Malawi

Integrated Household Panel Survey (IHPS)

2019

Basic Information Document

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ACRONYMS

ADD	Agricultural Development Division
ADMARC	Agricultural Development and Marketing Corporation
CAPI	Computer Assisted Personal Interviewing
DFID	Department for International Development
EA	Enumeration Area
FAO	Food and Agriculture Organization of the United Nations
GTZ	German Development Corporation
IFAD	International Fund for Agricultural Development
IHPS 2010	Integrated Household Panel Survey 2010
IHPS 2013	Integrated Household Panel Survey 2013
IHPS 2016	Integrated Household Panel Survey 2016
IHPS 2019	Integrated Household Panel Survey 2019
IHS1	First Integrated Household Survey 1997-1998
IHS2	Second Integrated Household Survey 2004-2005
IHS3	Third Integrated Household Survey 2010-2011
IHS4	Fourth Integrated Household Survey 2016-2017
IHS5	Fourth Integrated Household Survey 2019-2020
LSMS	Living Standards Measurement Study
LSMS-ISA	LSMS–Integrated Surveys on Agriculture
MCC	Millennium Challenge Corporation
MGDS	Malawi Growth and Development Strategy
MDG	Millennium Development Goal
MK	Malawi Kwacha
NACAL	National Census of Agriculture and Livestock
NSO	National Statistical Office of Malawi
PHC	Population and Housing Census
PSU	Primary Sampling Unit
SDG	Sustainable Development Goal
TA	Traditional Authority
WFP	World Food Programme
WMS	Welfare Monitoring Survey

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1.0: INTRODUCTION

1.1: Background

The Government of Malawi through the National Statistical Office as the implementing agency; periodically conducts the Integrated Household Survey (IHS) which is one of the primary instruments to monitor and evaluate the changing conditions of Malawian households. The Integrated Household Survey collects information on consumption patterns of households both in terms of food and non-food. The survey also collects information on poverty and income equality, demographic characteristics, health, education, labour force participation, housing, credit and loan, household enterprises, agriculture, housing infrastructure and asset ownership, food security and mortality indicators. The IHS data have, among other insights, provided benchmark poverty and vulnerability indicators to foster evidence-based policy formulation and monitor the progress of meeting the Sustainable Development Goals (SDGs) and the goals listed as part of the third Malawi Growth and Development Strategy (MGDS III).

The First Integrated Household Survey (IHS1) was conducted in Malawi from November 1997 through October 1998 with support from the World Bank and International Food Policy Research Institute (IFPRI). The survey provided for a broad set of applications on policy issues regarding households' behavior and welfare, distribution of income, employment, health and education.

The Second Integrated Household Survey (IHS2) was implemented with technical assistance from the World Bank to compare the situation of that time with the situation in 1997-98, and to collect more detailed information on several topics. The IHS2 was conducted from March 2004 through February 2005.

The Third Integrated Household Survey (IHS3) was implemented from March 2010 to March 2011 under the umbrella of the World Bank Living Standards Measurement Study – Integrated Surveys on Agriculture (LSMS-ISA) initiative. the LSMS-ISA project collaborates with the national statistics offices of its eight partner countries in Sub-Saharan Africa to design and implement systems of multi-topic, nationally representative panel household surveys with a strong focus on agriculture. The primary objective of the project is to foster innovation and efficiency in statistical research on the links between agriculture and poverty reduction in the region. The IHS3 broadened on the agricultural content of the IHS2.

Preceding the start of the IHS3, 204 EAs out of the 768 were selected with the intention to; (i) visit a total of 3,246 households in these selected EAs twice to reduce recall associated with different aspects of agricultural data collection and (ii) to track and resurvey these households in 2013 in accordance

with the IHS3 fieldwork timeline and as part of the Integrated Household Panel Survey (IHPS)1. The LSMS-ISA initiative provided technical and financial assistance to the design and implementation of the IHPS, alongside DFID, Norway and Government of Malawi. The IHPS fieldwork took place during the period of April-October 2013, with residual tracking operations in November-December 2013.

The Fourth Integrated Household Survey (IHS4) was implemented from April 2016 to April 2017 also under the umbrella of the LSMS-ISA initiative. This was conducted with financial support from the World Bank and the Millennium Challenge Account (MCA). The third round of the panel survey, the IHPS 2016, ran concurrently with the IHS4 main cross-section fieldwork. The IHPS 2016 collected information from a sample of all households and split-off individuals from 102 out of the 204 original baseline EAs selected prior to the start of the IHS3 representative at the national and urban/rural levels.

The Fifth Integrated Household Survey (IHS5) is the fifth full survey in this series and was fielded from April 2019 to March 2020 also under the World Bank LSMS-ISA umbrella. The fourth round of the panel survey, the IHPS 2019, also ran concurrently with the main IHS5 field work. The 2019 collected information from all households and split-off individuals that made up the IHPS 2016 final database.

1.1 Integrated Household Panel Survey

The panel component was integrated into the core IHS program to study trends in poverty, socioeconomic and agricultural characteristics over time through a longitudinal survey. At baseline, the IHPS sample was selected to be representative at the national-, regional-, urban/rural levels and for each of the following 6 strata: (i) Northern Region – Rural, (ii) Northern Region – Urban, (iii) Central Region – Rural, (iv) Central Region – Urban, (v) Southern Region – Rural, and (vi) Southern Region – Urban. The IHPS 2013 attempted to track all baseline households as well as individuals that moved away from the baseline dwellings between 2010 and 2013 as long as they were neither servants nor guests at the time of the IHS3; were projected to be at least 12 years of age and were known to be residing in mainland Malawi but excluding those in Likoma Island[2] and in institutions, including

[1] The IHPS sample does NOT have any links to the IHS2 sample. The IHPS serves as a baseline ONLY for the panel subsample. See the IHS3 basic information document for details on the sub-sampling and original spatial distribution of the panel EAs.

[2] The exclusion of Likoma Island is rooted in the traditional exclusion of the district for IHS purposes, largely due to logistical considerations.

prisons, police compounds, and army barracks. Once a split-off individual was located, the new household that he/she formed/joined since 2010 was also brought into the IHPS sample. In view of the tracking rules, the final IHPS 2013 sample, therefore, included a total of 4,000 households that could be traced back to 3,104 baseline households.

Prior to the start of the IHPS 2016, due to the increasing numbers of households from the 2013 database to be tracked and budget constraints, 102 out of the 204 baseline EAs were selected and the IHPS 2016 attempted to track all households, individuals that moved away from dwellings they were enumerated in, in 2013 tied to the selected 102 EAs. In line with the aforementioned tracking rules, the final 2016 database included a total of 2,508 households which could be traced back to 1,908 households from 102 EAs in the IHPS 2013 database.

The IHPS 2019, attempted to track all households and individuals that moved away from the dwellings they form the final IHPS 2016 database.

The areas of analysis for 2019 is limited to the national, urban and rural areas since the number of EAs from which the 2019 database of households comes from; was halved in 2016. Although the results of the IHPS 2019 cannot be tabulated by region, the stratification of the IHS3 Panel Survey by region, urban and rural strata was still maintained with a proportional allocation of the sample across the regions, based on the distribution of the sampling frame from the 2008 Malawi Census.

Table 1 shows the distribution of enumeration areas in the sampling frame by region, urban and rural strata. The selection ensured that the IHPS 2019 had a sufficient sample size in the urban stratum to obtain reliable national estimates for the urban and rural domains. The findings in this report come from the data collected in only these 102 EAs from 2010, 2013, 2016 and 2019[3].

[3] The panel report released in 2013 compared figures from the IHPS 2010 and the IHPS 2013 using the full 204 panel EAs with sampling weights calculated in 2013 on the full round of data collection. In 2016, panel sampling weights were recalculated for 2013 and 2010, the 2016 report compared figures from IHPS 2010 to 2016, but for only 102 of the 204 baseline EAs.

Table 1. Distribution of enumeration areas in the sampling frame by region, urban and rural strata

PANEL	REGION	URBAN	RURAL	TOTAL
Panel A	North	3	3	6
	Centre	6	15	21
	South	6	18	24
	Sub-total	15	36	51
Panel B	North	3	3	6
	Centre	6	15	21
	South	6	18	24
	Sub-total	15	36	51

1.2 Success of Implementation

2,508 households from IHPS 2016 were the tracking targets for IHPS 2019 with 12,250 total individuals and 8,995 eligible individuals. By the end of the 2019 tracking operation the panel sample grew to 3,178 households with 14,649 individuals. This represents an entire household shift, or a single person from a household splitting off and forming a new one. These 3,178 households stemmed from 2,368 of the 2016 households representing a household-level attrition rate of 5.6 percent.

At the individual level, the calculation of the attrition rate is as follows. Baseline households contained 12,250 individuals in 2016, of whom 153 died between 2016 and 2019. Out of the remaining 12,097 individuals and irrespective of the tracking rules that were in place, the IHPS 2016 accounted for 10,516 baseline individuals, representing an **overall attrition rate of 13 percent at the individual level**. If one focuses only the individuals that were tracking-eligible in accordance with the aforementioned tracking rules and that were alive in 2016, the IHPS accounted for 7,737 individuals out of 8,859 tracking-eligible individuals, representing an attrition rate of 13 percent at the individual level.

2.0: SURVEY DESIGN

2.1 Fieldwork Organization

The IHPS 2019 consists of four core questionnaire instruments; the Household Questionnaire, the Agriculture Questionnaire, the Fishery Questionnaire, and the Community Questionnaire. While the details on the structure and scope of the questionnaire instruments will be provided in Section 2.2, they are briefly mentioned here since they are relevant for understanding the fieldwork organization.

The core IHPS 2019 fieldwork spanned the period of April 2019-November 2019. IHPS 2019 fieldwork was to take place during the first 6 months of IHS5 fieldwork, however due to the extensive time and travel commitment involved with tracking both 2016 and 2019 split-off households, there was a residual tracking operation in October and November.

To collect more accurate information on each of the two agricultural seasons in the country, attempts were made to visit the panel households twice over the course of the IHPS 2019 fieldwork. **The timing of these visits attempted to mirror the baseline visit schedule as much as possible.**[4] Visit 1 was in the first half of the panel field work, corresponding to the post-planting period with respect to the 2017/2018 rainy season[5]. In this visit, the farming households reported information on 2017/2018 rainy season pre-harvest related matters, including land area, cultivation and input use. Visit 2 was fielded in the second half of the panel field work, approximately 4 months after Visit 1[6], in the post-harvest period with the respect to the 2017/2018 rainy season. In this visit, farming households reported (i) information on 2017/2018 rainy season production and post-harvest related matters, and (ii) complete information on the 2019 dry season.

In order to collect consumption data in an evenly spread manner across the panel period and to spread the workload across two visits, it was decided **at baseline** that when the panel households were visited for the first time, approximately half of them (Panel Group A) would receive the household questionnaire in full, and if applicable, the Visit 1 components of the agriculture questionnaire and the fishery questionnaire. The rest of the panel subsample (Panel Group B) were supposed to be administered only the household roster, the filter module for the agriculture questionnaire, and the Visit 1 components of the agriculture questionnaire, if applicable, when they were visited for the first time. During the second visit period, Panel Group B were supposed to be administered the remaining parts of the household questionnaire, and the Visit 2 components of the agriculture questionnaire and the fishery questionnaire, if applicable, while Panel Group A would only receive a household roster update and the Visit 2 components of the agriculture questionnaire, if applicable. Table 2 summarizes the timing of the questionnaire instruments across different panel subsamples.

All IHPS households retained the Panel A vs. B status of their associated baseline household during the 2013 fieldwork. The IHPS fieldwork schedule followed the 2010, 2013 & 2016 schedules as much as possible so that the timing of the two visits could be in line with that of the earlier fieldwork. However, complex tracking dynamics sometimes meant that not all households were subject to the two-visit approach. Specifically, 89.28 percent of the IHPS 2019 sample were visited twice in 2019 in accordance with the original plan. The rest were visited once, mostly in the second half of the fieldwork, with the entire set of questionnaire instruments administered in one sitting. The ancillary variable **interview_status** in the data file HH_MOD_A_FILT that is part of the IHPS 2019 household data provides an overview of these dynamics (see below).

[4] Dates of interview for each visit in the IHS3 and the IHPS data could be consulted to get a sense of the extent to which the IHPS survey teams attempted to stick to the original interview timeline in the face of complex tracking dynamics that are not encountered in cross-sectional survey efforts.

[5] Rainy agricultural season covers two calendar years. The start and end dates for the rains vary spatially, happening throughout the period of November-April. By definition, agricultural season is inclusive of harvest; as such rainy agricultural season generally refers to the period of November-May for majority of the country, although earlier/later harvests are possible, depending on the type of crop, rainfall and other location-specific agronomic and climatic conditions.

[6] Intended to be a 3-month gap but extensive tracking operations after Visit 1 created a 4-month period.

Table 2: Timing of IHPS Questionnaire Instruments

	Panel Group A Sample	**Panel Group B Sample**
VISIT 1 Questionnaires	1.Household Questionnaire "*Full*" 2. *Agriculture Questionnaire Visit 1 Portion* 3.Fishery Questionnaire 4.Community Questionnaire	1.Household Roster, Filter Module 2. *Agriculture Questionnaire Visit 1 Portion*
VISIT 2 Questionnaires	1.Household Roster Update 2. *Agriculture Questionnaire Visit 2 Portion*	1.Household Questionnaire "*Full*" 2. *Agriculture Questionnaire Visit 2 Portion* 3.Fishery Questionnaire 4.Community Questionnaire

2.2 Questionnaire Design

The IHPS 2019 questionnaire instruments are primarily modeled after the IHS4 with some modules and content altered, dropped or added. The modules and questions that have been added in either IHPS 2013 or IHPS 2016 or IHPS 2019 are identified primarily by an underscore "_" in the questionnaire instruments.

2.21 Household Questionnaire

The Household Questionnaire is a multi-topic survey instrument and is near-identical to the content and organization of the IHS4. It encompasses economic activities, demographics, welfare and other sectoral information of households. It covers a wide range of topics, dealing with the dynamics of poverty (consumption, cash and non-cash income, savings, assets, food security, health and education, vulnerability and social protection). Although the IHPS 2019 Household Questionnaire covers a wide variety of topics in detail it intentionally excludes in-depth information on topics covered in other surveys that are part of the NSO's statistical plan (such as maternal and child health issues covered at length in the Malawi Demographic and Health Survey).

