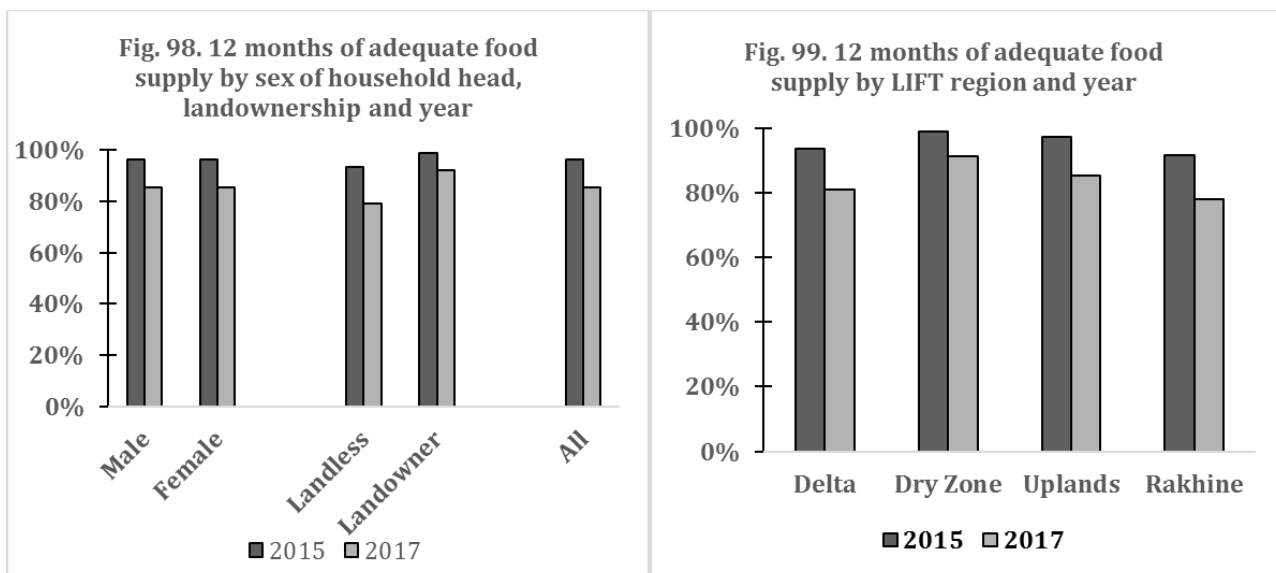
Lack of money was the most common constraint in all LIFT regions, with 41 per cent of households in the Uplands and Rakhine listing this as a constraint as compared to 33 per cent in the Dry Zone and 35 per cent in the Delta. Bad or unreliable weather was particularly challenging for households in the Dry Zone where 27 per cent said this constituted a constraint to successful crop production.

Lack of casual labour was particularly an issue in the Delta and the Dry Zone where 21 and 18 per cent respectively mentioned this. Lack of land was an issue for 23 per cent of households in the Delta and Rakhine. Crop pests and diseases were most prevalent in the Uplands where 20 per cent said it was a constraint to their production as compared with 8 to 11 per cent in the other regions.

3.8 Household diets and food security

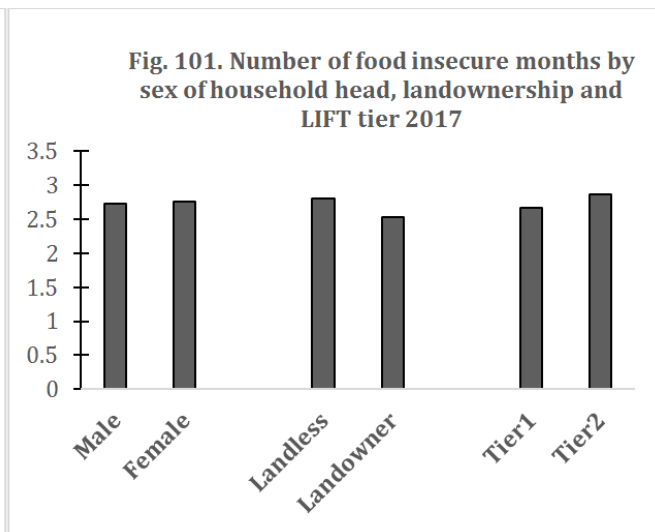
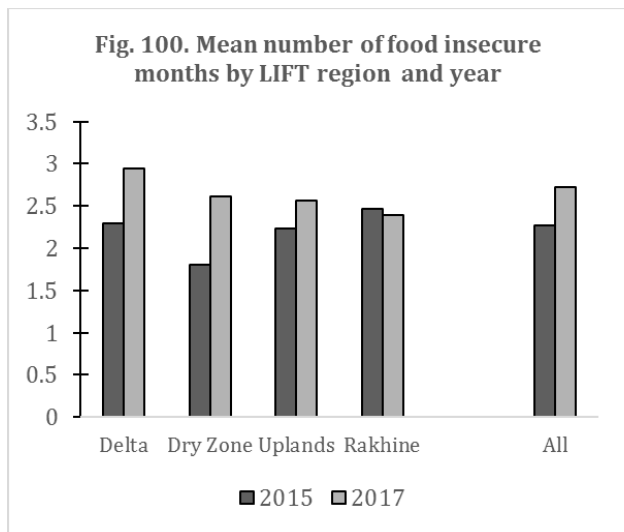
3.8.1 Food Security overview

A total of 85 per cent of households in LIFT-supported villages said they had experienced 12 months of adequate food in the last year, a reduction of 11 percentage points from 2015 where a full 96 per cent said they had had sufficient food in all months of the past year. As shown in Fig. 98, the reduction is seen for male- as well as female-headed households, and for landless and landowners alike. However, the decrease appears to be largest for the landless for whom the proportion with 12 months of food decreased 14 percentage points from 93 per cent in 2015 to 79 in 2017, as opposed to landowners for whom the proportion decreased from 99 per cent to 92 per cent.



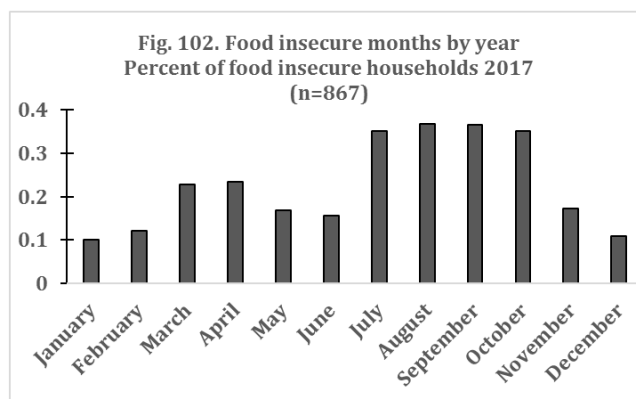
Food adequacy varied somewhat across regions with the lowest proportion of households with 12 months of adequate food supply found in Rakhine with 78 per cent, followed by the Delta with 81 per cent, the Uplands with 85 per cent and finally the Dry Zone, which, with 91 per cent had the largest proportion of households with adequate food for 12 months of the past year (Fig. 99).

Among households who did not have 12 months of food security, the average number of food insecure months was 2.7 with minor variation across groups, ranging from 2.4 months in Rakhine to 2.9 in the Delta, and from 2.5 months among landowners to 2.8 months among the landless. Differences between LIFT tiers and male- and female-headed households were very minor (Fig. 101).

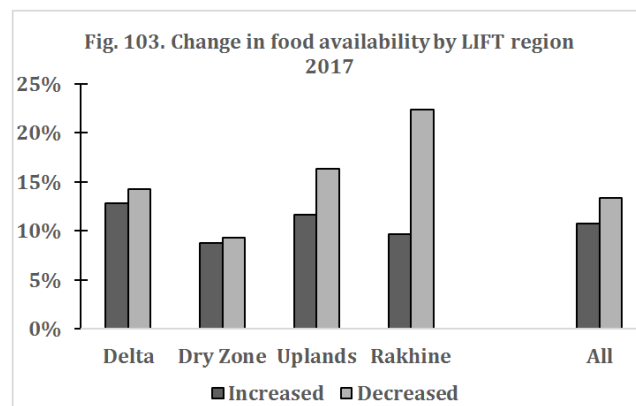


As shown in Fig. 100, the mean number of food insecure months increased between 2015 and 2017 with the largest increase taking place in the Delta, followed by the Dry Zone. Changes in the Uplands and Rakhine were minor.

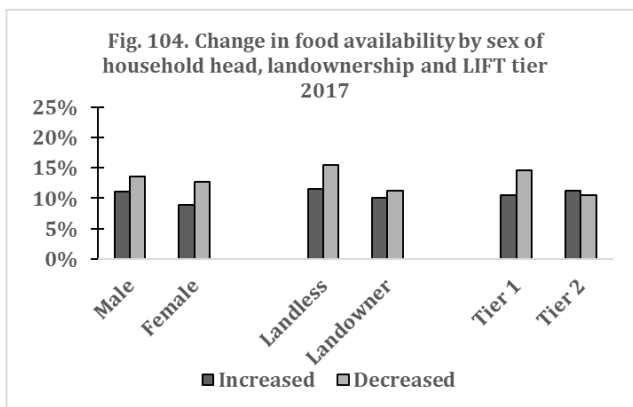
July-October were the months with the highest prevalence of food insecurity in both years with up to 37 per cent of food insecure households in 2017 suffering from a lack of food during these months. This was followed by March and April when 23 per cent of those who experienced food insecurity felt challenged. December and January were the time of year with the highest level of food adequacy as illustrated in Fig. 102.



In addition to providing information on food insecure months, survey participants also were asked how they perceived the general change in food availability over the last year – whether availability increased, stayed the same or decreased. In 2017, the majority of households said the situation had stayed the same, with just over 10 per cent saying food availability had increased and 13 per cent saying it had decreased (Fig. 103).



The greatest proportion reporting a decrease was in Rakhine, where 22 per cent did so, substantially more than the proportion saying it had increased, which was just under 10 per cent. In the Uplands 16 per cent reported a decrease whilst 12 per cent reported an increase. The lowest level of change was in the Dry Zone where 9 per cent reported an increase and a decrease respectively.



According to qualitative interviews a central reason for the steep decline in food availability in Rakhine was a lack of fish as a result of bad weather in the last two years resulting in deteriorating fishing conditions, lost and damaged nets and boats, and in turn less work availability.

Fig. 104 shows that households in LIFT’s *Tier 1* were slightly more likely to report a decrease than households in *Tier 2*. Similarly, landless were more likely to report a decrease than were landowners. There was no notable difference between male- and female-headed households.

3.8.2 Coping with food insecurity

Qualitative interviews suggest that food insecurity was at least in part caused by income instability, particularly during summer when work opportunities were low. However, FGD participants said that insecurity did not usually lead to a reduction in actual food intake because village shops were increasingly offering to purchase on credit, an option reportedly used by many households. In the Dry Zone, it was reported that purchasing rice on credit allowed households to buy rice in bulk and repay over time to the shop owner. Buying on credit was particularly useful pre-harvest during which time incomes were reported lowest for most farming households. In Rakhine, another option mentioned was to pawn gold to cover food costs when incomes were low.

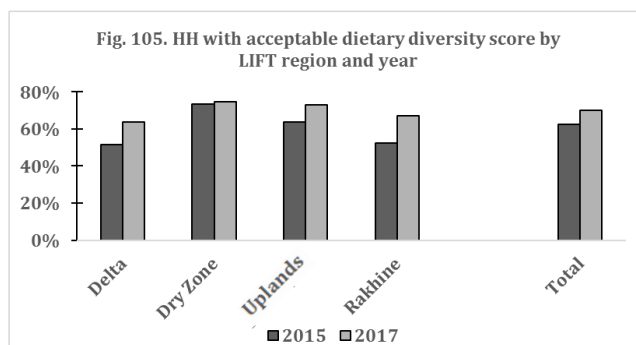
“We bought food on credit from the shops and paid back when we had income.” — Poor male, Rakhine.

“We don’t have to reduce our consumption. We eat what we normally eat. Sometimes, if we don’t have any income then we just go to the shop and buy it with credit. We are used to buying with credit.” — Poor male, Uplands.

In other cases, food was reportedly shared and borrowed from neighbours to cope during periods of lower food availability. Both these coping mechanisms rely on the unity of the village and trust, which is perhaps developed through social community groups active in the village.

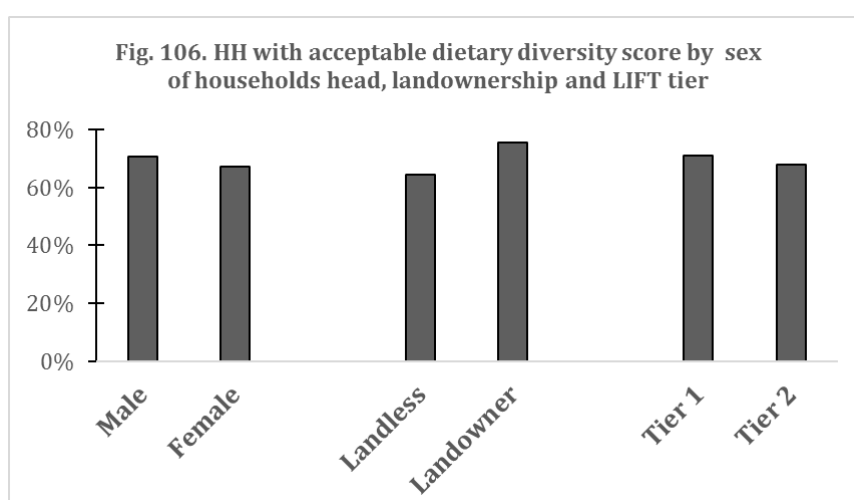
3.8.3 Household Dietary Diversity

The household survey collects detailed data on the types of foods eaten by household members during the day prior to the survey. These data are used to calculate the Household Dietary Diversity Score (HDDS) which is used as a measure of households' access to and utilisation of food²⁶ and which is used to set a definition of a locally appropriate acceptable dietary diversity score. In LIFT-supported villages the proportion of households with such an acceptable score grew from 62 per cent in 2015 to 70 per cent in 2017 as can be seen in Fig. 105.



Landowners were noticeably more likely than landless to meet the acceptable dietary diversity score with 76 per cent of landowners doing so and just 64 per cent of landless. Differences between LIFT's *Tiers 1* and 2 were small with the proportion just a few percentage points higher in *Tier 1* and for male-headed households (Fig. 106).

Examination of the panel data shows that households that received development assistance and households that did not were practically equally likely to meet the acceptable dietary score in 2015 (Fig. 107 and Table 12a).



The proportion of households with an acceptable score increased from 65 to 74 per cent for households who received support whereas it appeared to decrease slightly for households without support. Overall, households that received support were close to 12 per cent better off over time than those who received no support. This result is highly statistically significant (Table 12b).

²⁶ Technical overview can be found at: http://www.fantaproject.org/sites/default/files/resources/HDDS_v2_Sep06_0.pdf

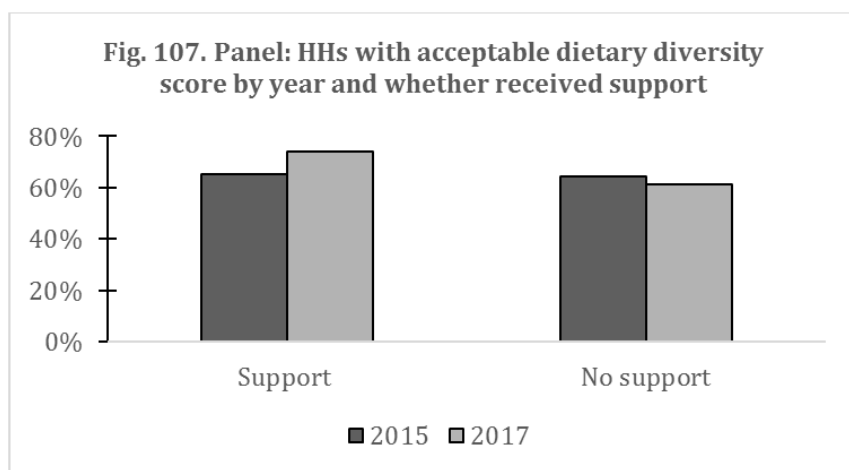


Table 12a. Panel: HHs with acceptable dietary diversity score by whether received development assistance

	Support	No support	Difference
2015	65.0%	64.3%	0.7%
2017	73.9%	61.4%	12.5%
Change	8.8%	-3.0%	11.8%

Table 12b. T-test: Probability that difference in differences is $\neq 0$

	Mean	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Household MAD	(1)	0.117982	0.031134	3.79	0.000	5.6%	0.1794845

3.9 Nutrition and anthropometrics

3.9.1 Stunting of children

Stunting is impaired growth and development resulting from poor nutrition and repeated infection during childhood. Being stunted, or too short for one's age, affects a child's risk of infection and mortality, cognitive function and motor development, and thus has direct implications for learning capacity and school performance, and a long-term effect on productivity, wages, and reproductive health.²⁷ Childhood stunting is thus seen as the best overall indicator of children's well-being, as well as a reflection of social inequalities.²⁸

Stunting is defined as a height that is more than two standard deviations below the World Health Organization (WHO) child growth standards median. To measure stunting, a child's height and age is recorded and used to measure the height-for-age Z-score (HAZ), which is a measure for how far the child is situated above or below the mean of a normal population as defined by WHO's growth reference. A HAZ below -2 standard deviations from the mean defines stunting, whereas a HAZ below -3 defines severe stunting.²⁹

²⁷ <https://www.who.int/nutrition/healthygrowthproj/en/index1.html> and https://www.who.int/nutrition/publications/globaltargets2025_policybrief_stunting/en/

²⁸ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5084763/>

²⁹ See e.g. <http://www.who.int/nutgrowthdb/about/introduction/en/index2.html> for further information on the WHO growth reference.

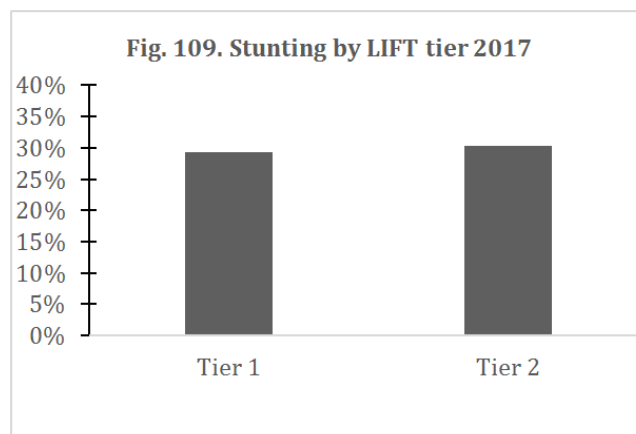
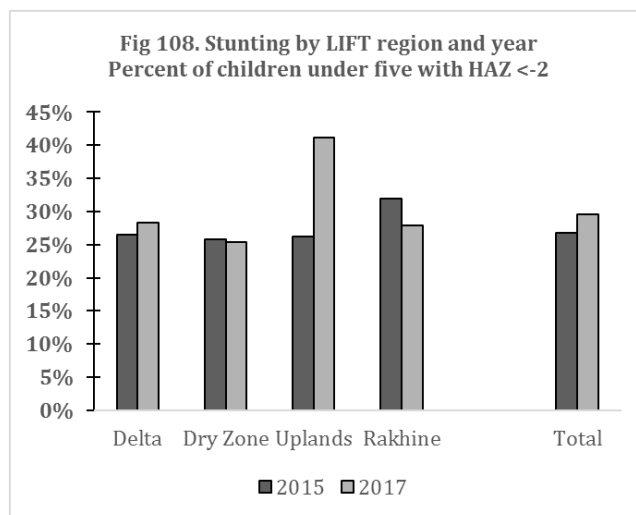
As described elsewhere, the reported statistics reflect the situation in LIFT’s programme areas in 2015 and 2017, respectively. The observed difference in the reported 2015 and 2017 stunting rates therefore reflect not only a development within the areas surveyed in both years, but also a geographical expansion of LIFT-supported programmes.

Stunting in children under the age of five in LIFT-supported villages in new programme areas was 26.8 per cent in 2015³⁰ and 29.6 per cent in 2017,³¹ as shown in Fig. 108. The higher number in 2017 reflects an expansion of LIFT programmes into areas with a high prevalence of malnutrition, particularly in Chin State. More specifically, the 2017 sample in the Uplands region includes a greater number of high malnutrition villages from Chin and northern Kayin State.³² As such, whereas the under-five stunting rate in the Uplands was 26 per cent in the areas surveyed in 2015, it was 41 per cent in the areas surveyed in 2017.

In the Delta, the Dry Zone and Rakhine there was no statistically significant change in the stunting prevalence between the two years. The observed rate in LIFT-supported areas of the Delta and Rakhine was 28 per cent in 2017 whereas the Dry Zone had the lowest regional stunting prevalence of stunting with 25 per cent.

There was a small and insignificant difference between LIFT’s *Tiers 1* and *2* with 29 per cent stunted in *Tier 1* and 30 per cent in *Tier 2* (Fig. 109).

LIFT’s forthcoming in-depth nutrition study will explore nutrition indicators and child malnutrition more closely, including wasting, an indicator of acute child malnutrition.



³⁰ 95% confidence interval in 2015: [25.7- 29.3]

³¹ 95% confidence interval in 2017: [28- 31.2] Overall change statistically significant at 5 percent (p-value<0.05)

³² A number of villages in the Uplands were no longer LIFT supported in 2017 and were replaced with newly sampled villages in 2017 which may also affect the observed changes.