Table 3 presents a list and description of the IHPS 2019 Household Questionnaire modules. The modules were developed in extensive consultations with a wide set of stakeholders, including the World Bank LSMS, Statistics Norway, the UK Department for International Development (DFID), the Food and Agriculture Organization of the United Nations (FAO), the World Food Programme (WFP), the Millennium Challenge Corporation – Malawi Account (MCC-MA), the Department of Forestry, the Department of National Accounts, and the World Fish Center (WFC).

Table 3: Contents of the IHPS 2019 Household Questionnaire

Module	Description
Module A:	This module household identifiers, the sample weights, information on household location, date of interview, supervisor and enumerator codes. Additionally, this module contains filters for subsequent modules.
Module B: Household Roster	This module contains the roster of individuals living in the household, their gender, age, relationship to the household head, duration away from the household in past 12 months, number of days meals were taken in the household, where born, how long in this community, and information on the location and level of education of parents of every member, including ID's if in the household. For members over 12, information on religious affiliation, marital status and location of spouses is collected and identifies the ID of the spouse/s of a household member.
Module C: Education	The education module is asked of all individuals over 5 years in age and collects information on self-reported reading and writing ability, school attendance, highest class attended and highest qualification achieved, year and age of beginning school. If the individual is presently attending school, information on the type of school, distance, and costs are collected.
Module D: Health	The health module is administered to all individuals and collects information on: Illness or injury in the past 2 weeks, diagnosis source, and action taken, and disruption to normal activity; Health spending over the past 4 weeks; Hospitalization or stay in a traditional healer's in the last 12 months. For individuals over 5 years in age: Information on chronic difficulties and disruption to normal activities; chronic illness and diagnosis source. For women aged 12 to 49 years of age information on births in the last 24 months, prenatal health clinic visits and where the baby was born and who assisted at birth for last-born child is collected. There are **new** questions on disability administered in 2019.
Module E: Time Use and Labour	The module is administered to all individuals 5 years or older. This module collects information on hours spent yesterday collecting water and wood; hours spent in the last 7 days spent on agriculture and non-agriculture activities; type of primary and secondary work, employers and wages over the last 12 months; participation in unpaid apprenticeships, casual (ganyu) labour, and other unpaid labour over the last 12 months. Households involved in agriculture 5 crops were captured in accordance with importance (importance defined as value addition in terms of non-market (consumption) or market (commercial sales) terms).

Module F: Housing	This module on housing is administered to the household head. It collects information on the characteristics of the dwelling, household fuel use, availability of electricity, telephone and water, toilet and rubbish facilities, and mosquito net use. In an attempt to improve data collected on land rights and ownership, this module contains detailed questions on who owns the property and who has the right to sell or bequeath the property containing their dwelling. **new** detailed questions were added on use of toilet facilities
Module F1: Land Roster	This is a **new** module and it collects information on all agricultural and non-agricultural land for which any household member currently uses, owns or holds use rights for, either alone or with someone else. This gardens in this module feeds forward into the different agricultural modules depending on the time they were cultivated. NOTE: This Module **Replaces** AG_MOD_B1, AG_MOD_I1 AND AG_MOD_O1 in the Agricultural Questionnaire. All Plots in the Agricultural Questionnaire are linked to this module.
Module G: Consumption of food Over past one week	This module collects information on all food consumed by the household in the past 7 days: in total and then classified as purchased (with price), own-production, or gift and other sources. Additionally, this module collects information on number of days aggregated food categories were consumed by the household and number of days and meals taken in the household by children and adults.
Module H: Food Security	This module collects information on number of meals taken by adults and children in the household and restricted food intake in the past 7 days.
Module I: Non-food Expenditures	This module collects expenditures on non-food items over the past week and the past 1 month.
Module J: Non-Food Expenditures (3 months)	This module collects expenditures on non-food items over the past 3 months.
Module K: Non-Food Expenditures (12 months)	This module collects expenditures on non-food items over the past 12 month.
Module L: Durable Goods	This module collects information on ownership, quantity owned, age of items, current preserved market value, purchases of items in the last 12 months, and cost of items in the last 12 months for durable goods.
Module M: Farm Implements, Machinery and Structures	This module collects information on household ownership, quantity owned, age of items, perceived market value, item purchases in last 12 months, quantity purchased in last 12 months, asset value, use, and items rental and rental cost, for farm implements and structures. Additionally, for farm structures, information is collected on construction and cost of construction over the past 12 months.

Module N: Household Enterprises	This module collects information on non-agricultural family enterprises or trading business, specifically who manages/owns the enterprise, employees, enterprise operation periods, start-up capital and source, customers, business trends, sales revenue, expenditures, and profits.
Module O: Children Living Elsewhere	This module collects information on the age, sex, education, length away from household, current locations, activity status and occupation of children living outside the household. Additional information is collected on remittances to the household from children living outside the household.
Module P: Other Income	This module collects information on household income from interest, pensions, rentals, or other income over the past 12 months.
Module Q: Gifts Given Out	This module collects information on cash, food, or other in-kind items given by the household, in the past 12 months.
Module R: Social Safety Nets	This module collects information on receipts and value of social safety nets including, cash, food, or other aid from programs. Additionally this module collects information on household member recipients of the aid, decision making for aid received, and number of months aid was received.
Module S: Credit	This module collects information on household credit, specifically where the credit was acquired, who is responsible for the loan, reason credit was obtained, how much was borrowed, timing of loan, and expected pay-off. Additionally this module collect information on attempted credit and reasons for being turned down.
Module T: Subjective Assessment of Well-being	This module collects information on the respondent's assessment of his/her family's situation regarding food consumption, housing, clothing, health care, financial level, and income level. The intended respondent for this module is the head of household. Additionally this module asks the head of household about the number of changes of clothes owned, and bedding type.
Module U: Shocks & Coping Strategies	This module collects information on shocks on the household in the past 3 years such as crop disease, theft of livestock, death of family members and how many times these shocks have happened in the past 3 years. Respondents are asked to rank the 3 most severe shocks experienced within a 12 month period(filtered based on date from those listed as having happened in the past years) and report on the impact of the shock on income, assets, food production, food stocks and food purchases as well as what was done by the household in response to the shock.
Module V: Child Anthropometry	This module collects weight and height/length measurements as well as observed oedema for children. For the panel sample all children that were measured in IHS3 or IHPS (based on the timing of IHS3, were measured. These children are up to 15 years of age. Additionally, this module collects information on child participation in nutrition programs and under five clinics.

Module W: Deaths in the Household	This module records information on family members who have died in the past two years and collects information on the type of work previously performed, age at death, and previous illness of deceased household member. It also collects information on the diagnosis source of cause of death and assets lost due to the death.
Module X: Filter Questions for Agriculture & Fishery	This module contains filter questions on the presence of agricultural, livestock and or fisheries in the household.
Network Roster	This module collects information on the characteristics of the networks of households such as friends, relatives, employers, government agencies and private institutions.

2.22 Agriculture Questionnaire

All IHPS 2019 households that are identified as being involved in agricultural or livestock activities were administered the Agriculture Questionnaire, which is primarily modelled after the IHS4 and IHS3 questionnaires. The development of the agriculture questionnaire was done with input from the aforementioned stakeholders who provided input on the household questionnaire as well as outside researchers involved in research and policy discussions pertaining to the Malawian agriculture. The Agriculture Questionnaire allows, among other things, for extensive agricultural productivity analysis through the diligent estimation of land areas, both owned and cultivated, labor and non-labor input use and expenditures, and production figures for main crops, and livestock. Although one of the major foci of the agriculture data collection effort was to produce smallholder production estimates for major crops, it is also possible to disaggregate the data by gender and main geographical regions. Table 4 includes the descriptions of the modules. The IHPS 2019 households supply information on the 2017/2018 rainy season and the 2019 dry season. All rainy season modules plus livestock are administered in Visit 1 and dry season, tree/permanent crops, extension services, land tenure and land disposition are administered in Visit 2.

Table 4: Contents of the IHPS 2019 Agriculture Questionnaire

Module	**Description**
Module B_2: Garden Details (Rainy Season)	This module was **adjusted** in 2019 and collects information on details of how the garden was acquired, proceeds from renting out the garden, obligations arising from renting in the garden and decision makers as regards the proceeds from the garden. It also collects information on concerns of ownership of a garden. **Some** information that was collected using this module in 2016 was transferred to the land roster (Module F1 in the household questionnaire) in 2019.
Module C: Plot Roster (Rainy Season)	This module contains the information of agriculture plots owned and/or cultivated by household members during the reference rainy season. More specifically, it reports the location and description and area of the plot.

Module D: Plot Details (Rainy Season)	This module collects detailed plot information (agricultural practices and plot characteristics, use of organic and inorganic fertilizers, use of pesticides/herbicides, and labor inputs) for the reference rainy season. This module also asks a series of questions on sustainable agriculture: trees, cover crops, crop residue disposal, land preparation.
Module E: Coupon Use (Rainy Season)	This module collects information about quantity/type of input coupons/vouchers and how they were obtained and used during the reference rainy season.
Module F: Other Inputs (Rainy Season)	This module collects information about the inputs used for cultivation and their costs, specifically pesticides and herbicides, during the reference rainy season. It elicits information on the main sources of the input purchased without coupons/vouchers, any input received for free, any input that was left over from a previous season and own-produced organic fertilizer.
Module G: Crops (Rainy Season)	This module collects information about the crops grown by the household on each plot during the reference rainy season such as the type of crop stand, area of plantation, the amount of seed used and when it was planted, and the details of the harvest.
Module H: Seeds (Rainy Season)	This module collects information about seeds and how they were acquired during the rainy season. More specifically, it elicits information on the main sources of the seed purchased without coupons/vouchers, any seed received for free, and any seed that was left over from a previous season.
Module I: Sales/Storage (Rainy Season)	This module collects information on the quantity and value of crops sold, the main buyers/outlet, alternative uses, post-harvest losses and storage during the reference rainy season.
Module I_1: Post Harvest Labour (Rainy Season)	This is a **new** module whose questions were added to Module I in 2019. This module collects information on post-harvest labour activities for a particular crop.
Module I_2: Garden Details (Dry Season)	This module was **adjusted** in 2019 and collects information on details of how the garden was acquired, proceeds from renting out the garden, obligations arising from renting in the garden and decision makers as regards the proceeds from the garden. It also collects information on concerns of ownership of a garden. **Some** information that was contained in this module as per the 2016 setup was transferred to the land roster (Module F1 in the household questionnaire).
Module J: Plot Roster (Dry Season)	This module contains the information of agriculture plots owned and/or cultivated by household members during the reference dry (dimba) season. More specifically, it reports the location and description and area of the plot. Enumerators identify whether the plot of land was part of a rainy season or dry season garden.

Module K: Plot Details (Dry Season)	This module collects detailed plot information (agricultural practices and plot characteristics, use of organic and inorganic fertilizers, use of pesticides/herbicides, and labor inputs) for the reference dry (dimba) season.
Module L: Other Inputs (Dry Season)	This module collects information about the inputs used for cultivation and their costs, specifically pesticides and herbicides, during the reference dry (dimba) season. More specifically, it elicits information on the main sources of the input purchased without coupons/vouchers, any input received for free, any input that was left over from a previous season and own-produced organic fertilizer.
Module M: Crops (Dry Season)	This module collects information about the crops grown by the household on each plot during the reference dry (dimba) such as the type of crop stand, area of plantation, the amount of seed used and when it was planted, and the details of the harvest.
Module N: Seeds (Dry Season)	This module collects information about seeds and how they were acquired during the reference dry (dimba) season. More specifically, it elicits information on the main sources of the seed purchased without coupons/vouchers, any seed received for free, and any seed that was left over from a previous season.
Module O: Sales Storage (Dry Season)	This module collects information on the quantity and value of crops sold, the main buyers/outlet, alternative uses, post-harvest losses and storage during the reference dry (dimba) season.
Module O_1: Post Harvest Labour (Dry Season)	This is a **new** module whose questions were added to Module O in 2019. This module collects information on post-harvest labour activities for a particular crop.
Module O_2: Plot Roster Tree Crop Production	This module collects basic information on plots owned and/or cultivated with tree crops by household members during the last 12 months, specifically the area and GPS coordinates of each plot.
Module P: Tree / Permanent Crop Production (Last 12 Months)	This module collects information on crop-stand, area planted, number of trees owned, pre-harvest losses, and amount harvested.
Module Q: Tree/Permanent Crop Sales/Storage (Last 12 Months)	This module collects information on amount sold (value of sales) / given out / used as input for crop by-product / lost / currently in storage.
Module Q_I: Post Harvest Labour (Rainy Season)	This is a **new** module whose questions were added to Module Q in 2019. This module collects information on post-harvest labour activities for a particular crop.

Module R: Livestock	This module collects information on number currently owned, owners and responsible individuals in the household, inflow/outflow of livestock through various means in the past twelve months, vaccinations, expenditures in the past twelve months on various items
Module S: Livestock Products	This module collects information on amount produced, sales and expenditures.
Module T: Access to Extension Services	This module collects information on where households receive advice/ information on agriculture and how useful the source has been during the last 12 months.
Network Roster	This module collects information on the characteristics of the networks of households such as friends, relatives, employers, government agencies and private institutions.

2.23 Fishery Questionnaire

The design of the IHPS 2019 Fishery Questionnaire is identical to the questionnaire designed for IHS3. The IHS3 Fisheries Questionnaire was informed by the design and piloting of a fishery questionnaire by the World Fish Center (WFC), which was supported by the World Bank LSMS-ISA initiative for the purpose of assembling a fishery questionnaire that could be integrated into multi-topic household-surveys. Table 5 presents the list and description of the fishery questionnaire modules.

Table 5: Contents of the IHPS 2019 Fishery Questionnaire

Module	**Description**
Module B: Fisheries Calendar	This module asks the respondent to indicate the status of fishing months for the community as either “high”, “low”, or “no fishing” months.
Module C & G: Fisheries Labour (Last High Season) (Last Low Season)	This module elicits information on household members’ time allocation to fishing. Specifically, this module asks household members to record the number of weeks, days per week, and hours per day that they allocated to full-time fishing, part-time fishing, fish processing and or fish trading during the last high / low season respectively.
Module D & H: Fisheries Input (Last High Season) (Last Low Season)	This module collects information on inputs to fishing, including ownership, purchases, and rentals. Additionally, this module collects information on use of boats and engines, hired labor, and other inputs in high and low fishing season respectively.
Module E & I: Fisheries Output (Last High Season) (Last Low Season)	This module collects output from fishing activities and owned fishing equipment, including: total catch, sales, consumption, and revenue generated from renting fishing equipment out for high and low season respectively.