3.9.2 Exclusive breastfeeding

Exclusive breastfeeding is recommended by WHO until an infant turns six months. Using surveys, it is measured by asking whether the child is breastfed, and whether the child received any other solids or liquids in the 24 hours prior to the survey.

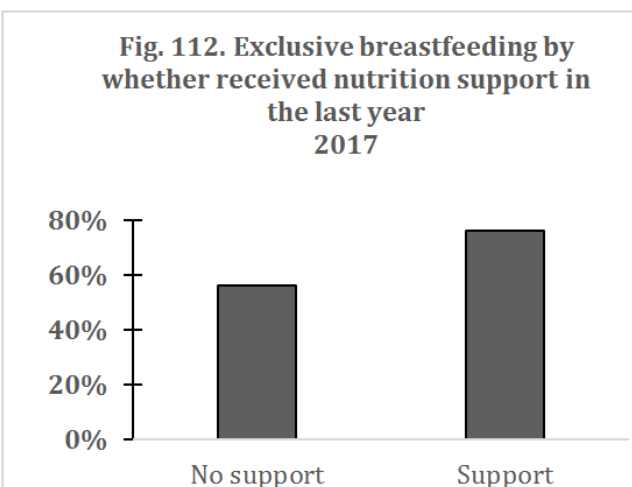
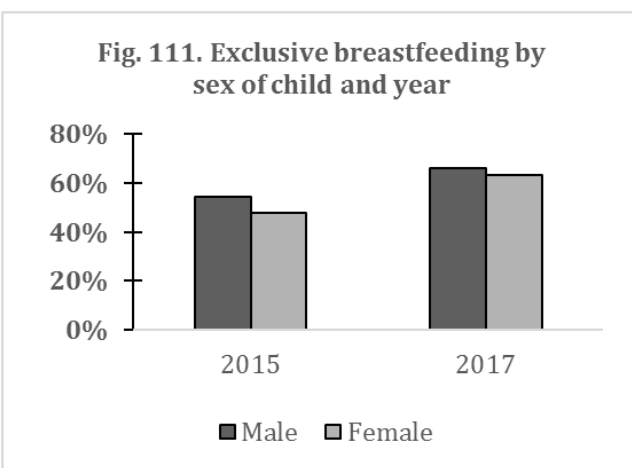
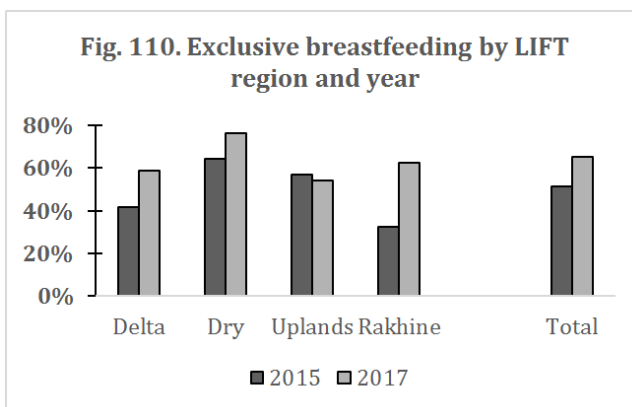
Exclusive breastfeeding increased from 51 per cent of children in 2015 to 65 percent in 2017 as illustrated in Fig. 110.³³

Because the total number of children under six months of age was only 406 in 2015 and 615 in 2017, subgroup analysis of the indicator is not representative of the full population of children under six months of age, and as such should be viewed as suggestive only.

With the caveat of a small sample size, the increase in exclusive breastfeeding between years was particularly visible in Rakhine where the proportion almost doubled, from 32 per cent in 2015 to 63 per cent in 2017. In comparison, the Delta saw an increase of 17 percentage points from 41 to 58 per cent of children, while the Dry Zone, which had the highest proportion of exclusively breastfed children in both years, saw an increase from 64 to 76 per cent as shown in Fig. 110. The Uplands saw a small but non-significant decrease from 57 to 54 per cent and had the lowest level of exclusive breastfeeding in 2017.

The data do not show significant differences in exclusive breastfeeding of boys and girls. Although Fig. 111 appear to indicate that girls were less likely to be exclusively breastfed particularly in 2015 the margin of error is large due to the limited sample size, and thus should be interpreted with caution.

A more substantial difference was seen between households that received nutrition-related development assistance and those that did not in 2017. Women in the former group were substantially more likely to exclusively



³³ Note that these numbers include both tier 1 and tier 2 and therefore differ slightly from the numbers presented in LIFT's 2017 Annual Report, which include tier 1, core programme areas, only.

breastfeed their infants under six months of age than were women in households who received no such support (Fig. 112). Whereas the coverage was 56 per cent for households with no support, it was a whole twenty percentage points higher, 76 per cent, for those who received support in the last year.

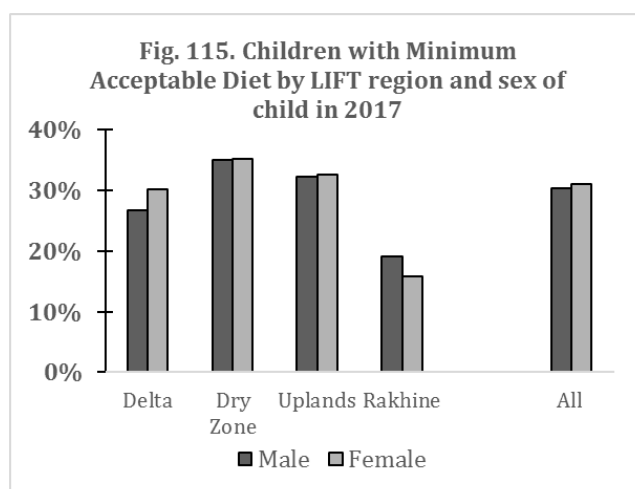
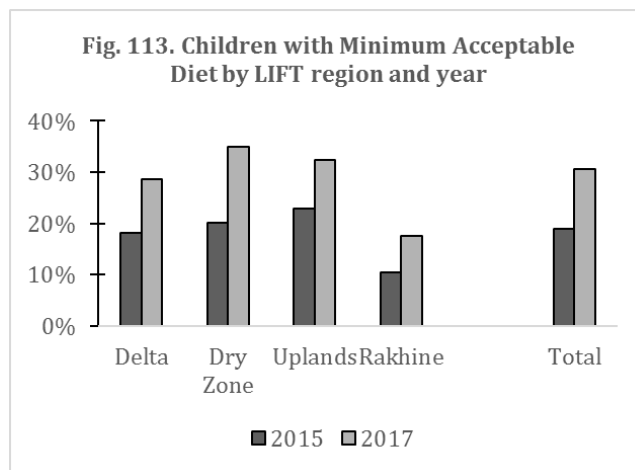
3.9.3 Child minimum acceptable diet

The household survey collects data on feeding practices, which enables the measurement of children 6-23 months of age who receive a minimum acceptable diet (MAD) score. The indicator considers both feeding frequency and dietary diversity. Children meeting the minimum feeding frequency and minimum dietary diversity for their age group and breastfeeding status are considered as receiving a minimum acceptable diet.³⁴

The overall proportion of children with a minimum acceptable diet in LIFT-supported villages was 31 per cent in 2017, a substantial increase from just 19 per cent in 2015 (Fig. 113). Rakhine had a noticeably smaller proportion of children with a minimum acceptable diet in both years with under 11 per cent of children in 2015 and 19 per cent in 2017. The situation in other regions was substantially better, although still relatively low in the Delta with 29 per cent, the Uplands with 32 per cent and finally the Dry Zone with 35 per cent.

There was little difference between LIFT tiers (Fig. 114). The proportion of children in *Tier 1* with an acceptable diet was 31 per cent compared to 29 per cent of children in *Tier 2*, but the difference was not statistically significant.

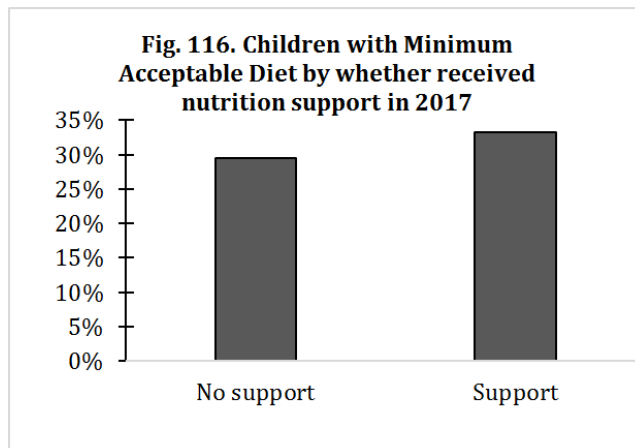
There was an equally small and insignificant difference between the proportion of children with a minimum acceptable diet in male- and female-headed households with 34 per cent of children in female-headed household meeting the threshold compared to 31 per cent of male-headed households (Fig. 114).



³⁴ http://www.who.int/maternal_child_adolescent/documents/9789241596664/en/

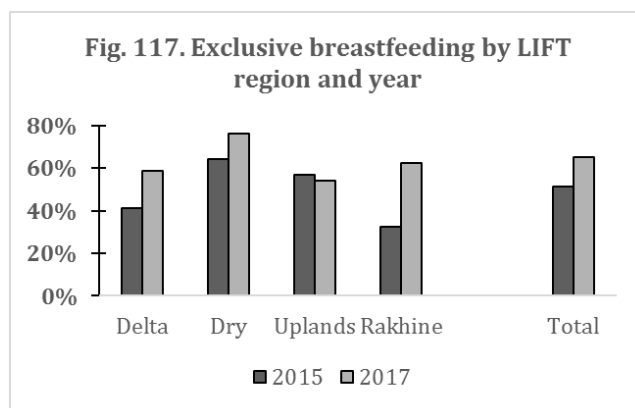
There also did not appear to be any dietary gender bias with boys and girls equally likely to receive a minimum acceptable diet in 2017. Minor but once again insignificant differences between the sexes were observed in the Delta and Rakhine, as shown in Fig. 115.

Fig. 116 shows that the likelihood of children having a minimum acceptable diet differs very little between households that reported receiving nutrition-related support and those that did not in 2017. There is no panel data available for child nutrition.