Module F & J: Fish Trading (Last High Season) (Last Low Season)	This module elicits information on purchases and sales associated with the household's fish trading activities, high and low season respectively, for the 5 main species of fish.

2.24 Community Questionnaire

The content of the IHPS 2019 Community Questionnaire follows the content of the IHS3 and IHPS 2013 and 2016; Community Questionnaires. A "community" is defined as the village or urban location surrounding the enumeration area selected for inclusion in the sample and which most residents recognize as being their community. **The IHPS community questionnaire was administered in 101 of the baseline EAs** and, identical to the approach of earlier, to a group of several knowledgeable residents such as the village headman, the headmaster of the local school, the agricultural field assistant, religious leaders, local merchants, health workers and long-term knowledgeable residents. The instrument gathers information on a range of community characteristics, including religious and ethnic background, physical infrastructure, access to public services, economic activities, communal resource management, organization and governance, investment projects, and local retail price information for essential goods and services. Table 6 presents the list and description of the community questionnaire modules.

Table 6: Contents of the IHPS 2019 Community Questionnaire

Module	**Description**
Module CB: Roster of Informants	This module lists the group of informants and their age, sex, positions in community, length of residence in the community, education and language spoken.
Module CC: Basic Information	This module collects basic characteristics of the community, including: population, number of households, major religions, languages spoken, common marriage types, land characteristics and use, number of registered voters and ability to address resource priorities.
Module CD: Access to basic Services	This module collects information on the community access to and characteristics of transportation networks, markets, ADMARC market, post office, telephone services, churches, schools, health services, and banking services.
Module CE: Economic Activities	This module collects basic information on the primary work activities of community members.
Module CF: Agriculture	This module collects basic information on the prevalence and type of agricultural activities and agricultural facilities.

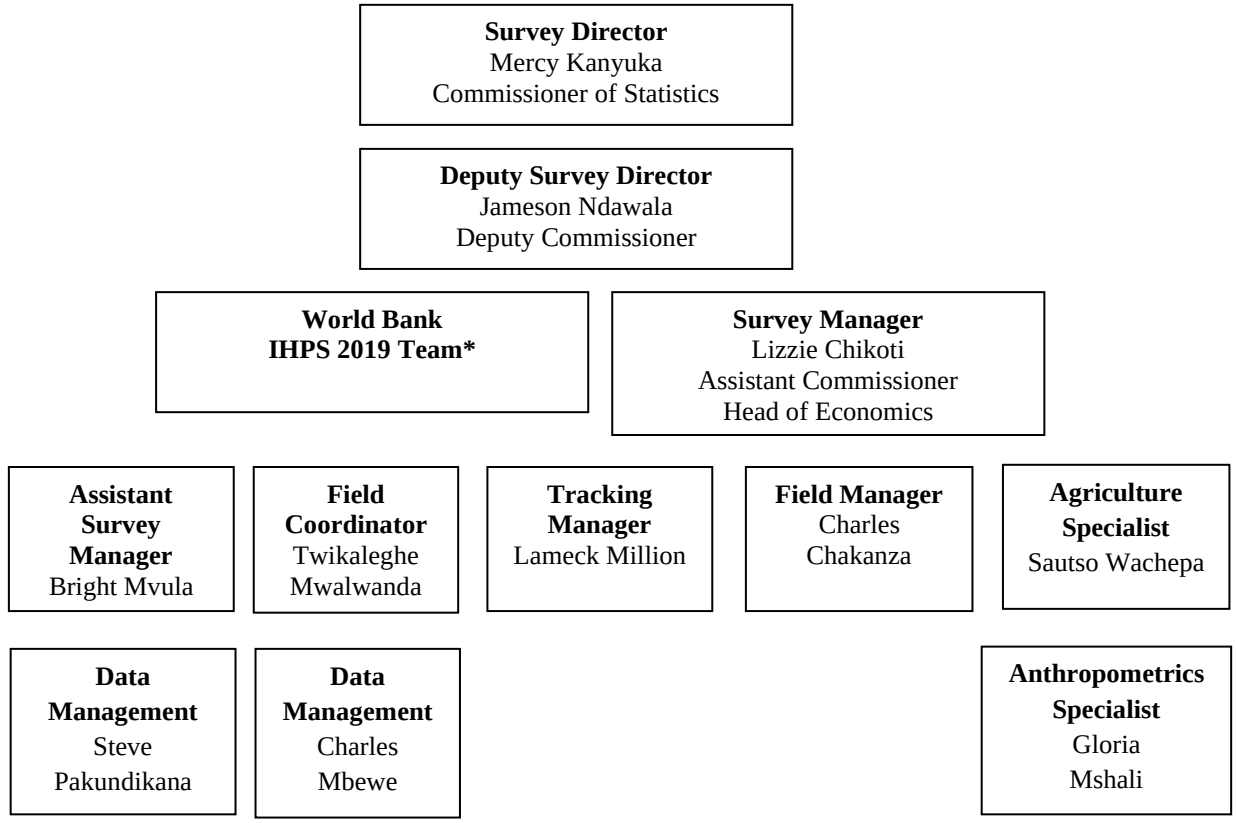
Module CG: Changes	This module asks respondents to identify changes since 2016 that have made people worse off or better off, such as: drought, flood, changes in prices, changes in access to services, including health facilities, social services, schools, roads, transportation, among others. Additionally, respondent groups are asked to list when these major events occurred and what share of the community they affected.
Module CH: Community needs, Actions & Achievements	This module asks the respondent group to report on any needs (road and bridge maintenance/construction, school and health center improvement, piped water/boreholes/wells and maize mills construction, orphanage construction, public transportation and law enforcement improvement and the addition of agricultural/fishery/livestock extension services) that community members have expressed during the last 3 years. It then details whether or not the community members took any action to meet these needs and how they went about doing so.
Module CI: Communal Resource Management	This module collects information on communal resources owned by the community and how the rules of access are determined. It further elicits information about how compliance with these rules is enforced among both community members and outsiders.
Module CJ: Communal Organization	This module asks the informed respondent group to report on the presence in the community of listed organizations. It further collects information on the number of specific groups, meeting frequency, size of membership, female and younger adult participation.
Module CK	This module asks the informed respondent group to report on selected items available for sale in the community or nearby at the time of the interview. It further collects information the prices of these items if they are available in the community.

3.0 ORGANIZATION OF THE SURVEY

3.1 Survey Management

The IHPS 2019 was executed by the National Statistical Office, under the direction of the Commissioner of Statistics and the IHS5 Management Team. The management team was responsible for questionnaire design, recruitment of personnel, training of personnel, and implementation of the survey. Figure 1 outlines the composition of the IHPS 2019 Management Team.

Figure 1: IHPS 2019 Management Team



Note: * Composed of Talip Kilic (Senior Economist), Heather Moylan (Survey Specialist), John Ilukor (Economist), Wilbert Vundru Drazi (IHPS 2019 Resident Advisor).

3.2 Training of Field Staff

Field staff for the IHPS 2019 and the IHS5 was selected after advertisements were placed in the national newspapers advertising posts for enumerators. Interviews were conducted to determine the most qualified candidates.

Training instruction was given to the field staff by the IHS5 Management Team with help from World Bank LSMS-ISA team members. The training consisted of classroom instruction on the contents of the questionnaire, concepts and definitions, interview techniques and methods, and field practices in performing actual interviews to ensure that Enumerators fully understood the questionnaire. Training instructions are detailed in the Enumerator and Field Supervisor's Manuals.

At the end of the training session, trainees were assessed based on tests given during the training process and evaluations by the supervisory personnel. 72 candidates were selected to be Field Enumerators and 18 members of NSO staff were chosen to be supervisors.

3.3 Field Work Implementation

The IHPS 2019 fieldwork began in April 2019 at the same time as the full IHS5 cross-section. Each of the 18 field-based mobile teams consisting of 1 supervisor, 4 enumerators and 1 driver were assigned to cover specific districts and received cross-sectional and panel assignments associated with these districts. Prior to leaving headquarters for fieldwork, team leaders and NSO management sorted

carefully through all tracking forms for panel households to be sure that split-off households from 2016 were assigned to the correct team.

3.31 Field Supervisors

The IHPS 2019 field based supervisors were responsible for managing the daily operations of their respective field based mobile team. Each team supervisor received enumeration assignment schedules throughout the fieldwork. Enumeration assignments were further accompanied by (1) enumeration area maps, (2) completed listing forms, (3) the list of selected as well as replacement households to be interviewed in each EA (4) the Survey Solutions assignments for the selected EA from headquarters.[7]

Primary responsibilities included: (1) liaising with IHPS 2019 management on schedules, field operation status, equipment status and needs, and special issues, (2) planning daily field operation schedules including coverage and transportation, (3) liaising with local authorities before commencing interview activities, (3) making Survey Solutions questionnaire assignments on CAPI and syncing completed interviews with their Supervisor account (4) reviewing incoming questionnaires for completion and accuracy, (5) syncing reviewed questionnaires with the Headquarters account, (6) reviewing error reports from Headquarters generated through Stata checking system and assigning questionnaire reviews, and authorizing review/call back based on these reports, (7) administering community questionnaires within each enumeration area.

3.32 Enumerators

Field based mobile teams consisted of 4 enumerators to field household interviews over the course of the scheduled fieldwork. An enumerator's major areas of responsibility were to accurately and completely administer the Household, Agriculture, and Fishery questionnaires. The enumerators were responsible for: (1) locating assigned households, (2) relaying the source and purpose of the survey and obtaining respondent permission to implement the interview, (3) implementing all pertinent questionnaire modules, (4) systematically obtaining anthropometric measures for qualified household members, (5) using GPS technology to mark and record household locations and take agricultural field measurements, and (6) participating in the review and correction of questionnaires.

3.40 Field Work Monitoring and Evaluation

The IHPS 2019 field operations were regularly monitored through visits to the field based teams by the NSO IHPS 2019 Managers, the World Bank IHPS 2019 Resident Advisor, and the technical missions from the World Bank LSMS-ISA team. In addition, data transmitted from the field was regularly reviewed for completeness and quality by the NSO IHPS 2019 Managers with the assistance of the World Bank IHPS 2019 Resident Advisor. The incoming data was organized and regularly checked for completeness and quality at the national-, district-, team-, and enumerator-level. The issues that were found in instrument implementation, general quality, or other technical issues were reviewed, and the appropriate corrective action taken by the NSO IHPS 2019 Managers and technical support staff either through revised field notes, additional field visits, remote communication directly with the field supervisors and/or general Whatsapp/SMS messages relayed to all teams.

After the first quarter of fieldwork, field supervisors and assistants were recalled to the cities of the different regions (Mzuzu, Blantyre, Lilongwe and Zomba) to discuss observations and concerns by

[7] Assignments for households tracked outside of their original EA were made upon request. To avoid a large number of assignments on the tablets at a time, EA assignments from headquarters were made approximately 48 priors to teams starting interviews in a new EA.

field supervisors and to address observed concerns in the data. In general, field based teams demonstrated extremely high commitment to collecting high quality data and the successful completion of the IHPS 2019 survey with the assistance of the NSO IHPS 2019 Management team. In a few cases, however, failure to alleviate quality concerns through the above mentioned methods and individual coaching efforts lead to the restructuring of select field teams and or the replacement of field based staff.

4.0 DATA ENTRY AND DATA MANAGEMENT

4.1 Data Entry Platform

To ensure data quality and timely availability of data, the IHPS 2019 was implemented using the World Bank's *Survey Solutions* CAPI software.[8] To carry out IHPS 2019, 1 laptop computer and a wireless internet router were assigned to each team supervisor, and each enumerator had an 8–inch GPS-enabled Lenovo tablet computer that the NSO provided. The use of *Survey Solutions* allowed for the real-time availability of data as the completed data was completed, approved by the Supervisor and synced to the Headquarters server as frequently as possible. While administering the first module of the questionnaire the enumerator(s) also used their tablets to record the GPS coordinates of the dwelling units. Geo-referenced household locations from that tablet complemented the GPS measurements taken by the Garmin eTrex 30 handheld devices and these were linked with publically available geospatial databases to enable the inclusion of a number of geospatial variables - extensive measures of distance (i.e. distance to the nearest market), climatology, soil and terrain, and other environmental factors - in the analysis.

4.2 Data Management

The IHPS 2019 *Survey Solutions* CAPI based data entry application was designed to stream-line the data collection process from the field. IHPS 2019 Interviews were mainly collected in "sample" mode (assignments generated from headquarters) and a few in "census" mode (new interviews created by interviewers from a template) for the NSO to have more control over the sample. This hybrid approach was necessary to aid the tracking operations whereby an enumerator could quickly create a tracking assignment considering that they were mostly working in areas with poor network connection and hence could not quickly receive tracking cases from Headquarters.

The range and consistency checks built into the application was informed by the LSMS-ISA experience with the IHS3 2010/11, IHPS 2013 and IHPS 2016. Prior programming of the data entry application allowed for a wide variety of range and consistency checks to be conducted and reported and potential issues investigated and corrected before closing the assigned enumeration area. Headquarters (the NSO management) assigned work to the supervisors based on their regions of coverage. The supervisors then made assignments to the enumerators linked to their supervisor account. The work assignments and syncing of completed interviews took place through a Wi-Fi connection to the IHPS 2019 server. Because the data was available in real time it was monitored closely throughout the entire data collection period and upon receipt of the data at headquarters, data was exported to Stata for other consistency checks, data cleaning, and analysis.

[8] For background and documentation on *Survey Solutions*, please visit https://mysurvey.solutions/. The software platform is available free of charge and is being developed by the World Bank Development Data Group - Data Analytics and Tools Unit (DECAT). To access Survey Solutions Designer, please visit and sign up as a user at https://designer.mysurvey.solutions/. All IHPS 2019 CAPI questionnaires are available free of charge to any interested implementing agency.