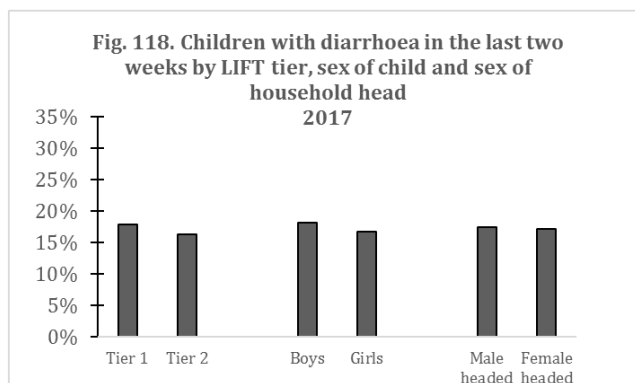


3.9.4 Children with diarrhoea

The household nutrition survey collects data on whether children under the age of five have suffered from diarrhoea in the two weeks preceding the survey. A total of 17 per cent of children under five in LIFT-supported villages did so in both 2015 and 2017 as shown in Fig. 117. The highest incidence of child diarrhoea was found in Rakhine where almost a third of children had experienced three or more loose stools within 24 hours in the last two weeks. This was a very minor increase of three percentage points since 2015. Rates in other LIFT regions remained constant between 2015 and 2017 and were highest in the Uplands with 22 per cent, followed by the Delta with 17 per cent and the Dry Zone with 12 per cent.



There was no significant difference between LIFT tiers with an 18 per cent prevalence in *Tier 1* and 16 per cent in *Tier 2*. Similarly, children in male- and female headed households were equally likely – within a percentage point difference – to suffer from diarrhoea, as were boys and girls as shown in Fig. 118.



3.9.5 Women’s nutritional status

Women’s nutritional status is measured through two indicators.

First, the Minimum Dietary Diversity for Women (MDD-W) indicator, a dichotomous indicator of whether or not women 15-49 years of age consumed at least five out of 10 defined food groups the day or night prior to the survey. The proportion of women 15–49 years of age who reach this

minimum in a population can be used as a proxy indicator for higher micronutrient adequacy, one important dimension of diet quality.³⁵

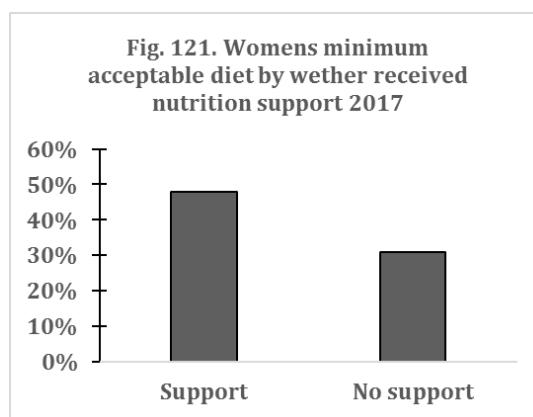
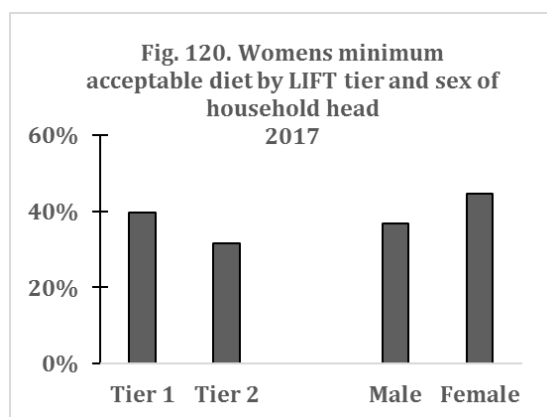
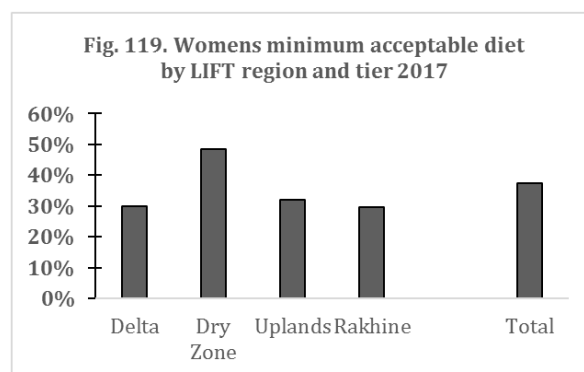
Second, mid-upper arm circumference (MUAC), an anthropometric measurement that has traditionally been used for measuring underweight in children, and is increasingly used as an indicator of underweight and by extension nutritional status for adults.³⁶ There is no universally agreed upon cut off value for defining who is underweight using MUAC, however, cut offs of <210mm for moderate and 210≥230mm for severe undernourishment have been used in recent work on nutrition programs and surveys in Rakhine³⁷ and will be adopted for the purposes of the LIFT Household Survey 2017 report.

Data for both indicators are collected in LIFT’s household nutrition survey, and only includes women with children under the age of five.

Women’s dietary diversity

The mean proportion of women meeting the minimum dietary diversity in 2017 was 37 per cent across LIFT-supported villages as shown in Fig. 119. Women in the Dry Zone were more likely to meet the minimum dietary diversity than were women in other LIFT regions with close to half of women in the Dry Zone doing so, compared to 32 per cent in the Uplands, and 30 per cent in the Delta and Rakhine.

Women in LIFT’s *Tier 2* were noticeably less likely to meet the minimum dietary diversity with just 31 per cent doing so as compared to 40 per cent of women in *Tier 1* (Fig. 120). Women in female-headed households were also more likely to have better dietary diversity than were women in male-headed households. Whereas 37 per cent of women in households headed by men met the minimum dietary diversity, this was true for 45 per cent of women in female-headed households.



³⁵ <https://www.fantaproject.org/monitoring-and-evaluation/minimum-dietary-diversity-women-indicator-mddw>

³⁶ <https://www.fantaproject.org/sites/default/files/resources/Global-MUAC-Cutoffs-nonPregnant-Adults-Jun2017.pdf>

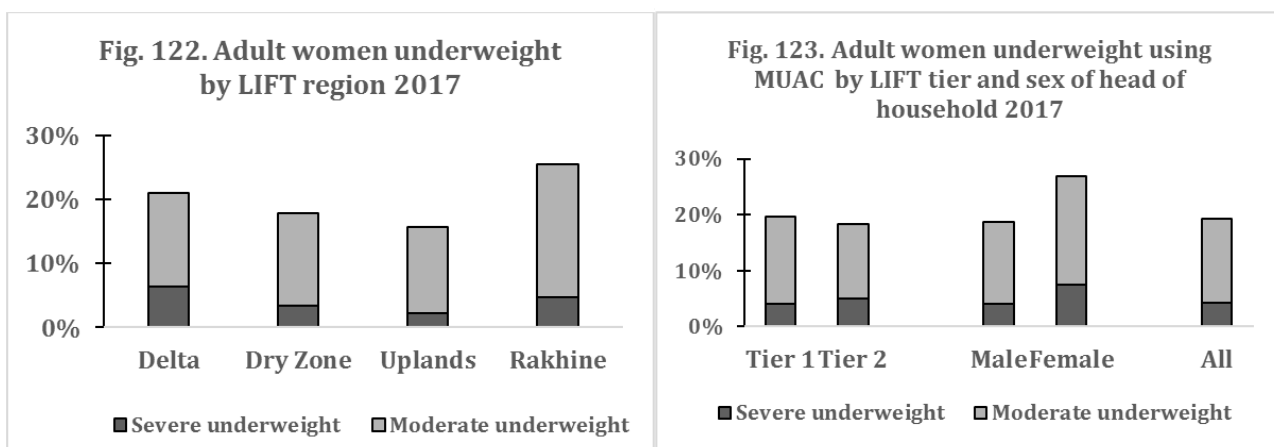
³⁷ Reference to two AFC SMART surveys/Rakhine.

Finally, although no data on this indicator is available for 2015, Fig. 121 shows that nearly half of women who reported having received nutrition-related assistance in 2017 met the minimum dietary diversity and thus were substantially more likely to do than were women who did not receive such support. Just 30 per cent of those who did not receive support had an adequate diet as defined by the minimum dietary diversity indicator.

Women’s underweight

Overall, MUAC measurements reveal a prevalence of underweight of 19 per cent among adult women with children under the age of five. Of these, 14 per cent were moderately underweight and 5 per cent severely underweight as shown in Fig. 122. The overall proportion of underweight among this population of women was highest in Rakhine with 26 per cent underweight, of which 21 per cent were moderately underweight and 5 per cent severely underweight. This was followed by the Delta where 21 per cent were underweight, with 15 per cent moderately so and 5 per cent severely so. The Uplands had the lowest prevalence with 15 per cent underweight overall, of which just 2 per cent were severely underweight.

Tier 1 had a slightly higher proportion of underweight women with 20 per cent vs. 16 per cent in *Tier 2* (Fig. 123). The proportion of underweight amongst female-headed households was substantially higher than in male-headed households with 25 per cent of women in female-headed households underweight, of which 7 per cent were severely underweight, as compared to 19 per cent in male-headed households, of which 4 per cent were severely underweight.



3.10 Water and sanitation

The household survey collects data on sanitation facility, water sources and treatment of drinking water. This allows for reporting on the share of households using an improved sanitation facility and a protected water source.

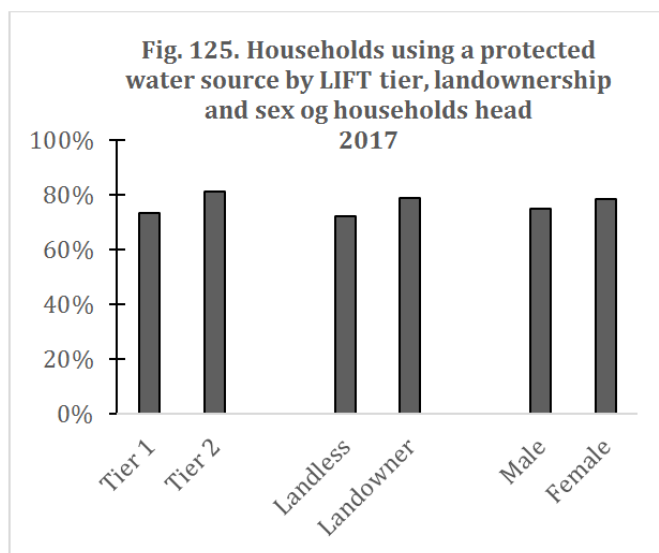
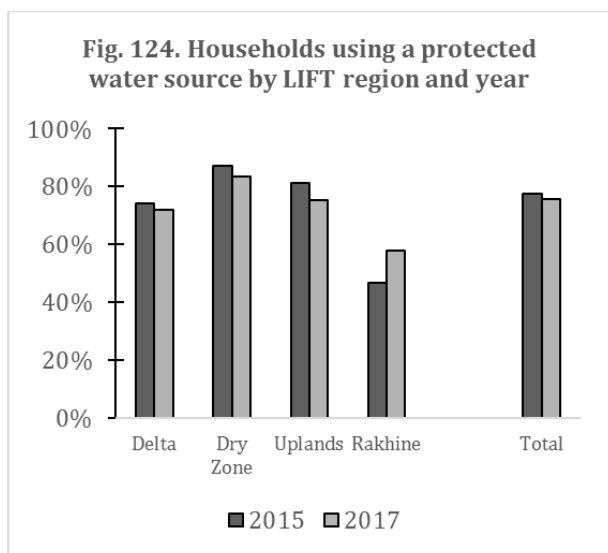
3.10.1 Protected water sources

A protected water source includes piped water into dwelling, yard or plot, public taps or

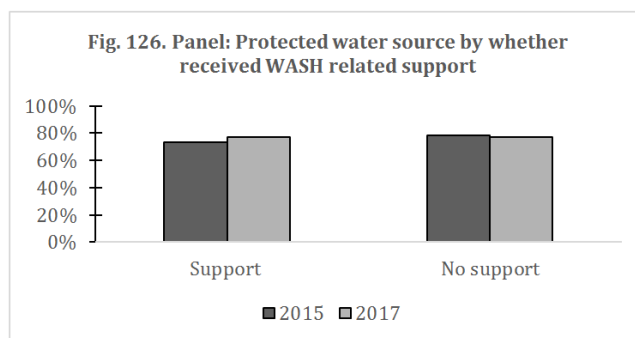
standpipes, boreholes or tube wells, protected dug wells, protected springs and rainwater, and protected ponds.³⁸

A total of 76 per cent of households were using a protected water source in 2017 as shown in Fig. 124. The highest proportion of households doing so were found in the Dry Zone with 83 per cent and the lowest proportion was in Rakhine where just 58 per cent used a protected water source. Change over time was insignificant overall, but there were noticeable changes in the Uplands which saw a six percentage point reduction and in Rakhine, which saw an increase by 11 percentage points, when compared to 2015.

Usage of protected water sources was higher in LIFT *Tier 2* with 81 per cent, than in *Tier 1* where 74 per cent obtained their water from a protected source. Landowners were somewhat more likely to have access to a protected water source than were landless with this being the case for 79 per cent of landowners and 72 per cent of landless. The difference between male- and female-headed households on the other hand was negligible with 78 per cent of female-headed households and 75 per cent of male-headed households using a protected source as shown in Fig. 125.



Looking only at the panel data in Fig. 126, we see that, as would be expected, households that received WASH-related development assistance in 2017 were more likely to have benefited from an improved water source in 2015, than were households who received no support, although only by a small margin – 73 per cent of households who received no support in 2017 used a protected water source in 2015, and 77 per cent did so in 2017. In contrast, 78 per cent of those who received no support used a protected source in 2015, and



³⁸ Protected ponds is not included in the definition used by the broader international community and as defined in SDG 6, but it is included in the definition used by LIFT since protecting ponds is a major LIFT intervention, particularly in the Dry Zone.

experienced a 1 per cent decrease, which considering statistical uncertainty can be viewed as no significant change. The net change for those who received support was therefore roughly 5 per cent as shown in Table 13a.

Table 13a. Panel: Protected water source by whether received WASH support

	Support	No support	Difference
2015	73.0%	78.1%	-5.1%
2017	77.0%	77.0%	0.0%
Change	4.0%	-1.1%	5.1%

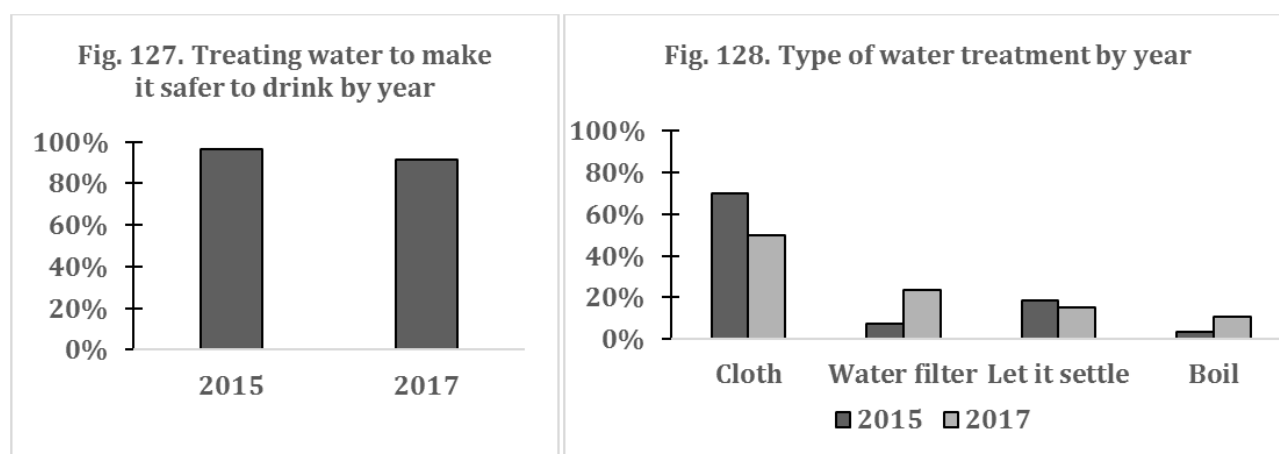
Table 13b. T-test: Probability that difference in differences is $\neq 0$

	Mean	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Improved sanitation	(1)	0,0824521	0,0205803	4,01	0	0,0417981	0,1231062

Participants in focus group discussions supported this finding by reporting that, at least in LIFT villages, the number of ponds had increased recently with help from donors. In the Dry Zone, the majority of participants described that water supply in the village had been adequate since the introduction of new wells and piped water. Furthermore, although water shortages continue to be prevalent in the Delta, Upland and Rakhine during the hot season water shortages had eased where protected water sources such as new wells, pipes and pumps had been built in villages.

3.10.2 Treatment of drinking water

In addition to providing information on water sources, households were asked whether they treated their water to make it safer to drink. As shown in Fig. 127, 91 per cent of households in LIFT-supported villages reported doing so in 2017, which was a reduction from 97 per cent in 2015. The primary method used for treating drinking water however, was to strain it through a cloth, a method used by half of households in 2017, down from 70 per cent in 2015. The second most common approach in 2017 was a water filter (ceramic, sand, composite, etc.), which was used by 23 per cent in 2017, a substantial increase from 2015 when just 7 per cent said they used a water filter. This approach was followed by simply letting it stand and settle, which was used by 15 per cent in 2017 and 18 per cent in 2015. Finally, just a small proportion of households reported boiling their water – 11 per cent did so in 2017, up from just 4 per cent in 2015 (Fig. 128).



3.10.3 Improved sanitation

An improved sanitation facility as defined in SDG 6, includes flush or pour flush toilets to sewer systems, septic tanks or pit latrines, ventilated improved pit latrines, pit latrines with a slab, and composting toilets. Facilities should be hygienic and functional to categorise as improved sanitation.

In LIFT-supported villages, 82 per cent of households were using improved sanitation facilities in 2017, a minor increase from 78 per cent in 2015 (Fig. 129). Coverage was highest in the Uplands with a 95 per cent of households using improved sanitation. Usage in the Dry Zone and the Delta was similarly high at 89 and 83 per cent respectively, whereas Rakhine lags sharply behind. Just 32 per cent of households in Rakhine used improved sanitation facilities in 2017, and even less, 15 per cent, did so in 2015.

Differences by LIFT tier, landownership and sex of household head were very similar to the patterns observed for protected water source (Fig. 130). Improved sanitation facilities were more common in *Tier 2*, where 89 per cent used these as compared to 80 per cent in *Tier 1*. The usage was at 86 per cent for landowners and 78 per cent for landless. The difference between male- and female-headed households was only three percentage points.

Examination of the panel data and households receiving WASH support in Fig. 131, shows that, as for protected water source, households who received support in 2017 were less likely to use an improved facility at the 2015 baseline, than were households who received no support. In 2017, the usage rate had increased from 69 to 78 per cent for those who received support, whereas

there had been no change for households who received no support. These remained stable at 82 per cent. Thus, although the absolute coverage was lower amongst households who received support, the net gain from getting support was eight percentage points as shown in Table 14a.

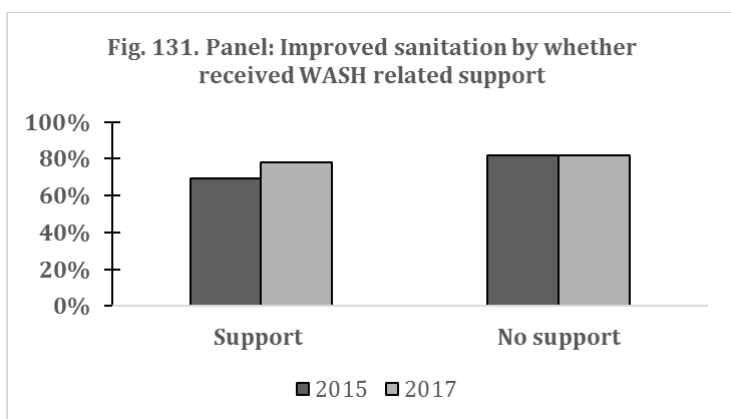
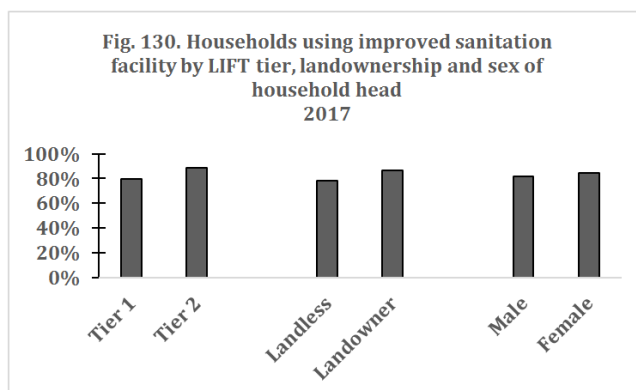
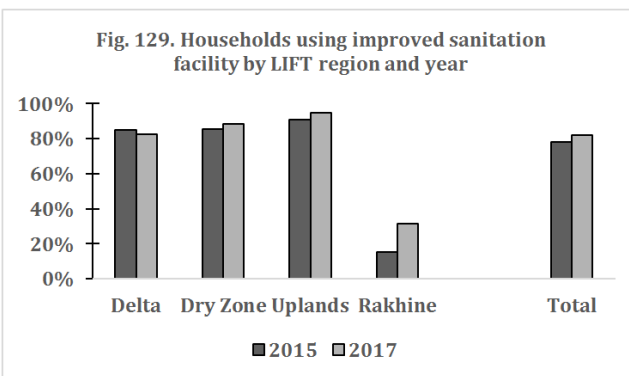


Table 14a: Panel: Improved sanitation by whether received WASH support

	Support	No support	Difference
2015	69.2%	81.7%	-12.4%
2017	77.8%	81.9%	-4.2%
Change	8.5%	0.3%	8.2%

Table 14b. T-test: Probability that difference in differences is ≠ 0

	Mean	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Protected water	(1)	0,0511439	0,0318683	1,6	0,111	-0,0118084	0,1140961