4.3 Data Cleaning

The data cleaning process was done in several stages over the course of fieldwork and through preliminary analysis. The first stage of data cleaning was conducted in the field by the field-based field teams utilizing error messages generated by the Survey Solutions application when a response did not fit the rules for a particular question. For questions that flagged an error, the enumerators were expected to record a comment within the questionnaire to explain to their supervisor the reason for the error and confirming that they double checked the response with the respondent. The supervisors were expected to sync the enumerator tablets as frequently as possible to avoid having many questionnaires on the tablet, and to enable daily checks of questionnaires. Some supervisors preferred to review completed interviews on the tablets so they would review prior to syncing but still record the notes in the supervisor account and reject questionnaires accordingly. The second stage of data cleaning was also done in the field, and this resulted from the additional error reports generated in Stata, which were in turn sent to the field teams via email or DropBox. The field supervisors collected reports for their assignments and in coordination with the enumerators reviewed, investigated, and collected errors. Due to the quick turn-around in error reporting, it was possible to conduct call-backs while the team was still operating in the EA when required. Corrections to the data were entered in the rejected questionnaires and sent back to headquarters.

The data cleaning process was done in several stages over the course of the fieldwork and through preliminary analyses. The first stage was during the interview itself. Because CAPI software was used, as enumerators asked the questions and recorded information, error messages were provided immediately when the information recorded did not match previously defined rules for that variable. For example, if the education level for a 12 year old respondent was given as post graduate. The second stage occurred during the review of the questionnaire by the Field Supervisor. The Survey Solutions software allows errors to remain in the data if the enumerator does not make a correction. The enumerator can write a comment to explain why the data appears to be incorrect. For example, if the previously mentioned 12 year old was, in fact, a genius who had completed graduate studies. The next stage occurred when the data were transferred to headquarters where the NSO staff would again review the data for errors and verify the comments from the enumerators and supervisors regarding anomalies that remain.

Additional cleaning was performed after interviews were “Approved” where appropriate to resolve systematic errors and organize data modules for consistency and efficient use. Case by case cleaning was also performed during the preliminary analysis specifically pertaining to out of range and outlier variables.

All cleaning activities were conducted led by the NSO, and the World Bank LSMS-ISA team provided technical assistance.

5.0 USING THE IHPS 2019 DATA

It is strongly recommended that the end user of the IHPS data familiarize themselves with the questionnaires and manuals while using the IHPS data. The naming of IHPS data files follows the instrument name and module lettering as listed in the questionnaires and variable names, whenever possible, reflect question numbers as presented in relative modules. In the STATA versions of the data, variable labels, whenever possible, perfectly match the question asked in the questionnaires. In some cases it was necessary to modify the variable labels and cross-referencing the questionnaires will be necessary for accurate use of the data.

To increase the efficiency with which the survey instruments were administered, the IHPS instruments make extensive use of skip patterns. End users of the IHPS data must be aware of these skip patterns to properly interpret the data. When referencing the available paper questionnaires note that skip patterns are, in most cases, clearly identified by an arrow followed by a number in parentheses (>> 2).[9] The skip codes are explained in detail in the Enumerator Manual.

5.1 File Structure, Key Identifiers

The file structure of the IHPS data directly reflects the modules in the questionnaires. Where modules in the questionnaire contain data with multiple levels of observation, data files have been divided with additional numeric labels. It is recommended that end users of the IHPS data refer to the questionnaires and manuals when using the data. The index of data files, along with key identifiers relevant for merging data from different modules, are presented in Tables 7-10.

IHPS data files follow an intuitive naming scheme for easy use by the end user. Each file name gives reference to the instrument component, "HH" (Household), "AG" (Agriculture), "FS" (Fishery) and "COM" (Community) and the specific module as they appear in the questionnaires. For example, file "HH_MOD_B" refers to Household Module B; Household Roster. Similarly, file "AG_MOD_Q", for example, refers to Agriculture Module Q; "Tree / Permanent Crop Production (Over the Last 12 Months)". In modules that contain sub-sections with varying levels of observation, a number has been added to the tail of the file name, "HH_MOD_G1" and "HH_MOD_G2" for example. The numbers are sequential with how the module appears in the questionnaire.

5.2 Household Level Instruments

Each household level IHPS instrument cover sheet captures information on the location of the household at both the time of the baseline IHS3 survey as well as at the time of IHPS. It is important to note that given the 2-visit structure of IHPS, we encountered households that moved between visits. For these cases the IHPS locational identifiers reflect the location of the household during the visit we collected their consumption data – Visit 1 for Panel A and Visit 2 for Panel B. The primary location identifiers include the **regional**, **district** and **urban/rural** locations of each household in 2010, 2013, 2016 and 2019 in the IHS3, IHPS 2013, IHPS 2016 and the IHPS 2019 database, respectively.

Additionally, the variable, "qx_type" was added to the IHPS 2019 data sets to identify the sub-sample assignment of each sample EA just as done in IHPS 2010, IHPS 2013 and IHPS 2016. The baseline enumeration area sub-sample type "Panel A" or "Panel B" is identified by the "qx_type" variable across all IHPS instruments and datasets.

Also provided in every module of the household, agriculture and fishery questionnaire data files is the variable "**interview_status**" notating whether a household was interviewed in both Visit 1 and 2 or just one of the two visits (i.e. combining the workload and going through it in one sitting). If a household was only found in Visit 2 then, regardless of Panel A vs. B status, the enumerator administered both the Visit 1 portion and the Visit 2 portion of all instruments. This variable is broken down by Panel A vs. Panel B for easy use and is particularly relevant for understanding the timing of the administration of different modules, and the missing data in certain modules for the Panel A households only found in Visit 1.

For household modules B through E, the level of observation is the individual household member. The variable, id_code refers to the roster row for the household member in 2019 and when used in conjunction with "**y4_hhid**" can uniquely identify individuals within the IHPS 2019 household across household modules of similar level of observation.

[9] Skip patterns were automatically taken into account in the CAPI application.

Furthermore, it is important to note that although most of the modules were administered only once, either in Visit 1 or in Visit 2, the household roster was administered in both visits for all Panel sub-groups. In the final version of the data, the household roster information collected in both Visit 1 and Visit 2 is collapsed to indicate each household member only once. As some information between visits may have changed, the individual's age and status in the household for example, the information presented in the household roster is directly associated with the time of visit of the main sections of the household questionnaire.

Both the status and age in Visit 2 are provided, given that these variables directly determine the respondents for the remaining household questionnaire modules. Members that existed in the first visit of the Panel B sample but may not have been present in visit 2 will be indicated in this status. For both the Panel A and Panel B households, the information presented in the rest of the household roster is associated with Visit 1 unless it was a household found only in Visit 2 and the interview was done in one sitting.

5.3 Community Level Instruments

The community questionnaire was administered in the original 101 panel EAs and observations are uniquely identified by using the "**ea_id**" variable, carried over from the baseline data collection. For further details on the construction of the ea_id along with examples, please refer to the IHS3 basic information document.

5.4 Linking IHPS Databases Across Rounds

The IHPS data include the variables **case_id** and **HHID** as baseline household identifiers, since each of the 3,181 IHPS 2019 households can be mapped to the 2010, 2013 and 2016 household counterparts.

The variable **y4_hhid** is the unique household identifier in the IHPS 2019 data, and it is composed of a 4-digit renumbered 2016 value plus the lowest IHPS 2019 two-digit roster ID code (identified by the variable hh_b06_1 in the HH_MOD_B of the IHPS 2019 database) for the baseline sample members that were found in that household in 2019. [10]

At the **individual-level**, the IHPS data from 2010, 2013, 2016 and 2019 can be merged using the variable **PID** (without using any other variable for individual level merges across time). **PID** is a unique individual identifier that is assigned to a given individual the first time he/she joined the panel sample, whether in 2010, 2013, 2016 or 2019. Given the attrition at the household and individual levels, the merges across the rounds of the IHPS data will not be perfect.[11]

A special scenario encountered in the IHPS involved individuals moving from one IHPS baseline household to another. These individuals are identified in ta **individualmover** in HH_MOD_B. The baseline household these individuals are listed in the variable **moverbasehh**.

To replicate the attrition statistics reported in Section 1.0, the users should consult the ancillary data file "**IHPS2019MemberDatabase**" that has been made available. The file contains all 12,250 IHPS 2016 sample individuals; the variable **eligible_tracking** that identifies those that were tracking eligible in 2019 in terms of their projected age in 2019 and their relationship to household head in 2016 in accordance with the tracking protocol explained in Section 1.0; the variable **status** that identifies their final tracking outcome in 2016 (complete for all 10,035 individuals); the variable

whynotfound that identifies the reason for being unable to interview a given *tracking-eligible* individual in 2016 (cases that migrated outside of Malawi, moved to an institution such as a police compound or army barracks, and other special cases); and the variable **specialcase** that details the unique reason for not being able to interview IHPS 2013 individuals that are marked as "special case" for the variable **whynotfound**.

5.5 IHPS 2019 Location Information

The 2019 location identifiers are available for the region, district, TA and urban/rural based on the survey field team reporting of household locations. The 8-digit ea_id provided is the baseline enumeration area identifier and is an attribute carried over from 2010 to 2019 (similar to case_id and HHID, as explained above), as such there are 102 unique ea_id values in 2019.

5.6 Confidential Information, Geospatial Variables

To maintain the confidentiality of our respondents, certain parts of the IHPS 2019 database have not been made publicly available. The confidential variables pertain to (i) names of the respondents to the household and community questionnaires, (ii) village and constituency names, (iii) descriptions of household dwelling and agricultural plot locations, (iv) phone numbers of household members and their reference contacts, (v) GPS-based household and agricultural plot locations, (vi) names of the children of the head/spouse living elsewhere, (vii) names of the deceased household members, (viii) names of individuals listed in the network roster, and (ix) names of field staff.

To enhance the IHPS 2019 data, a set of geospatial variables has been generated using the georeferenced field and household locations in conjunction with various geospatial databases that were available to the survey team. These include simple measures of distance, climatology, soil and terrain and other environmental factors. Time-series on rainfall and vegetation have also been used to describe the survey agricultural season relative to normal conditions. The variables are intended to provide contextual information at the landscape level. The file **IHPS2019.Geovariables.Description.pdf** provides the name, type, source, reference period, resolution, description, and source of each variable. Household geospatial variables in the public release have been produced using anonymized location data (see below for description of anonymization method).

The geo-variables are stored in two data files, one at the household-plot-level, the other at the household-level. The plot-level file, named **PlotGeovariables_Y4.dta**, contains several geospatial variables describing the physical landscape and plot distance to household. The observations are uniquely identified by the combination of **y4_hhid gardenid plotid**. The observations included in this file are rainy season, dry season and permanent crop plots that are owned and/or cultivated by the household and that have been visited for GPS-based land area measurement. The rest of the geovariables are stored in **HouseholdGeovariables_Y4.dta** and the observations are uniquely identified by **y4_hhid.** To partially satisfy the demand for geo-referenced household and community locations while preserving the confidentiality of sample household and communities, we have computed the average of household GPS coordinates in each EA, applied a random offset within a specified range to the average EA value (following the MeasureDHS methodology) and provided the off-set EA latitudes and longitudes as part of **HouseholdGeovariables**. For households that have moved or split-off and are more than 5 km from their baseline or prior wave location, the offset is with respect to the new household location. In some remote locations the coordinate modification does not provide sufficient anonymization and the coordinates are suppressed.

More specifically, the coordinate modification strategy relies on random offset of cluster center-point coordinates (or average of household GPS locations by EA) within a specified range determined by an

urban/rural classification. For urban areas a range of 0-2 km is used. In rural areas, where communities are more dispersed and risk of disclosure may be higher, a range of 0-5 km offset is used. An additional 0-10 km offset for 1% of rural clusters effectively increases the known range for all rural points to 10 km while introducing only a small amount of noise. Offset points are constrained at the district level, so that they still fall within the correct district for spatial joins, or point-in-polygon overlays. The result is a set of coordinates, representing EA or mover household location, that fall within known limits of accuracy. Users should take into account the offset range when considering different types of spatial analysis. Analysis of the spatial relationships between locations in close proximity would not be reliable. However, spatial queries using medium or low-resolution datasets should be minimally affected by the offsets. Zonal statistics (average or range of values within an area corresponding to the known range) could help minimize the effect of offsets when combining with large scale data or high-resolution grids with a high degree of local variation.

Table 7: Structure of the IHPS 2019 Household Database

File Name	Module Name	Level of Analysis	Identification Variable(s)
HH_MOD_A_FILT	Module A: Household Identification	Household	y4_hhid
HH_MOD_B	Module B: Household Roster	Individual	y4_hhid PID
HH_MOD_C	Module C: Education	Individual	y4_hhid PID
HH_MOD_D	Module D: Health	Individual	y4_hhid PID
HH_MOD_E	Module E: Time Use & Labour	Individual	y4_hhid PID
HH_MOD_F	Module F: Housing	Household	y4_hhid
HH_MOD_F1	Module F1: Land Roster	Garden	y4_hhid gardenid
HH_MOD_G1	Module G: Food Consumption Over Past One Week	Consumption Item	y4_hhid hh_g02
HH_MOD_G2	Module G: Food Consumption Over Past One Week	Food Group	y4_hhid hh_g08*
HH_MOD_G3	Module G: Food Consumption Over Past One Week	Age Group	y4_hhid hh_g10a
HH_MOD_H	Module H: Food Security	Household	y4_hhid
HH_MOD_I1	Module I: Non-Food Expenditures – Over Past One Week & One Month	Consumption Item	y4_hhid hh_i02
HH_MOD_I2	Module I: Non-Food Expenditures – Over Past One Week & One Month	Consumption Item	y4_hhid hh_i05
HH_MOD_J	Module J: Non-Food Expenditures – Over Past Three Months	Consumption Item	y4_hhid hh_j02
HH_MOD_K	Module K: Non-Food Expenditures – Over Past 12 Months	Consumption Item	y4_hhid hh_k02
HH_MOD_L	Module L: Durable Goods	Durable Good	y4_hhid hh_l02
HH_MOD_M	Module M: Farm Implements, Machinery,	Farm Implement	y4_hhid hh_m0b

	and Structures		
HH_MOD_N1	Module N: Household Enterprises	Household	y4_hhid
HH_MOD_N2	Module N: Household Enterprises	Household Enterprise	y4_hhid hh_n09a
HH_MOD_O	Module O: Children Living Elsewhere	Child of Head/Spouse Living Elsewhere	y4_hhid hh_o0a
HH_MOD_P	Module P: Other Income	Income Type	y4_hhid hh_p0a
HH_MOD_Q	Module Q: Gifts Given Out	Gift Type	y4_hhid D hh_q0a
HH_MOD_R	Module R: Social Safety Nets	Program	y4_hhid hh_r0a
HH_MOD_S1	Module S: Credit	Loan	y4_hhid hh_s02
HH_MOD_S2	Module S: Credit	Household	y4_hhid
HH_MOD_T	Module T: Subjective Assessment Of Well-Being	Household	y4_hhid
HH_MOD_U	Module U: Shocks & Coping Strategies	Shock	y4_hhid hh_u0a
HH_MOD_V	Module V: Child Anthropometry	Individual	y4_hhid PID
HH_MOD_W	Module W: Deaths In Household	Deceased Individual	y4_hhid hh_w01
HH_MOD_X	Module X: Filter Questions For Agriculture & Fishery Questionnaires	Household	y4_hhid