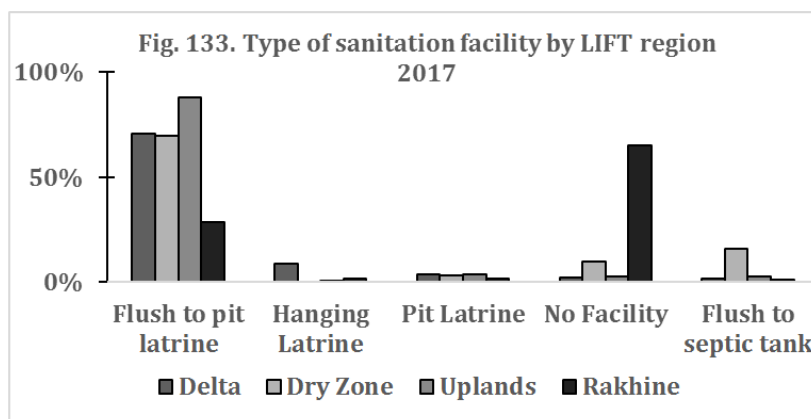
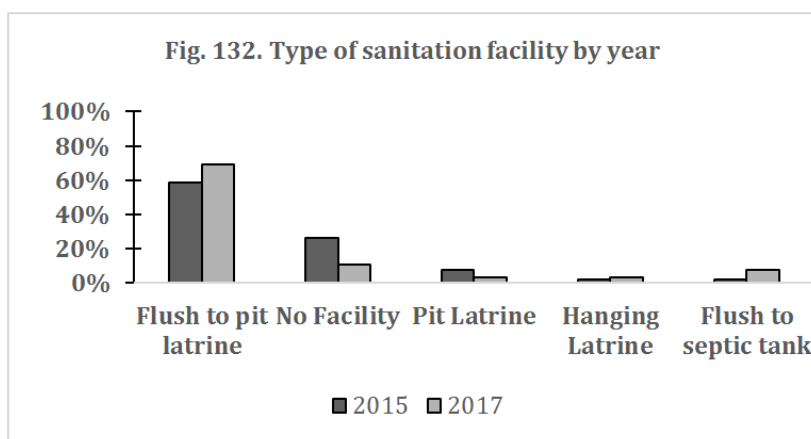
Qualitative interviews confirm that promotion of health in villages is important in changing habits. Villagers report learning about fly proof toilets and the health benefits from organisations and neighbours. This presents opportunities for increased impact from training through knowledge transfer and copying among households within villages and potentially between villages.

3.10.4 Sanitation facility

Examination of types of toilet facility used, shows that flush to pit latrine was the most common facility in both 2015 and 2017 with 69 per cent using this type of facility in 2017.

The second most common ‘facility’ was in fact no facility at all such as a bush or field. In 2015, 26 per cent said they used no facility, where the rate had reduced substantially to 11 per cent in 2017. Other sources were uncommon as shown in Fig. 132.

Finally, looking at facilities by region, the most striking observation is that households in Rakhine were vastly more likely to have no facility than were households in the other regions with 65 per cent of households in the region having, or using, no facility at all (Fig. 133).



4. Conclusion

4.1 The LIFT Household Survey 2017 report

The LIFT Household Survey is an ambitious exercise that collects a rich set of household data. These data provide a broad overview of the food security, livelihoods, and health situation in LIFT's programme areas and enables more in-depth exploration of many aspects of livelihoods.

As LIFT support has grown and as objectives have expanded, the size, scope and complexity of the survey has evolved to enable analysis by region and by LIFT tier, whilst the panel dimension of the survey allows for closer understanding of change over time and the drivers of change.

This report has provided insight into the lives and livelihoods of rural people in LIFT programme areas in 2015 and 2017, respectively, with any observed changes over time stemming partly from changes taking place within villages surveyed in both years, and partly from an expansion in the geographical coverage of LIFT programme areas. Analysis of panel data allowed for a partial decoupling of the two to explore programme effect, stopping short of drawing conclusions on attribution.

All of the results presented will be expanded upon through separate in-depth outcome studies which will examine changes to (1) incomes and assets, (2) vulnerability, and (3) health and nutrition.

4.2 Key findings

Overall Progress

Almost three-quarters of households in LIFT-supported villages received some kind of development assistance in the year leading up to the 2017 household survey, be it training, advice, material support or group membership.

Data on exposure to development assistance indicate that the majority of support in LIFT villages was provided by LIFT-supported NGOs. Although a minor share of support, primarily from government programmes, was not supported by LIFT, and although the source of support received by households could not always be identified, it is reasonably assumed that LIFT was responsible for providing the bulk of support received within LIFT-supported villages.

Overall, livelihoods improved on many fronts in LIFT-supported villages between 2015 and 2017. Real wages, asset ownership, and consumption expenditure, a proxy for living standards used when measuring poverty, increased, whilst poverty decreased. At the same time there were noteworthy improvements in nutritional outcomes such as household dietary diversity, minimum acceptable diets for children and exclusive breastfeeding.

The improvements were not universal however, as the share of households reporting a perceived increase in incomes in the last year decreased, and perceived food security decreased. As

households had increased access to credit however, this did not seem to affect nutritional outcomes.

In general, improvements over time were larger for households that received support in the year leading up to the 2017 survey, and where change was negative, such as for perceived increase in income, it was less so for households that received support. Although causal effects cannot be established, this pattern is visible across different aspects of livelihoods.

Village level developments

Overall, presence of services and infrastructure remained practically constant since 2015 except for a number of noticeable regional changes, which are likely due to the expansion of LIFT support into new areas, and the ensuing change in the area covered by the survey. In particular, measured access to grid electricity decreased substantially in the Uplands, and increased somewhat in Rakhine.

Village level wages increased in real terms for both male and female workers between 2015 and 2017, which appears to have been caused by scarcity of labour due to migration. Wages were particularly high in Rakhine, where migration is increasing and mechanisation is low. This is likely to be a trend which will continue, in turn increasing both need for, and interest in, mechanisation. Farmers reported that mechanisation, which LIFT is currently supporting through Yoma Bank, was already noticeable in several places and where it was present demand for casual labour had reduced.

The consequences of increased wages were higher production costs for farmers. The wage increases reportedly failed to translate into improved living conditions for casual labourers due to a simultaneous rise in commodity prices.

Whereas real wages increased over time for both male and female workers, female wages were substantially lower than male wages in both years. The difference between male and female wages was 25 per cent in 2015 and 26 per cent in 2017. As such, although wages have increased for both men and women in real terms, wage inequality has not changed significantly in either direction.

Development assistance

As expected, the data suggest that development assistance, much of which was provided by LIFT, increased between 2015 and 2017. Although no exact comparative data exist, 73 per cent reported receiving support in the year preceding the 2017 survey, whereas 69 per cent of household in 2015 reported receiving support in the *five* years preceding that survey, suggesting that a notable increase in support took place in the interim period.

Financial inclusion assistance was the most common type of support in 2017, received by 42 per cent of households in *Tier 1* and 49 per cent of households in *Tier 2*. This was followed by farm support, which was received by 26 per cent households in *Tier 1* and 19 per cent in *Tier 2*, and

WASH, received by 25 per cent of households in *Tier 1* and 17 per cent of households in *Tier 2*.

Overall, male-headed households were more likely to receive assistance than female-headed households in 2017. Seventy-five per cent of male-headed households received support, compared to 66 per cent of female-run households.

Regional differences in development assistance were also visible. Overall support was similar in the four regions, but different types of support varied between regions. Households in Rakhine were much more likely to have received nutrition or WASH support than those in other regions, whereas households in the Uplands were slightly more likely to have benefited from farm support, non-farm support and natural resource management than households elsewhere. Financial inclusion support was most prevalent in the Delta, as was community-based organisation support.

Income, assets, consumption and poverty

Households in LIFT-supported villages are highly dependent on farm income. Eighty per cent of households reported having some kind of farm income in 2017. There was large regional variation between incomes in 2017 with the highest household incomes the Delta with **average annual income** of MMK 3.6 million (USD 2,560) (median 2.04 million), followed by the Dry Zone, the Uplands and finally Rakhine where average incomes were just MMK 2.0 million (USD 1,480) (median 1.56 million).

Data on **perceived income change** show that incomes either increased or remained stable in the last 12 months for the majority of households. This was true for 73 per cent of households in 2015, and 67 per cent in 2017. The proportion of households reporting having increased their income since last year however, decreased noticeably between 2015 and 2017 whilst the proportion reporting a decrease grew, although by a smaller share.

For households surveyed in both 2015 and 2017 the proportion of households reporting an increase in incomes nearly halved over the two-year period, dropping from 34 per cent in 2015 to just 18 per cent in 2017. Meanwhile, the proportion reporting a decrease in income rose somewhat less, from 27 per cent in 2015 to 33 per cent in 2017.

Possible reasons for fewer households reporting perceived income increases include a rise in commodity prices, and increased labour costs for farmers. In Rakhine, income instability was associated with a drop in availability of fish, affecting core livelihoods of many people in the region. Other factors such as bad weather, including severe flooding in Rakhine, have added to income instability just as the Rakhine crisis may have affected job availability through a reduction in investment. Causes of perceived changes to incomes will be explored in detail in LIFT's forthcoming Income & Assets study.

Notably, households that received development assistance were slightly more likely to report an increase in incomes than were those who received no support. In addition, although the proportion of households who reported increased incomes dropped in 2017, the drop was lower for households that received support.

Although fewer households reported perceived income increases, **per capita daily consumption** which is used for measuring poverty, and often used as proxy for income, increased from MMK 1,478 in 2015 to MMK 1804 in 2017 in real terms, corresponding to a 22 per cent increase over the two-year period.³⁹ Food consumption made up just under 60 per cent of total consumption expenditure in both years indicating that although levels of consumption expenditure have increased, the share of food expenditure remains the same.

Overall **ownership of household assets** increased from 2015 to 2017. Ownership of several assets increased in the range of 10 to 20 per cent over the two years. This was the case for assets such as a cell phone, which was owned by 59 per cent of households in 2015 and by 79 per cent in 2017, making it the most commonly owned asset in 2017.

Although survey questions on specific asset ownership showed a clear overall increase, there was substantial regional variation when asked about their **perception of change**. In particular, the share of households in Rakhine reporting a decrease in 2017 was much larger than the share reporting an increase, and much larger than those who reported decreases in other regions. More than a quarter of households in Rakhine reported a decrease in assets as opposed to 14 per cent reporting a decrease in the Dry Zone and the Delta, and just 9 per cent in the Uplands.

Wealth quintiles based on asset ownership show that a greater share of households in the Delta and Rakhine belong to the poorest quintile with a full 37 per cent of households in Rakhine and 33 per cent in the Delta belonging to the poorest quintile, whereas the opposite is true for the Uplands and particularly the Dry Zone, where 30 per cent of households belong to the wealthiest quintile.

The **proportion of households living in extreme poverty** (below USD 1.90/day) was relatively low and remained close to unchanged at 15 per cent in both years. Using the local poverty line estimated by GoUM and the World Bank however, the population of households living in poverty in LIFT-supported villages decreased by 11 percentage points between 2015 and 2017.

Financial services

Overall, 77 per cent of households in 2017 had taken some kind of loan in the past 12 months, including loans from any source such as formal credit sources, money lenders or family and friends.

Microfinance was one of the most common sources of credit in both years, supplying credit to 24 per cent of households in *Tier 1*, and 30 per cent of households in *Tier 2*, showing that households in financial inclusion programme areas were more likely to borrow from a microfinance provider.

Microfinance loans were more likely than other loans to be used for productive purposes such as business investment and agricultural inputs than were loans from other sources. Microfinance was also the most gender equal form of credit with an equal proportion of male- and female-headed households reporting taking such a loan in 2017.

³⁹ 2015 values are adjusted for inflation and reported in 2017 MMK.

Whereas the poor borrowed disproportionately from moneylenders, and the rich borrowed disproportionately from the government, borrowing from microfinance providers was distributed more equally across wealth groups. Households in the middle of the wealth distribution were most likely to take a loan from a microfinance provider. The increase in microfinance lending also derived from a small increase in such borrowing among the poorest wealth quintile

Qualitative findings reported that the increased access to finance allowed households to increase asset ownership despite steady or declining incomes, and to maintain food consumption during food insecure months of the year. Increasing debt however was also highlighted as one reason for the inability of some households to improve living standards revealing both positive and negative aspects of borrowing.

When asked whether the amount of their debt had increased, decreased or stayed the same in the last 12 months, the share of households stating it had increased was notably higher than the share saying it had decreased. This was true for all LIFT regions with the largest “net increase” found in Rakhine where 34 per cent reported an increase in debt as opposed to just 14 per cent reporting a decrease.

Agriculture and farm-based production

Just over half of households in LIFT supported villages – 53 per cent – grew any crop in any of the three agricultural seasons prior to the household survey in 2017, which was a small increase from 2015 where 48 per cent of households did so.

Overall, although 24 per cent of households had received farm related assistance in 2017, just 8 per cent of all households said they had trialled or adopted new practices or technology in the past year, with the proportion being twice as large, 16 per cent, for households who had received some type of farm assistance in the last year.

Close to half of households in 2017 reported experiencing some kind of **constraint to agricultural production**. The proportion was highest in the Uplands where 56 per cent said they experienced constraints, followed by the Delta with 45 per cent and finally the Dry Zone and Rakhine with 39 per cent of households.

Finally, there was a small decline in households with increased productivity between 2015 and 2017 in both cool/dry season and rainy season. This decline however, was slightly larger for households receiving no development assistance in 2017. This effect was not statistically significant but should merit further investigation into whether households who received support were slightly better equipped to maintain yield levels. It is important to note however, that yield is determined by a large number of factors that are beyond the control of farmers such as the distribution of rainfall over a growing season.

Nutrition and food security

Food security, measured as 12 months of adequate food supply in the last year, decreased from 96 per cent in 2015 to 85 per cent in 2017, a reduction which was particularly large for landless households, and largest for households in Rakhine and the Delta with the lowest proportion of households with 12 months of adequate food supply in 2017 found in Rakhine. As for income instability, food security in Rakhine is likely to have been affected by severe flooding and heavy rain as well as the arrival of Cyclone Mors in May 2017. LIFT's forthcoming studies on vulnerability, and on income and assets will explore such reasons in greater detail.

Despite such decrease in food availability, the proportion of households with an acceptable **household dietary diversity** score grew from 62 per cent in 2015 to 70 per cent in 2017. Qualitative reports suggested that this was not necessarily a contradiction as households were able to maintain food consumption levels through buying food on credit and borrowing food from peers.

The proportion of households with an acceptable score increased from 65 to 74 per cent for households who received support whereas it appeared to decrease slightly for households without support, meaning that households who received support were overall close to 12 per cent better off over time than those who received no support.

Similarly, although it remains low, the proportion of **children with a minimum acceptable diet** in LIFT-supported villages increased substantially from 19 per cent in 2015 to 31 per cent in 2017.

Exclusive breastfeeding also improved substantially, increasing from 51 per cent of children in 2015 to 65 per cent in 2017. Women in households that received nutrition-related development assistance were substantially more likely to exclusively breastfeed their infants under six months of age than were women in households who received no such support (Fig. 121). Whereas the coverage was 56 per cent for households with no support, it was a whole twenty percentage points higher, 76 per cent, for those who received support in the last year.

Stunting in children under the age of five in LIFT-supported villages in new programme areas increased from 26.8 per cent in 2015 to 29.6 per cent in 2017, a statistically significant increase, which appears to be driven largely by an expansion of LIFT programmes into areas with a high prevalence of malnutrition, particularly in Chin State. The regional stunting rate for the Uplands increased by 14 percentage points to 41 per cent in 2017, whereas no significant change was observed in other regions.

Data on **women's nutritional status** are only available for 2017 and showed a 19 per cent prevalence of underweight among women with children under five, of which 14 per cent were moderately underweight and 5 per cent severely underweight. Women in Rakhine were most likely to be underweight as were women residing in female-headed households. Women in female-headed households on the other hand, were more likely meet the minimum dietary diversity than women in male-headed households. Nearly half of women who reported having received nutrition related assistance in 2017 met the minimum dietary diversity and were substantially more likely to do so than were women who did not receive such support for whom just 30 per cent met the minimum dietary standard.

Overall, the findings on nutrition outcomes reveal a clear and positive development over time, particularly so for beneficiaries of nutrition-related development assistance. Although we cannot establish causality, the findings indicate that LIFT's maternal and child cash transfer (MCCT) programmes and social behaviour change communication (SBCC) are working. These interventions have promoted messages such as exclusive breastfeeding, and the importance of dietary diversity through major ongoing interventions in the Dry Zone, Rakhine and the Delta.

Water and sanitation

A total of 76 per cent of households in LIFT-supported villages were using a protected water source in 2017 while 82 per cent of households used improved sanitation. None of the two changed significantly from 2015. However, looking at the panel survey only, there was a "net increase" of roughly 5 per cent in protected water usage, and of 8 per cent in improved sanitation usage for households who received WASH support in between the two survey years, suggesting a positive effect of receiving WASH-related development assistance.

Regional differences

Regional differences were visible for most indicators, and differences were often large. On most parameters, households in Rakhine were worse off and often substantially so than households in other regions. Households in the Delta also fared poorly on many fronts, although the region did better on some indicators such as average income, driven by a small number of wealthy landowners. Households in the Dry Zone were generally best off, with better nutritional standards and higher levels of wealth than households elsewhere.

Gender

The report has explored gender differences mainly through comparison of outcomes by sex of household head. While the household survey is not representative for female-headed households, exploring outcomes by sex of household head is still helpful for pointing out key trends. A few other indicators were explored to shed light on gender differences, including village level wages and child nutrition indicators by sex of the child.

Overall, in 2017, female-headed households were materially worse off than their male counterparts. They were on average, poorer, had lower household incomes (although this was partially driven by smaller household size), and were more likely to include a disabled household member, yet they were less likely to receive any kind of development assistance. They were also less likely to take any credit but when they did, they were more likely to spend it on health emergencies or food. They were less likely to be food secure and more likely to be underweight. They were however, more likely to meet minimum dietary diversity for both children and mothers and slightly more likely to use protected water sources and improved sanitation.

There was a large gender wage gap with average daily wages rates for women just 75 per cent of male wages. In addition, although wage rates increased in real terms for both men and women, the increase was smaller for women, resulting in increased gender disparity in wages over time.

Overall, the findings on gender differences show that there is still a need to purposely target female-headed households and design or adapt programming to specifically benefit women. The fact that female-headed households appear to do better on dietary diversity and WASH indicators than their male counterparts suggest that women are more likely to effect behavioural change despite having fewer material resources to support these changes.

Although LIFT does not directly influence wage differences outside cash for work programmes the vast gender wage gap might be addressed through programmes specifically targeting women for practical and financial skills development, as well as through incorporation of SBCC in programmes where both men and women participate.

Core Programme vs. Financial inclusion

LIFT's *Tier 2*, financial inclusion only areas, had on average better access to infrastructure such as roads and electricity, as well as protected water and improved sanitation and were, as expected, more likely to report the presence of microfinance providers and VSLAs than households in *Tier 1*, core programme areas. *Tier 2* households were also on average wealthier and less likely to experience food insecurity. They were, however, also less likely to receive WASH- and nutrition-related assistance and did worse on nutritional outcomes than households in *Tier 1*, particularly related to dietary diversity.

LIFT programme effect

The study does not allow for robust counterfactual analysis of programme effect, and it is recommended that LIFT integrates methodologically robust impact evaluation designs in future programmes if wishing to draw stronger conclusions on attribution of specific LIFT support.

Meanwhile, the household survey findings point to some trends of interest for LIFT's continued planning. Changes to the following key outcomes were explored by whether households received support, or not, using panel data: (1) increased and decreased incomes, (2) increased yields (3) adoption of new marketing practices (4) household dietary diversity (5) improved sanitation usage (6) protected drinking water usage. In addition the following were explored, also by whether households received support or not, using cross-sectional nutrition data: (7) exclusive breastfeeding (8) children with acceptable dietary diversity (9) women's dietary diversity.