Table 8: Structure of the IHPS 2019 Agriculture Databases

File Name	**Module Name**	**Level of Analysis**	**Identification Variable(s)**
AG_META	Agriculture Questionnaire Metadata (Contains time stamps and respondent IDs for each module)	Household	y4_hhid
AG_MOD_B2	Ag-Module B_2: Garden Details – [Rainy Season]	Garden	y4_hhid gardenid
AG_MOD_C	Ag-Module C: Plot Roster - [Rainy Season]	Plot	y4_hhid gardenid plotid
AG_MOD_D	Ag-Module D: Plot Details - [Rainy Season]	Plot	y4_hhid gardenid plotid
AG_MOD_E1	Ag-Module E: Coupon Use - [Rainy Season]	Individual-Coupon Type	y4_hhid ag_e0b ag_e0c
AG_MOD_E2	Ag-Module E: Coupon Use - [Rainy Season]	Individual-Coupon Type	y4_hhid ag_e0e ag_e0g
AG_MOD_E3	Ag-Module E: Coupon Use - [Rainy Season]	Household	y4_hhid
AG_MOD_E4	Ag-Module E: Coupon Use - [Rainy Season]	Coupon Type	y4_hhid ag_e30
AG_MOD_F	Ag-Module F: Other Inputs	Input Type	y4_hhid ag_f0c

	- [Rainy Season]		
AG_MOD_G	Ag-Module G: Crops – [Rainy Season]	Plot-Crop	y4_hhid gardenid plotid crop_code
AG_MOD_H	Ag-Module H: Seeds – [Rainy Season]	Seed Type	y4_hhid crop_code
AG_MOD_I	Ag-Module I: Sales/Storage - [Rainy Season]	Crop	y4_hhid crop_code
AG_MOD_I_1	Ag-Module I_1: Harvest Labour [Rainy Season]	Individual-Crop Type	y4_hhid id_code crop_code
AG_MOD_I2	Ag-Module I2: Garden Details – [Dry Season]	Garden	y4_hhid gardenid
AG_MOD_J	Ag-Module J: Plot Roster – [Dry (Dimba) Season]	Plot	y4_hhid gardenid plotid
AG_MOD_K	Ag-Module K: Plot Details - [Dry (Dimba) Season]	Plot	y4_hhid gardenid plotid
AG_MOD_L	Ag-Module L: Other Inputs - [Dry (Dimba) Season]	Input Type	y4_hhid ag_l0c
AG_MOD_M	Ag-Module M: Crops – [Dry (Dimba) Season]	Plot-Crop	y4_hhid gardenid plotid crop_code
AG_MOD_N	Ag-Module N: Seeds – [Dry (Dimba) Season]	Seed Type	y4_hhid crop_code
AG_MOD_O	Ag-Module O: Sales/Storage – [Dry (Dimba) Season]	Crop	y4_hhid crop_code
AG_MOD_O_1	Ag-Module I_1: Harvest Labour [Dimba Season]	Individual-Crop Type	y4_hhid id_code crop_code
AG_MOD_O2	Ag-Module O_1: Plot Roster Tree Crop Production	Plot	y4_hhid gardenid
AG_MOD_P	Ag-Module P: Tree / Permanent Crop Production Last 12 Months	Plot-Tree Crop	y4_hhid gardenid plotid crop_code
AG_MOD_Q	Ag-Module Q: Tree/Permanent Crop Sales/Storage Last 12 Months	Tree Crop	y4_hhid crop_code
AG_MOD_Q_1	Ag-Module Q_1: Harvest Labour [Tree/Perm Season]	Individual-Crop Type	y4_hhid id_code crop_code
AG_MOD_R1	Ag-Module R: Livestock	AnimalType	y4_hhid ag_r0a
AG_MOD_R2	Ag-Module R: Livestock	Household	y4_hhid
AG_MOD_S	Ag-Module S: Livestock Products	By-product	y4_hhid ag_s0a
AG_MOD_T1	Ag-Module T: Access To Extension Services	Extension Source	y4_hhid ag_t0a
AG_MOD_T2	Ag-Module T: Access To Extension Services	Extension Source	y4_hhid ag_t0b
AG_NETWORK	Network Roster	Roster Member	y4_hhid Id

Table 9: Structure of the IHPS 2019 Fishery Databases

File Name	Module Name	Level of Analysis	Identification Variable(s)
FS_MOD_B_FILT	Module B: Fisheries Calendar	Household	y4_hhid
FS_MOD_C	Module C: Fisheries Labour (Last High Season)	Individual	y4_hhid fs_c00
FS_MOD_D1	Module D: Fisheries Input (Last High Season)	Fishing Gear	y4_hhid Fishing_GearID
FS_MOD_D2	Module D: Fisheries Input (Last High Season)	Boat/Engine	y4_hhid Boats_EnginesID
FS_MOD_D3	Module D: Fisheries Input (Last High Season)	Household	y4_hhid
FS_MOD_E1	Module E: Fisheries Output (Last High Season)	Fish Type	y4_hhid fs_e02
FS_MOD_E2	Module E: Fisheries Output (Last High Season)	Fishing Gear	y4_hhid Rented_Out_GearID
FS_MOD_F1	Module F: Fish Trading (Last High Season)	Fish Type	y4_hhid fs_f01
FS_MOD_F2	Module F: Fish Trading (Last High Season)	Cost Item	y4_hhid CostsID
FS_MOD_G	Module G: Fisheries Labour (Last Low Season)	Individual	y4_hhid PID
FS_MOD_H1	Module H: Fisheries Input (Last Low Season)	Fishing Gear	y4_hhid Fishing_GearID
FS_MOD_H2	Module H: Fisheries Input (Last Low Season)	Boat/Engine	y4_hhid Boats_EnginesID
FS_MOD_H3	Module H: Fisheries Input (Last Low Season)	Household	y4_hhid
FS_MOD_I1	Module I: Fisheries Output (Last Low Season)	Fish Type	y4_hhid fs_i02
FS_MOD_I2	Module I: Fisheries Output (Last Low Season)	Fishing Gear	y4_hhid Rented_Out_GearID
FS_MOD_J1	Module J: Fish Trading (Last Low Season)	Fish Type	y4_hhid fs_j01
FS_MOD_J2	Module J: Fish Trading (Last Low Season)	Cost Item	y4_hhid CostsID

Table 10: Structure of the IHPS 2019 Community Database

File Name	Module Name	Level of Analysis	Identification Variable(s)
COM_CA	Module CA: Community Identification	Community	ea_id
COM_CB	Module CB: Roster Of Informants	Informant	ea_id com_cb01
COM_CC	Module CC: Basic Information	Community	ea_id
COM_CD	Module CD: Access To Basic Services	Community	ea_id
COM_CE	Module CE: Economic Activities	Community	ea_id
COM_CF	Module CF: Agriculture	Community	ea_id
COM_CG	Module CG: Changes	Community	ea_id

COM_CG1	Module CG: Changes	Community	ea_id
COM_CG2	Module CG: Changes	Event	ea_id com_cg35a
COM_CH	Module CH: Community Needs, Actions & Achievements	Need	ea_id com_ch0b
COM_CI	Module CI: Communal Resource Management	Natural Resource	ea_id com_ci0b
COM_CJ	Module CJ: Communal Organization	Communal Group Type	ea_id com_cj0b
COM_CK	Section CK: Prices	Item	ea_id com_ck00a

6.0 Weighting Procedures for 2019 Panel Survey

The longitudinal panel analysis involves using the data for all the sample panel households that had completed interviews in all four rounds of the Panel Survey (2010 baseline, 2013, 2016 and 2019). Therefore the weights were calculated for this set of matched sample households (both original panel and split) for all four rounds. The calculation of the basic weights for the 2016 round of the Panel Survey are described in the final methodological report on the IHS-4 sample design and estimation procedures. In that report the formula for the basic weight of the baseline panel households was simplified as follows:

$$W'_{Pghi} = \frac{M_g \times M'_{hi}}{n_{Pg} \times M_{hi} \times m_{hi}} \times \frac{n_{Pg}}{n_{P16g}} = \frac{M_g \times M'_{hi}}{n_{P16g} \times M_{hi} \times m_{hi}}$$

where:

W'_{Pghi} = basic sampling weight for the panel households in the 2016 subsample for the i-th sample EA in district h within region, rural/urban stratum g

M_g = total number of households in region, rural/urban stratum g from 2008 Malawi Census frame

M'_{hi} = total number of households in the 2010 baseline listing for the i-th sample EA in district h

n_{Pg} = number of EAs selected in subsample for the 2013 Panel Survey in region, rural/urban stratum g

M_{hi} = total number of households in the i-th sample EA in district h from the 2008 Malawi Census frame

m_{hi} = 16 = number of sample households selected for the 2010 baseline survey (IHS-2) in the i-th sample EA in district h

n_{P16g} = number of EAs selected in subsample for the 2016 Panel Survey in region, rural/urban stratum g

Given that the 2019 Panel Survey used the same sample of panel households from the 102 baseline sample EAs as the 2016 survey, this same baseline sampling weight was used. This is the first component of the weight for the corresponding panel households in the 2016 and 2019 Panel Surveys, including the split households associated with each baseline panel household.
The next step involved an adjustment of the basic weights for nonresponse, based on response propensity scores calculated from the panel data for each round using a logistic regression model that

takes into account different characteristics of each household. The response propensity score for each round of the Panel Survey corresponds to the probability that a sample panel household interviewed the previous round was interviewed again. A logistic regression model was used to calculate the 2013, 2016 and 2019 propensity scores for all the sample panel households interviewed in all three rounds of the Panel Survey.

The nonresponse adjustment factor for the baseline weight of each panel household is equal to the inverse of the corresponding response propensity scores. Since the data included in the longitudinal analysis is limited to the panel households interviewed in all three rounds of the Panel Survey (baseline, 2013, 2016 and 2019), it is necessary to multiply the response propensity scores from all three rounds to determine the overall probability of the household being interviewed in all three rounds. Therefore the first panel weight adjustment factor for nonresponse can be expressed as follows:

$$A_{Rghij} = \frac{1}{ps_{13ghij} \times ps_{16ghij} \times ps_{19ghij}}$$

where:

A_{Rghij} = first panel weight adjustment factor (for nonresponse) for the j-th sample panel household in the i-th sample panel EA in district h within region, rural/urban stratum g

ps_{13ghij} = response propensity score from the 2013 Panel Survey for the j-th sample panel household in the i-th sample panel EA in district h within region, rural/urban stratum g

ps_{16ghij} = response propensity score from the 2016 Panel Survey for the j-th sample panel household in the i-th sample panel EA in district h within region, rural/urban stratum g

ps_{19ghij} = response propensity score from the 2019 Panel Survey for the j-th sample panel household in the i-th sample panel EA in district h within region, rural/urban stratum g

The second weight adjustment factor was for the sample panel households that were split; a separate adjustment factor was calculated for each original and split household. For each split panel household, it was necessary to determine the proportion of the eligible persons 12 years or older in the 2016 Panel Survey who were successfully tracked and interviewed in the split household for the 2019 Panel Survey. If an original panel household was not split or the split was not tracked, this weight adjustment factor would be equal to 1. Otherwise separate weight adjustment factors were calculated for the original and each split household, using the following formula:

$$A_{Sghijk} = \frac{e_{ghijk}}{e_{ghij}}$$

where:

A_{Sghijk} = second panel weight adjustment factor for the k-th split household of the j-th baseline panel household in the i-th sample panel EA in district h within region, rural/urban stratum g

e_{Sghijk} = number of eligible 2016 panel tracked persons interviewed in the 2019 Panel Survey in the k-th split household of the j-th baseline panel household in the i-th sample panel EA in district h within region,

rural/urban stratum g

e_{Sghij} = total number of eligible 2016 panel tracked persons interviewed in all the 2019 Panel Survey split households corresponding to the j-th baseline sample panel household in the i-th sample panel EA in district h within region, rural/urban stratum g

An example is presented here to illustrate the weight adjustment for split households. Let us assume that a baseline panel household had 5 persons in the 2016 Panel Survey eligible for tracking who were interviewed in 2019, across three split households. During the enumeration for the 2019 Panel Survey, two eligible household members were found in the original panel household, one eligible person was found in the first split household, and two in the second split household. In this case there are a total of 5 eligible persons from the 2016 Panel Survey who were tracked and interviewed. In this case the panel weights for the three split households would be calculated as follows:

- Original panel household with two eligible members: $A_{Sghijk} = \frac{2}{5}$
- First split household with one eligible baseline member: $A_{Sghijk} = \frac{1}{5}$
- Second split household with two eligible baseline members: $A_{Sghijk} = \frac{2}{5}$

It can be seen that the adjustment factors for the three split households add up to 1 to represent the full baseline panel household weight. A reference document that describes a similar panel weighting methodology used for the Tanzania Panel Survey is "Weight Calculations for Panel Surveys with Sub-Sampling and Split-off Tracking" (World Bank Policy Working Paper 6373, Kristen Himelein, February 2013).