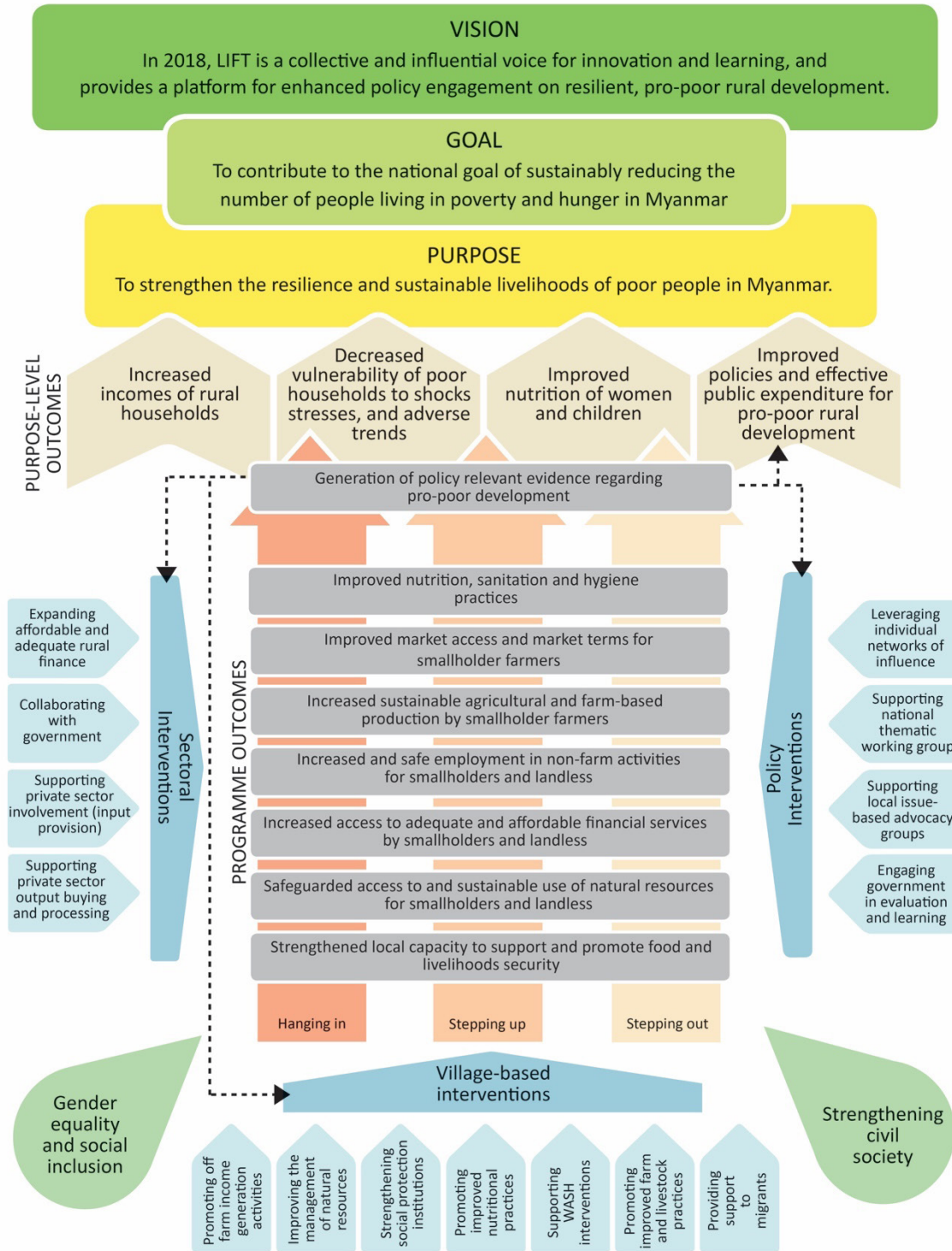
For all of the selected outcomes the data show a positive relationship between receiving support and improving outcomes over time. Some results are substantial and significant. Households that received support were 12 percentage points more likely over time to have an adequate dietary diversity. Similarly, households that received WASH support increased their improved sanitation usage by 8 per cent more than those with no support. Also nutrition data showed a positive relationship between receiving support and nutritional outcomes. The proportion of women who

reported having received nutrition related assistance was 20 percentage points more likely to meet the minimum dietary diversity than were women who did not receive support (50 vs 30 percent). Finally, households receiving nutrition-related development assistance in 2017 were substantially more likely to exclusively breastfeed their infants under six months of age than were households who received no such support. Whereas the coverage was 56 per cent for households with no support, it was a whole twenty percentage points higher, 76 per cent, for those who received support in the last year.

Stopping short of drawing conclusions about causality, there is a strong indication that households in LIFT villages that receive development assistance are more likely to see important improvements on key health and nutrition outcomes than households that receive no such support. Further work is needed to understand why some households receive support while others do not, and if access to support can be eased for those currently left out as they are visibly at a disadvantage particularly on nutrition-related indicators. This may include a greater focus on inclusion of more vulnerable groups, including reaching more female-headed households, women within all households, and various ethnic groups in more remote and precarious locations.

Annex A: LIFT Theory of Change 2014-2018

Livelihoods and Food Security Trust Fund Theory of Change



ANNEX B: SAMPLE SIZE CALCULATIONS

Past surveys

The sampling strategy for each of the three surveys conducted in 2011, 2013 and 2015 aimed at ensuring a survey, which was representative of LIFT supported households at the level of each of the LIFT geographical areas. The overall approach and assumptions applied for sample size calculations remained unchanged over the three surveys:

The surveys followed a two-stage cluster sampling approach, in which villages were identified based on probability proportional to size. A standard formula was used for the sample size needed for measuring a proportion in a single random sample. This looks as follows:

$$n = \frac{z_{\alpha/2}^2 \cdot r \cdot (1-r)}{e^2}$$

Where:

- n is the sample size
- z is the critical value for a 95 per cent confidence interval of the normal distribution
- r is the estimated prevalence for a given indicator
- e is the margin of error

The confidence level was set at 95 percent, the coverage rate set at a default 50 percent and the margin of error was set at 5 percent. Given the standard formula a coverage rate of 50 is a conservative value which reveals the largest sample size. Plugging in the numbers above gives a sample size of 384 households.

$$n = \frac{1.96^2 \cdot 0.5 \cdot (1-0.5)}{0.05^2} = 384$$

Because the survey was not a simple random sample, but rather a two-stage cluster sample, the sample was adjusted for the so-called *design effect*. The design effect refers to the loss of precision that results from sampling clusters of households rather than drawing a random sample from the full population. This loss stems from the fact that respondents within clusters are likely to be somewhat similar to each other. Adding a household in the same cluster thus adds less new information than had this household been sampled independently. In other words, the design effect expresses how much larger the sampling variance for the cluster sample is compared to a simple random sample of the same size. A design effect of 2 thus tells us that the variance is twice as high using a cluster approach than it would be in a simple random sample.

The formula for calculating the design effect is:

$$DEFF = 1 + \delta (n - 1)$$

Where:

- DEFF is the design effect
- δ is the intraclass correlation for the statistic in question
- n is the average size of the cluster

In all of the three household surveys, a standard value of 2 was used for the design effect. Adjusting for the design effect and rounding up led to a sample size of 768, which was rounded up to 800 households for each representative sample. In 2011 for instance, the survey covered four LIFT regions thus totalling a sample size of 3200 LIFT households. How the cluster size and hence the number of villages selected was identified is unclear.

The 2017 survey

For the calculations used in 2017, the calculations were based on actual coverage of key LIFT indicators in 2015, as well as actual values for the design effect for these indicators as they occurred in the 2015 sample and for correlation between 2015 and 2016 values-

An adaptation of the previous formula was used following the UN guidelines on designing household survey samples,⁴⁰ although a standard margin of error of 5 percent was maintained, and no adjustment was made for household size.

The revised formula used looks as follows:

$$n = \frac{z_{\alpha/2}^2 \cdot r \cdot (1-r) \cdot (f \cdot k)}{e^2}$$

Where:

- z is stat for level of confidence. We set this at 95% which gives z=1.96
- r is coverage rate for our variable of interest
- f is the design effect
- k is multiplier to account for expected non-response rate. We set non-response to 10%.
- e is margin of error. We set this at 5%.

Table B1. Sample size calculations for key LIFT indicators.

INCREASED INCOME		
z ²	3.8416	z is stat for level of confidence. We set this at 95% which gives z=1.96
r	0.2927	r is coverage rate for our variable of interest
f	2.4220	f is the design effect
k	1.1000	k is multiplier to account for expected non-response rate. We set non-response to 10%.
e ²	0.0025	e is margin of error. We set this at 5%.
e ² ved e=0.1r	0.0009	Alternative if we set ME to 10% of r.
Sample size <i>income increase</i>		
e=0.1r	2473.07	
e=5%	847.5836	

⁴⁰ United Nations (2008) Designing Household Survey Samples: Practical Guidelines. Department of Economic and Social Affairs, Statistics Division, New York.

INCREASED ASSETS

z^2	3.8416
r	0.2387
f	2.1852
k	1.1000
e^2	0.0025
$e^2 \text{ ved } e=0.1r$	0.0006

Sample size *asset increase*

$e=0.1r$	2944.7560
$e=5\%$	671.2642

RESILIENCE

z^2	3.8416
r	0.3376
f	2.7191
k	1.1000
e^2	0.0025
$e^2 \text{ ved } e=0.1r$	0.0011

Sample size *resilience*

$e=0.1r$	2254.1077
$e=5\%$	1027.8861

ACCEPTABLE DIET

z^2	3.8416
r	0.5163
f	2.5353
k	1.1000
e^2	0.0025
$e^2 \text{ ved } e=0.1r$	0.0027

Sample size *acceptable diet*

$e=0.1r$	1003.5665
$e=5\%$	1070.1970

FOOD ADEQUACY

z^2	3.8416
r	0.9514
f	2.6637
k	1.1000
e^2	0.0025
$e^2 \text{ ved } e=0.1r$	0.0091

Sample size *food adequacy*

$e=0.1r$	57.5452
$e=5\%$	208.3347

PR12 TRIALADOPT

z^2	3.8416
r	0.3231
f	2.9933
k	1.1000
e^2	0.0025
$e^2 \text{ ved } e=0.1r$	0.0010

Sample size *pr12 trial/adopt*

$e=0.1r$	2650.3037
$e=5\%$	1106.5162

ADOPT MARKETING

z^2	3.8416
r	0.1868719
f	2.30926
k	1.1000
e^2	0.0025
$e^2 \text{ ved } e=0.1r$	0.0003

Sample size *adopt marketing*

$e=0.1r$	4246.1236
$e=5\%$	593.1173

PR23 RETURNS

z^2	3.8416
r	0.2110553
f	2.43851
k	1.1000
e^2	0.0025
$e^2 \text{ ved } e=0.1r$	0.0004

Sample size *pr23*
increased profit

$e=0.1r$	3851.9414
$e=5\%$	686.3287

NONAG INCOME

z^2	3.8416
r	0.2154523
f	2.22378
k	1.1000
e^2	0.0025
$e^2 \text{ ved } e=0.1r$	0.0005

Sample size *nonag*
income

$e=0.1r$	3421.8807
$e=5\%$	635.3706

**IMPROVED
SANITATION**

z^2	3.8416
r	0.6906407
f	9.40737
k	1.1000
e^2	0.0025
$e^2 \text{ ved } e=0.1r$	0.0048

Sample size *improved*
sanitation

$e=0.1r$	1780.6725
$e=5\%$	3397.4134

PROTECTED WATER

z^2	3.8416
r	0.723304
f	9.46142
k	1.1000
e^2	0.0025
$e^2 \text{ ved } e=0.1r$	0.0052

Sample size protected water

$e=0.1r$	1529.4778
$e=5\%$	3200.6994

NATURAL RESOURCE MANAGEMENT

z^2	3.8416
r	0.0678392
f	9.49884
k	1.1000
e^2	0.0025
$e^2 \text{ ved } e=0.1r$	0.0000

Sample size NRM

$e=0.1r$	55155.0799
$e=5\%$	1015.3294

STUNTING

z^2	3.8416
r	0.300924
f	1.71533
k	1.1000
e^2	0.0025
$e^2 \text{ ved } e=0.1r$	0.0009

Sample size stunted

$e=0.1r$	1683.9147
$e=5\%$	609.9493