In the case of the eligible new household members in each split household in the 2019 Panel Survey who were not in the 2016 Panel Survey, some of these persons also had a chance of being tracked through the household where they lived at the time of the 2016 survey. For this reason a third weight adjustment factor was needed for the weight of each split panel household. Using the data for the 2019 Panel Survey for each split panel household, it was necessary to determine the number of **new** (non-panel) household members that would have been eligible in the 2016 survey based on their age and relationship. This information was used to calculate a "fair share correction" of the weights for these households. One procedure that is used for this type of panel survey is to assume that all the new members of the household who would have been eligible for tracking came from the same original household. This simplifies the fair share correction factor for the panel weights of split households into the following two cases:

- Split households with no new member who would have been eligible for tracking based on their age and relationship: $A_{Nghijk} = 1$

- Split households with one or more new members who would have been eligible for tracking based on their age and relationship: $A_{Nghijk} = 0.5$

where:

A_{Nghijk} = third panel weight adjustment factor (corresponding to the fair share correction) for the k-th split household of the j-th baseline panel household in the i-th sample panel EA in district h within region, rural/urban stratum g

The panel weights for the sample households from each round are equal to the basic panel household weights multiplied by the three weight adjustment factors and can be expressed as follows:

$$W_{19ghijk} = W'_{Pghi} \times A_{Rghij} \times A_{Sghijk} \times A_{Nghijk}$$

where:

$W_{19ghijk}$ = final 2019 panel weight for the k-th split household of the j-th baseline panel household in the i-th sample panel EA in district h within region, urban/rural stratum g, for the Panel Survey

6.1 Adjustment of 2019 Panel Survey Weights Based on Population Projections

As recommended in the paper by Kristen Himelein, the final weights for the 2019 Panel Survey were then adjusted based on the population projections by district for the mid-point of the data collection period for this survey. The district is the lowest geographic level for which the population projections are available. The purpose of this adjustment is to ensure that the results of the 2019 Panel Survey reflect the distribution of the current population of Malawi, similar to the IHS-5 cross-sectional survey.

Similar to the adjustment of the IHS-5 weights, the population projections by district for 1 July 2019 and 1 July 2020 were used to exponentially interpolate the projected population for the mid-point of the data collection for the 2019 Panel Survey. The panel households were interviewed between 22 April and 11 November 2019, so the mid-point of the data collection was 1 August 2019. The formula used for this exponential interpolation was the same as that used for the population projections for the IHS-5 cross-sectional survey, specified in Section 6.1. The adjustment factor for the panel weights in each district was also calculated in a similar way, using the following formula:

$$A_{Ph} = \frac{\hat{P}_{IHPSh}}{\sum_{i\varepsilon h} \sum_j W_{19ghijk} \times p_{hij}}$$

where:

A_{Ph} = population projection adjustment factor for the weights of the 2019 Panel Survey sample households in district h

$\hat{P}_{IHPSh}$ = projected total population for district h for the mid-point of the data collection period for 2019 Panel Survey (1 August 2019), based on demographic analysis

$W_{19ghijk}$ = final panel weight for the k-th split household of the j-th baseline panel household in the i-th sample panel EA in district h within region, rural/urban stratum g, for the 2019 Panel Survey

$p_{19ghijk}$ = number of persons in the k-th split household of the j-th baseline panel household in the i-th sample panel EA in district h within region, rural/urban stratum g, for the 2019 Panel Survey

Table 11 presents the Malawi NSO population projections by district for 1 July 2019 and 2020, the corresponding interpolated population estimates for 1 August 2019, the preliminary weighted total population by district from the 2019 Panel Survey data, and the corresponding weight adjustment factor for the sample household weights in each district. This table does not include population projections for Likoma, since there were no panel sample households in this small island district. It can be seen that the weight adjustment factors are higher for the two districts with fewer sample panel households. The adjustment factor is especially high for Rumphi (18.0383), which only has 5 panel households. Neno has 9 panel households and an adjustment factor of 6.5448. The district of Mwanza has the lowest weight adjustment factor, 0.4895.

Table 11. Malawi Population Projections by District for 2019 and 2020, Interpolated Population for Mid-Point of 2019 Panel Survey Data Collection Period, Weighted Preliminary Total Population Estimate from 2019 Panel Survey, and Weight Adjustment Factors by District

District	2019 01-Jul-19	2020 01-Jul-20	IHS-5 01-Aug-19	Weighted Population 2019 Panel Survey	Weight Adjustment Factor
Chitipa	239,019	243,252	239,380	379,397	0.6309
Karonga	372,539	380,608	373,227	168,175	2.2193
Nkhata Bay	289,519	294,491	289,944	467,505	0.6202
Rumphi	233,804	238,777	234,228	12,985	18.0383
Mzimba	955,394	970,816	956,712	626,306	1.5275
Mzuzu City	229,823	240,005	230,682	143,103	1.6120
Kasungu	864,532	885,624	866,327	215,214	4.0254
Nkhotakota	402,236	410,891	402,974	199,697	2.0179
Ntchisi	326,545	336,263	327,370	275,268	1.1893
Dowa	793,628	814,635	795,414	582,724	1.3650
Salima	492,362	506,655	493,576	155,960	3.1648
Lilongwe, non-city	1,677,174	1,715,103	1,680,405	1,084,394	1.5496
Mchinji	616,755	630,560	617,931	168,844	3.6598
Dedza	850,541	869,712	852,174	995,187	0.8563
Ntcheu	678,328	697,236	679,935	546,042	1.2452
Lilongwe City	1,021,699	1,055,737	1,024,585	852,269	1.2022
Mangochi	1,185,332	1,224,716	1,188,671	1,076,945	1.1037
Machinga	760,704	788,256	763,037	372,991	2.0457
Zomba, non-city	763,920	780,755	765,355	395,668	1.9343
Chiradzulu	363,978	370,579	364,541	272,398	1.3383
Blantyre, non-city	462,696	474,284	463,682	522,742	0.8870
Mwanza	134,970	139,244	135,333	276,464	0.4895
Thyolo	734,913	747,086	735,953	985,093	0.7471
Mulanje	700,515	716,793	701,901	805,368	0.8715
Phalombe	441,219	453,359	442,251	227,531	1.9437
Chikwawa	577,665	590,368	578,747	343,380	1.6854
Nsanje	305,123	310,655	305,595	210,849	1.4494
Balaka	450,961	464,103	452,077	306,199	1.4764
Neno	141,358	144,322	141,611	21,637	6.5448
Zomba City	107,420	109,774	107,621	101,783	1.0574
Blantyre City	815,793	830,073	817,012	649,709	1.2575
Malawi	17,990,465	18,434,732	18,028,252	13,441,827	

ANNEX 1: CODES NOT INCLUDED IN THE QUESTIONNAIRE
DISTRICT CODES AND COUNTRY CODES

DISTRICT CODES:

Chitipa.....101
Karonga.....102
Nkhatabay.....103
Rumphi.....104
Mzimba.....105
Likoma.....106
Mzuzu City.....107
Kasungu.....201
Nkhotakota.....202
Ntchisi.....203
Dowa.....204
Salima.....205
Lilongwe Non-City..206
Mchinji.....207
Dedza.....208
Ntcheu.....209
Lilongwe City.....210
Mangochi.....301
Machinga.....302
Zomba Non-City.....303
Chiradzulu.....304
Blanytyre Non-City...305
Mwanza.....306
Thyolo.....307
Mulanje.....308
Phalombe.....309
Chikwawa.....310
Nsanje.....311
Balaka.....312
Neno.....313
Zomba City.....314
Blantyre City.....315

COUNTRY CODES:

Angola.....501
Australia.....502
Botswana.....503
Canada.....504
China.....505
Lesotho.....506
Mozambique.....507
Namibia.....508
New Zealand.....509
South Africa.....510
Swaziland.....511
Tanzania.....512
United Kingdom (UK)..513
United States of America (USA).....514
Zambia.....515
Zimbabwe.....516
Other Country (Specify).....517

OCCUPATION CODES

MAJOR GROUP 0/1: PROFESSIONAL, TECHNICAL, & RELATED WORKERS	
01	**Physical Scientists and related technicians.** Chemists, Physicists
02	**Architects, Surveyors and related workers.** Architects, Planners, Surveyors, Draughtsmen and related workers
03	**Engineers and related workers.** Civil, Mechanical, Electrical, Mining and Other Engineers; Mining Technicians
04	**Aircraft's and ships' officers.** Pilots, Navigators, deck officers, flight and ships' officers
05	**Life scientists and related technicians**. Agronomists, biologists, zoologists.
06	**Medical, dental and related workers.** Doctors, Dentists, Medical and Dental Assistants, Nurses, X-ray and other medical technicians. (**Excluding traditional healers (which are group 59)**)
07	**Veterinary and related workers.** Veterinarians and related workers not elsewhere classified
08	**Statisticians, mathematicians, systems analysts.** Statisticians, actuaries, systems analysts and related technicians
09	**Economists**
11	**Accountants**, (private or government); (for book-keepers see 33)
12	**Jurists.** Lawyers, Judges
13	**Teachers**. University Lectures and teachers.
14	**Workers in Religion.** Priests, nuns lay brothers etc, and related workers in religion not elsewhere classified
15	**Writers.** Authors, journalists, critics and related writers.
16	**Artists.** Sculptors, painters of pictures, photographers and cameramen.
17	**Composers and Performing artists.** Composers, musicians, singers, dancers, actors, producers, performing artists.
18	**Athletics, sportsmen and related workers.** Athletes, etc.
19	**Professional and technical workers not elsewhere classified**. Librarians, archivists, curators, sociologists, social workers and occupational specialists, translators, interpreters and other professional and technical workers not elsewhere classified.
MAJOR GROUP 2: ADMINISTRATION AND MANAGERIAL WORKERS	
20	**Legislative Officials and government senior administrators.** Legislative officials.
21	**Managers.** General Managers, production managers (except farm managers) and managers not elsewhere classified.
22	**Traditional Leaders.** Village Headmen, Group Village Headmen, Sub-Traditional Authorities, Traditional Authorities, Senior Traditional Authorities/Chiefs, Paramount Chiefs.
MAJOR GROUP 3: CLERICAL AND RELATED WORKER	
30	**Clerical supervisors**
31	**Government administrative/secretarial officials**
32	**Stenographers and related workers.** Stenographers, typists, card and tape punching machine operators.
33	**Book-keepers, cashiers and related workers.** Book-keepers and cashiers.
34	**Computing and machine operators of book-keeping machines, calculators and automatic data processing machines (computers).**
35	**Transport and communication supervisors**. Railway Stations Masters, postmasters, communication supervisors not elsewhere classified stated.
36	**Transport conductors.** Bus conductors
37	**Mail distribution clerks.** Registry clerks
38	**Telephone and telegram operators Including switchboard (PBX) operators.**
39	**Clerical and related workers not elsewhere classified.** Stock Clerk Correspondence clerks, receptionists, and travel agency clerks, Library and filling clerks and other clerks and not elsewhere classified.
MAJOR GROUP 4: SALES WORKERS	

40	**Managers (wholesale & retail trade)**
41	**Working proprietors (wholesale and retail trade)**
42	**Sales supervisors and buyers**
43	**Technical salesmen, commercial travellers, manufactures agency**
44	**Auctioneers and salesmen of insurance, real estate, securities, and business services.**
45	**Salesmen and shop assistants, and related workers** (demonstrators, street vendors, canvassers, news vendors).
49	**Sales workers not elsewhere classified.**
MAJOR GROUP 5: SERVICE WORKERS	
50	**Managers (catering &lodging services)**
51	**Working proprietors (catering & lodging services)**
52	**Housekeeping and related service supervisors (Excluding housewives)**
53	**Cooks, waiters, bartenders and related workers**
54	**Maids and related housekeeping service workers not elsewhere classified, house girls, houseboys, garden boys**
55	**Buildings caretakers, watch guards, charworkers, cleaners and related workers.**
56	**Launderers, dry-cleaners and pressers.**
57	**Hairdressers, barbers, beauticians and related workers.**
58	**Protective service workers.** Fire fighters, policemen and detectives, protective workers not elsewhere classified.
59	**Service workers not elsewhere classified.** Traditional healers, guides, undertakers and embalmers, other service workers.
MAJOR GROUP 6: AGRICULTURAL, ANIMAL HUSBANDRY AND FORESTRY WORKERS, FISHERMEN AND HUNTERS	
60	**Farm managers and supervisors**
61	**Farmers (general farm owner/operators and specialised farmers)**
62	**Agricultural and animal husbandry workers.** General farm workers and labourers, dairy farm workers and gardeners, farm machine operators, agricultural and animal husbandry workers not elsewhere classified. (Not ganyu farm labourers-ganyu work covered in separate questions)
63	**Forestry workers.** Loggers and other forestry workers not elsewhere classified.
64	**Fishermen, hunters and related workers.**
MAJOR GROUP 7/8/9: PRODUCTION AND RELATED WORKERS, TRANSPORT EQUIPMENT OPERATORS AND LABOURERES NOT ELSEWHERE CLASSIFIED	
70	**General foreman and production supervisors.**
71	**Miners, Quarrymen, well drillers** including mineral and stone treaters, well borers and related workers.
72	**Metal processors**, Including melters and reheaters, casters, moulders and coremakers. Annealers, platers and coaters.
73	**Wood preparation and workers and paper makers.** Wood treaters, sawyers, makers and related wood processing and related workers, paper pulp prepares and paper makers related workers.
74	**Chemical processors and related workers.** Crushers, grinders, mixers, heat treaters, filter and separator operators, still operators, chemical processors and related workers not elsewhere classified.
75	**Spinners, weavers, dyers, fibre preparers.** Spinners, Weaving and Knitting, Machine setters and operators bleachers dyers and textile product finishers; related workers not elsewhere classified.
76	**Tanners, skin preparers and pelt dressers.**
77	**Food and beverage processors.** Grain millers, sugar processors and refiners, butchers and daily product processors, bakers tea and coffee prepares, brewers, beverages makers and other food and beverage processors.
78	**Tobacco preparers and product makers.** Tobacco preparers, cigarette makers and tobacco preparers and tobacco product workers not elsewhere classified.
79	**Tailors, dressmakers, sewers, upholsters.** Tailors dressmakers for tailors, hat

	makers, cutters, sewers, upholsters and related workers not elsewhere classified.
80	**Shoemakers and leather goods makers.** Shoemaker repairers, shoe cutters, lasters, sewers and related workers; leather goods makers.
81	**Cabinet makers and related wood workers.** Cabinet makers, wood-working machine operators not elsewhere classified.
82	**Stone cutters and carvers.**
83	**Blacksmith, toolmakers & machine tool operators.** Blacksmith, operators, forge-press operators, toolmakers, machine tool setters & operators, metal grinders, polishers, sharpeners.
84	**Machinery fitters, machine assemblers.** Machinery fitters and assemblers, clock makers, motor and precision instrument makers, vehicle machine and aircraft engine mechanics (except electrical)
85	**Electrical fitters and related electrical workers.** Electrical fitters wiremen and linesmen, electrical and electronics workers, electronic equipment assemblers, radio repairmen telephone and telegram installers and related workers not elsewhere classified.
86	**Broadcasting station operators and cinema projectionists.**
87	**Plumbers, welders, sheet metal workers.** Plumbers and pipe fitters, and frame cutters, sheet structural metal prepares, metal workers, structural metal prepares and erectors.
88	**Jewellery and precious metal workers.**
89	**Potters, glass formers and related workers.** Potters, glass formers and cutters ceramic kinsmen, grass engravers ceramic and glass painters and decorators and related workers not elsewhere classified
90	**Rubber and plastic product makers.** Rubber and plastic product makers not elsewhere classified (not footwear), tyre makers, vulcanisers and retreaders.
91	**Paper and paper-board product makers.**
92	**Printers and related workers.** Compositors, typesetters, printing pressmen, printing and photo engravers book binders, photographic darkroom operators and related workers not elsewhere classified.
93	**Painters.** House painters and the like (not artists).
94	**Production and related workers.** Musical instrument makers and tuners, basketry weavers not elsewhere classified and brush makers, other production related workers.
95	**Bricklayers, carpenters and other bricklayers**. stonemasons, tile setters, reinforced construction workers concetors, roof**e**rs, carpenters and joiners, plaster, glaziers and construction workers not elsewhere classified. (Not ganyu labourers - ganyu work covered in separate questions.)
96	**Operators of stationery engines and power generating machines.** Operators and operators of related equipment other stationery engines (i.e. not vehicles tractors etc) and related equipment not elsewhere classified.
97	**Material handling and related equipment operators.** Dockers and handlers, riggers, crane and hoist operators, Dockers and freight handlers/operators, earth moving and related machinery operators and material-handling equipment operators not elsewhere classified.
98	**Transport equipment operators.** Vehicles drivers, railway engine drivers and firemen, ships rating crew, railway breakmen shunters, signalmen and transport equipment operators not elsewhere classified.
99	**Labourers not elsewhere classified.** Workers not reporting occupation, or occupation not adequately describe or not classified. (Not ganyu labourers-ganyu work covered in separate questions.)

INDUSTRY CODES

AGRICULTURE, HUNTING, FORESTRY & FISHING	
01	Growing of non-perennial crops (cereals, rice, vegetables, sugar cane, tobacco) Growing of perennial crops (grapes, citrus fruits, other fruits, beverage crops, spices) Plant propagation Animal Production (cattle, horses, camels, sheep, goats, swine/pigs, poultry) Mixed farming Support activities to agriculture & post-harvest crop activities (activities for crop production & animal production, seed processing for propagation).
02	Forestry and logging (silviculture, gathering of non-wood forest products)
03	Fishing and aquaculture (marine and freshwater fishing and aquaculture)
MINING AND QUARRYING	
05	Mining of coal and lignite
06	Extraction of crude petroleum and natural gas
07	Mining of metal ores (iron, non-ferrous metal ores, uranium, thorium)
08	Other mining and quarrying (stone, sand, clay, chemical and fertilizer minerals, extraction of peat, salt)
09	Mining support service activities (for petroleum, natural gas extraction, other mining and quarrying support activities)
MANUFACTURING	
10	Processing and preserving of meat Processing and preserving of fish, crustaceans and molluscs Processing and preserving of fruit and vegetables Manufacture of vegetable and animal oils and fats Manufacture of dairy products Manufacture of grain mill products, starches and starch products Manufacture of grain mill products Manufacture of bakery products Manufacture of sugar Manufacture of cocoa, chocolate and sugar confectionery Manufacture of macaroni, noodles, couscous and similar farinaceous products Manufacture of prepared meals and dishes Manufacture of other food products n.e.c. Manufacture of prepared animal feeds
11	Distilling, rectifying and blending of spirits Manufacture of wines Manufacture of malt liquors and malt Manufacture of soft drinks; production of mineral waters and other bottled waters
12	Manufacture of tobacco products
13	Preparation and spinning of textile fibres Weaving of textiles Finishing of textiles Manufacture of knitted and crocheted fabrics Manufacture of made-up textile articles, except apparel Manufacture of carpets and rugs Manufacture of cordage, rope, twine and netting Manufacture of other textiles n.e.c.

MANUFACTURING (CONT'D)	
14	Manufacture of wearing apparel, except fur apparel Manufacture of articles of fur Manufacture of knitted and crocheted apparel
15	Tanning and dressing of leather; dressing and dyeing of fur Manufacture of luggage, handbags and the like, saddlery and harness Manufacture of footwear
16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
17	Manufacture of paper and paper products
18	Printing Service activities related to printing Reproduction of recorded media
19	Manufacture of coke and refined petroleum products
20	Manufacture of basic chemicals, fertilizers and nitrogen compounds, plastics and synthetic rubber in primary forms, Manufacture of other chemical products (pesticides, paints, varnishes, printing ink, soap and detergents, man-made fibres
21	Manufacture of pharmaceuticals, medicinal chemical and botanical products
22	Manufacture of rubber and plastics products
23	Manufacture of glass and glass products, Manufacture of refractory products Manufacture of clay building materials Manufacture of other porcelain and ceramic products Manufacture of cement, lime and plaster Manufacture of articles of concrete, cement and plaster Cutting, shaping and finishing of stone
24	Manufacture of basic iron and steel Manufacture of basic precious and other non-ferrous metals Casting of iron and steel Casting of non-ferrous metals
25	Manufacture of fabricated metal products, metalworking service activities
26	Manufacture of electronic components and boards Manufacture of computers and peripheral equipment Manufacture of communication equipment Manufacture of consumer electronics Manufacture of measuring, testing, navigating and control equipment Manufacture of watches and clocks Manufacture of optical instruments and photographic equipment Manufacture of magnetic and optical media
27	Manufacture of electric motors, generators, transformers and electricity distribution and control apparatus Manufacture of batteries and accumulators Manufacture of fibre optic cables Manufacture of other electronic and electric wires and cables Manufacture of wiring devices Manufacture of electric lighting equipment Manufacture of domestic appliances Manufacture of other electrical equipment
28	Manufacture of engines and turbines, except aircraft, vehicle and cycle engines Manufacture of fluid power equipment Manufacture of other pumps, compressors, taps and valves Manufacture of bearings, gears, gearing and driving elements Manufacture of ovens, furnaces and furnace burners Manufacture of lifting and handling equipment Manufacture of office machinery and equipment (except computers and peripheral

	equipment) Manufacture of power-driven hand tools Manufacture of other general-purpose machinery Manufacture of agricultural and forestry machinery Manufacture of metal-forming machinery and machine tools Manufacture of machinery for metallurgy Manufacture of machinery for mining, quarrying and construction Manufacture of machinery for food, beverage and tobacco processing Manufacture of machinery for textile, apparel and leather production Manufacture of other special-purpose machinery
29	Manufacture of motor vehicles Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers Manufacture of parts and accessories for motor vehicles
30	Building of ships and floating structures Building of pleasure and sporting boats Manufacture of air and spacecraft and related machinery Manufacture of military fighting vehicles Manufacture of motorcycles Manufacture of bicycles and invalid carriages Manufacture of other transport equipment n.e.c.
31	Manufacture of furniture
32	Manufacture of jewellery and related articles Manufacture of imitation jewellery and related articles Manufacture of musical instruments Manufacture of sports goods Manufacture of games and toys Manufacture of medical and dental instruments and supplies
33	Repair of fabricated metal products Repair of machinery Repair of electronic and optical equipment Repair of electrical equipment Repair of transport equipment, except motor vehicles Repair of other equipment Installation of industrial machinery and equipment
ELECTRICITY, GAS AND WATER	
35	Electricity, gas, steam and air conditioning supply
36	Water collection, treatment and supply
37	Sewerage
38	Waste collection, treatment and disposal activities; materials recovery
39	Remediation activities and other waste management services
CONSTRUCTION	
41	Construction of buildings
42	Civil engineering
43	Specialized construction activities (Demolition, Site preparation, Electrical, plumbing and other construction installation activities)

WHOLESALE AND RETAIL TRADE AND REPAIR OF MOTOR VEHICLES AND MOTORCYCLES	
45	Wholesale and retail trade and repair of motor vehicles and motorcycles
46	Wholesale on a fee or contract basis Wholesale of agricultural raw materials and live animals Wholesale of food, beverages and tobacco Wholesale of household goods Wholesale of machinery, equipment and supplies

	Wholesale of solid, liquid and gaseous fuels and related products Wholesale of metals and metal ores Wholesale of construction materials, hardware, plumbing and heating equipment and supplies Wholesale of waste and scrap and other products n.e.c.
47	Retail trade, except of motor vehicles and motorcycles
TRANSPORTATION AND STORAGE	
49	Land transport and transport via pipelines
50	Water transport
51	Air transport
52	Warehousing, storage and support activities for transportation
53	Postal and courier activities
ACCOMMODATION AND FOOD SERVICE ACTIVITIES	
55	Accommodation
56	Food and beverage service activities
INFORMATION AND COMMUNICATION	
58	Publishing activities
59	Motion picture, video and television programme production, sound recording and music publishing activities
60	Programming and broadcasting activities
61	Telecommunications
62	Computer programming, consultancy and related activities
63	Information service activities
FINANCIAL AND INSURANCE ACTIVITIES	
64	Financial service activities, except insurance and pension funding
65	Insurance, reinsurance and pension funding, except compulsory social security
66	Activities auxiliary to financial service and insurance activities
REAL ESTATE ACTIVITIES	
68	Real estate activities with own or leased property Real estate activities on a fee or contract basis
PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES	
69	Legal and accounting activities
70	Activities of head offices; management consultancy activities
71	Architectural and engineering activities; technical testing and analysis
72	Scientific research and development
73	Advertising and market research
74	Other professional, scientific and technical activities
75	Veterinary activities
ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
77	Rental and leasing activities
78	Employment activities
79	Travel agency, tour operator, reservation service and related activities
80	Security and investigation activities
81	Services to buildings and landscape activities
82	Office administrative, office support and other business support activities

PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY	
84	Administration of the State and the economic and social policy of the community Provision of services to the community as a whole
EDUCATION	
85	Pre-primary and primary education Secondary education Higher education Other education (Sports and recreation education, Cultural education) Educational support activities
HUMAN HEALTH AND SOCIAL WORK ACTIVITIES	
86	Human health activities
87	Residential care activities
88	Social work activities without accommodation
ARTS, ENTERTAINMENT AND RECREATION	
90	Creative, arts and entertainment activities
91	Libraries, archives, museums and other cultural activities
92	Gambling and betting activities
93	Sports activities and amusement and recreation activities
OTHER SERVICE ACTIVITIES	
94	Activities of membership organizations
95	Repair of computers and personal and household goods
96	Other personal service activities (Washing and (dry-) cleaning of textile and fur products, Hairdressing and other beauty treatment, Funeral and related activities)
ACTIVITIES OF HOUSEHOLDS AS EMPLOYERS; UNDIFFERENTIATED GOODS- AND SERVICES-PRODUCING ACTIVITIES OF HOUSEHOLDS FOR OWN USE	
97	Activities of households as employers of domestic personnel
98	Undifferentiated goods- and services-producing activities of private households for own use
ACTIVITIES OF EXTRATERRITORIAL ORGANIZATIONS AND BODIES	
99	Activities of extraterritorial organizations and bodies
00	ACTIVITIES NOT ADEQUATELY DEFINED

COMMUNITY, SOCIAL & PERSONNEL SERVICES	
91	Public administration and defence
92	Sanitary and similar services
93	Educational, commercial and driving schools Private schools Government schools Research and scientific institutes Medical, dental and other services Animal care centres Non-governmental organisations Agricultural cooperatives Welfare institutions Business professional and labour associates Religious organisations Political organisations
94	Motion picture distribution and projection

	Radio broadcasting Concert artists Libraries and museums Amusement and recreational services including clubs
95	Electrical repair shops Repairs of motor vehicles, and motor cycles Watch, clock repairs Bicycles, type writer, camera etc. repairs Laundries Barber and beauty Photographic studios Security services Funeral services
96	Private households with employed persons
00	ACTIVITIES NOT ADEQUATELY DEFINED

Food-Unit Combinations Covered for IHPS 2019 Non-Standard Units

em Name [Module G]	*Item Code [Module G]*	*Unit in Photo Aid*	*Size*	*Unit Code in Module G*
Cereals, Grains & Cereal Products:				
Maize ufa mgaiwa (normal flour)	101	PAIL	SMALL	4A
	101	PAIL	MEDIUM	4B
	101	PAIL	LARGE	4C
	101	No. 10 PLATE		6
	101	No. 12 PLATE		7
	101	TINA LARGE		23F
Maize ufa refined (fine flour)	102	PAIL	SMALL	4A
	102	PAIL	MEDIUM	4B
	102	PAIL	LARGE	4C
	102	No. 10 PLATE		6
	102	No. 12 PLATE		7
	102	TINA LARGE		23F
Maize ufa madeya (bran flour)	103	PAIL	SMALL	4A
	103	PAIL	MEDIUM	4B
	103	PAIL	LARGE	4C
	103	No. 10 PLATE		6
	103	No.12 PLATE		7
	103	TINA LARGE		23F
Maize grain (not as ufa)	104	PAIL	SMALL	4A
	104	PAIL	MEDIUM	4B
	104	PAIL	LARGE	4C

Item Name [Module G]	*Item Code [Module G]*	*Unit in Photo Aid*	*Size*	*Unit Code in Module G*
Vegetables:				
Onion	401	PIECE	SMALL	9A
	401	PIECE	MEDIUM	9B
	401	PIECE	LARGE	9C
	401	HEAP	SMALL	10A
	401	HEAP	MEDIUM	10B
	401	HEAP	LARGE	10C
Cabbage	402	PIECE	SMALL	9A
	402	PIECE	MEDIUM	9B
	402	PIECE	LARGE	9C
Tanaposi/Rape	403	HEAP	SMALL	10A
	403	HEAP	MEDIUM	10B
	403	HEAP	LARGE	10C
Vegetables (Continued):				
Nkhwani	404	HEAP	SMALL	10A
	404	HEAP	MEDIUM	10B
	404	HEAP	LARGE	10C
Chinese cabbage	405	HEAP	SMALL	10A
	405	HEAP	MEDIUM	10B
	405	HEAP	LARGE	10C
Other cultivated green leafy vegetables	406	HEAP	SMALL	10A
	406	HEAP	MEDIUM	10B
	406	HEAP	LARGE	10C

	104	No. 10 PLATE		6
	104	No. 12 PLATE		7
	105	5 LITRE BUCKET (Chigoba)		4D
	105	BASIN	SMALL	4E
Green maize	105	PIECE	SMALL	9A
	105	PIECE	MEDIUM	9B
	105	PIECE	LARGE	9C

Gathered wild green leaves	407	HEAP	SMALL	10A
	407	HEAP	MEDIUM	10B
	407	HEAP	LARGE	10C
Tomato	408	PIECE	SMALL	9A
	408	PIECE	MEDIUM	9B
	408	PIECE	LARGE	9C
	408	HEAP	SMALL	10A
	408	HEAP	MEDIUM	10B
	408	HEAP	LARGE	10C

Standard units like KGs, GRAMs and/or Litres are acceptable appropriate items e.g. 101 to 105

Item Name [Module G]	*Item Code [Module G]*	*Unit in Photo Aid*	*Size*	*Unit Code in Module G*
Rice	106	PAIL	SMALL	4A
	106	PAIL	LARGE	4C
	106	No. 10 PLATE		6
	106	No. 12 PLATE		7
	106	5 LITRE BUCKET (Chigoba)		4D
	106	TINA LARGE		23F
Finger millet (mawere)	107	No. 10 PLATE		6
	107	No. 12 PLATE		7
	107	BASIN	SMALL	4E
	107	TINA LARGE		23F
Sorghum (mapira)	108	PAIL	SMALL	4A
	108	PAIL	LARGE	4C

Item Name [Module G]	*Item Code [Module G]*	*Unit in Photo Aid*	*Size*	*Unit Code in Module G*
Cucumber	409	PIECE		9
	409	HEAP	SMALL	10A
	409	HEAP	MEDIUM	10B
	409	HEAP	LARGE	10C
Pumpkin	410	PIECE	SMALL	9A
	410	PIECE	MEDIUM	9B
	410	PIECE	LARGE	9C
Okra / Therere	411	HEAP	SMALL	10A
	411	HEAP	MEDIUM	10B

	108	No. 10 PLATE		6
	108	No. 12 PLATE		7
	108	TINA LARGE		23F
	108	BASIN	SMALL	4E
	108	5 LITRE BUCKET (Chigoba)		4D
Pearl millet (mchewere)	109	PAIL	SMALL	4A
	109	PAIL	LARGE	4C
	109	BASIN	SMALL	4E
	109	TINA LARGE		23F
	111	LOAF (300G)		
Bread	111	LOAF (600G)		25A
	111	LOAF (700G)		25B
	111	PIECE		9
Buns, scones	112	PIECE		9
Biscuits	113	PACKET (150 GRAMS)		26B
Spaghetti, macaroni, pasta	114	PACKET 250G		26C
	114	PACKET 400G		26D
	114	PACKET 500G		26E
	114	PACKET 1KG		26F

KGs, GRAMs and/or Litres are acceptable for appropriate items e.g 106 to 114, 504 to 509, 803

Item Name [Module G]	*Item Code [Module G]*	*Unit in Photo Aid*	*Size*	*Unit Code in Module G*
Roots,Tuber & Plantains:				
Cassava tubers	201	PAIL	SMALL	4A
	201	PAIL	LARGE	4C
	411	HEAP	LARGE	10C
Mushroom	413	HEAP		10
Meat, Fish, and Animal Products				
Eggs	501	PIECE		9
Sun-Dried fish (Large Variety)	502	PIECE	SMALL	9A
	502	PIECE	MEDIUM	9B
	502	PIECE	LARGE	9C
Sun-Dried fish (Medium Variety)	502	PIECE	SMALL	9G
	502	PIECE	MEDIUM	9H
	502	PIECE	LARGE	9I
	502	HEAP	SMALL	10G
	502	HEAP	MEDIUM	10H
	502	HEAP	LARGE	10I
Sun-Dried fish (Small Variety)	502	HEAP	SMALL	10D
	502	HEAP	MEDIUM	10E
	502	HEAP	LARGE	10F
Fresh fish (Large Variety)	503	PIECE	SMALL	9A
	503	PIECE	MEDIUM	9B
	503	PIECE	LARGE	9C

Item Name [Module G]	*Item Code [Module G]*	*Unit in Photo Aid*	*Size*	*Unit Code in Module G*

	201	PIECE	SMALL	9A
	201	PIECE	MEDIUM	9B
	201	PIECE	LARGE	9C
Cassava flour	202	PAIL	SMALL	4A
	202	PAIL	MEDIUM	4B
	202	PAIL	LARGE	4C
	202	No. 10 PLATE		6
	202	No. 12 PLATE		7
	202	TINA LARGE		23F
White sweet potato	203	PIECE	SMALL	9A
	203	PIECE	MEDIUM	9B
	203	PIECE	LARGE	9C
	203	HEAP	SMALL	10A
	203	HEAP	MEDIUM	10B
	203	HEAP	LARGE	10C
Orange sweet potato	204	PIECE	SMALL	9A
	204	PIECE	MEDIUM	9B
	204	PIECE	LARGE	9C
	204	HEAP	SMALL	10A
	204	HEAP	MEDIUM	10B
	204	HEAP	LARGE	10C
Irish potato	205	PAIL	SMALL	4A
	205	PAIL	MEDIUM	4B
	205	PAIL	LARGE	4C

Fresh fish (Medium Variety)	503	HEAP	SMALL	10G
	503	HEAP	MEDIUM	10H
	503	HEAP	LARGE	10I
	503	PIECE	SMALL	9G
	503	PIECE	MEDIUM	9H
	503	PIECE	LARGE	9I
Fresh fish (Small Variety)	503	HEAP	SMALL	10A
	503	HEAP	MEDIUM	10B
	503	HEAP	LARGE	10C
Beef	504	PIECE		9
Goat	505	PIECE		9
Pork	506	PIECE		9
Mutton	507	PIECE		9
Chicken - Whole	508A	PIECE		9
Chicken - Pieces	508B	PIECE		9
Other poultry - guinea fowl, doves, etc. **	509	PIECE		9
Small animal – rabbit, mice, etc. **	510	PIECE		9
Termites, other insects (eg Ngumbi, caterpillar) **	511	No. 10 PLATE		6
	511	No. 12 PLATE		7
	511	TINA LARGE		23F
	511	HEAP		10
Smoked fish (Large Variety)	502	PIECE	SMALL	9A
	502	PIECE	MEDIUM	9B
	502	PIECE	LARGE	9C

	205	HEAP	SMALL	10A
	205	HEAP	MEDIUM	10B
	205	HEAP	LARGE	10C
	205	5 LITRE BUCKET (Chigoba)		4D

Item Name [Module G]	*Item Code [Module G]*	*Unit in Photo Aid*	*Size*	*Unit Code in Module G*
Potato crisps	206	PACKET	25G	26A
	206	SATCHET/TUBE	25g	27A
	206	SATCHET/TUBE	50g	27B
	206	SATCHET/TUBE	100g	27C
Plantain, cooking banana	207	BUNCH	SMALL	8A
	207	BUNCH	MEDIUM	8B
	207	BUNCH	LARGE	8C
	207	PIECE		9
	207	CLUSTER	SMALL	8D
	207	CLUSTER	MEDIUM	8E
	207	CLUSTER	LARGE	8F
Cocoyam (masimbi)	208	PIECE		9
	208	HEAP		10
Nuts & Pulses:				
Bean, white	301	PAIL	SMALL	4A
	301	No. 10 PLATE	FLAT	6A
	301	No. 10 PLATE	HEAPED	6B
	301	No. 12 PLATE	FLAT	7A
	301	No. 12 PLATE	HEAPED	7B
	301	TINA LARGE	FLAT	23C

Smoked fish (Medium Variety)	502	PIECE	SMALL	9G
	502	PIECE	MEDIUM	9H
	502	PIECE	LARGE	9I
	502	HEAP	SMALL	10G

Item Name [Module G]	*Item Code [Module G]*	*Unit in Photo Aid*	*Size*	*Unit Code in Module G*
Smoked fish (Medium Variety)	502	HEAP	MEDIUM	10H
	502	HEAP	LARGE	10I
Smoked fish (Small Variety)	502	HEAP	SMALL	10D
	502	HEAP	MEDIUM	10E
	502	HEAP	LARGE	10F
Fruits:				
Mango	601	PAIL SMALL		4
	601	PAIL LARGE		5
	601	PIECE	SMALL	9A
	601	PIECE	MEDIUM	9B
	601	PIECE	LARGE	9C
	601	HEAP		10
Banana	602	CLUSTER	SMALL	28A
	602	CLUSTER	MEDIUM	28B
	602	CLUSTER	LARGE	28C

	301	TINA LARGE	HEAPED	23D
	301	BASIN	SMALL	4E
	301	HEAP		10
Bean, brown	302	PAIL SMALL		4A
	302	No. 10 PLATE	FLAT	6A
	302	No. 10 PLATE	HEAPED	6B
	302	No. 12 PLATE	FLAT	7A
	302	No. 12 PLATE	HEAPED	7B
	302	TINA LARGE	FLAT	23C
	302	TINA LARGE	HEAPED	23D
	302	BASIN	SMALL	4E
	302	HEAP		10

	602	PIECE	SMALL	9A
	602	PIECE	MEDIUM	9B
	602	PIECE	LARGE	9C
Citrus – naartje, orange, etc. **	603	PIECE		9
Pineapple	604	PIECE		9
Papaya	605	PIECE		9
Guava	606	PIECE	SMALL	9A
	606	PIECE	MEDIUM	9B
	606	PIECE	LARGE	9C
Avocado	607	PIECE		9

Item Name [Module G]	*Item Code [Module G]*	*Unit in Photo Aid*	*Size*	*Unit Code in Module G*
Pigeonpea (nandolo)	303	PAIL SMALL		4A
	303	No. 10 PLATE	FLAT	6A
	303	No. 10 PLATE	HEAPED	6B
	303	No. 12 PLATE	FLAT	7A
	303	No. 12 PLATE	HEAPED	7B
	303	TINA LARGE	FLAT	23C
	303	TINA LARGE	HEAPED	23D

Item Name [Module G]	*Item Code [Module G]*	*Unit in Photo Aid*	*Size*	*Unit Code in Module G*
Wild fruit (masau, malambe, etc.)**	608	No. 10 PLATE		6
	608	No. 12 PLATE		7
	608	TINA LARGE		23F
	608	PIECE		9
	608	HEAP		10
Apple	609	PIECE		9
Milk and Milk Products				

	303	BASIN	SMALL	4E
	303	HEAP		10
Groundnut (Shelled)	304A	PAIL SMALL		4A
	304A	No. 10 PLATE	FLAT	6A
	304A	No. 10 PLATE	HEAPED	6B
	304A	No. 12 PLATE	FLAT	7A
	304A	No. 12 PLATE	HEAPED	7B
	304A	TINA LARGE	FLAT	23C
	304A	HEAP		10
Groundnut - Dried (UnShelled)	304B	PAIL SMALL		4A
	304B	No. 10 PLATE	HEAPED	6B
	304B	No. 12 PLATE	HEAPED	7B
	304B	TINA LARGE	HEAPED	23D
	304B	BASIN -SMALL		4E
	304B	BASIN - MEDIUM		4F
	304B	HEAP		10
Groundnut -Fresh (UnShelled)	304C	PAIL SMALL		4A
	304C	PAIL LARGE		4C
	304C	No. 10 PLATE	HEAPED	6B
	304C	No. 12 PLATE	HEAPED	7B
	304C	TINA LARGE	HEAPED	23D
	304C	HEAP		10

Powdered milk	702	SATCHET/TUBE		22
	702	TABLE SPOON		20B
Margarine - Blue band	703	PIECE		9
	703	SATCHET/TUBE		22
Chambiko - soured milk	705	SATCHET/TUBE		22
Yoghurt	706	PACKET		26
Cheese	707	PIECE		9
Sugar, Fats & Oil:				
Sugar	801	No. 10 PLATE		6
	801	PACKET		26
	801	TEASPOON		20
	801	SATCHET/TUBE		22
Sugar Cane	802	PIECE		9
Cooking Oil	803	SATCHET/TUBE	SMALL	22A
	803	SATCHET/TUBE	MEDIUM	22B
	803	SATCHET/TUBE	LARGE	22C
Spices & Miscellaneous:				
Salt	810	No. 10 PLATE	FLAT	6A
	810	No. 10 PLATE	HEAPED	6B
	810	No. 12 PLATE		7
	810	TINA LARGE		23F
	810	HEAP		10
	810	TABLESPOON		20B

	304C	BASIN -SMALL		4E
	304C	BASIN - MEDIUM		4F

Item Name [Module G]	*Item Code [Module G]*	*Unit in Photo Aid*	*Size*	*Unit Code in Module G*
Groundnut flour	305	No. 10 PLATE	FLAT HEAPED	6A
	305	No. 10 PLATE		6B
	305	No. 12 PLATE	FLAT HEAPED	7A
	305	No. 12 PLATE		7B
	305	TINA SMALL	FLAT HEAPED	23A
	305	TINA SMALL		23B
	305	TINA LARGE	FLAT HEAPED	23C
	305	TINA LARGE		23D
Soybean flour	306	PAIL SMALL		4A
	306	No. 10 PLATE		6
	306	No. 12 PLATE		7
	306	TINA LARGE	FLAT HEAPED	23C
	306	TINA LARGE		23D
	306	BASIN	LARGE	4G
Ground bean (nzama)	307	No. 10 PLATE	FLAT HEAPED	6A
	307	No. 10 PLATE		6B
	307	No. 12 PLATE	FLAT	7A

Spices	811	TEASPOON		20A
Yeast, baking powder, bicarbonate of soda	812	TEASPOON		20A

Item Name [Module G]	*Item Code [Module G]*	*Unit in Photo Aid*	*Size*	*Unit Code in Module G*
Cooked Foods from Vendors:				
Maize - boiled or roasted (vendor)	820	PIECE		9
Chips (vendor)	821	No. 10 PLATE		6
	821	No. 12 PLATE		7
Cassava - boiled (vendor)	822	PIECE		9
Cassava - Roasted (vendor)		PIECE		9
Eggs - boiled (vendor)	823	PIECE		9
Chicken (vendor)	824	PIECE		9
Meat (vendor)	825	PIECE		9
Fish (vendor)	826	PIECE		9
Mandazi, doughnut (vendor)	827	PIECE		9
Samosa (vendor)	828	PIECE		9
Boiled sweet potatoes	829	PIECE		9
Roasted sweet potatoes	830	PIECE		9
Boiled groundnuts	831	No. 10 PLATE		6
	831	No. 12 PLATE		7
	831	TINA SMALL		23E

	307	No. 12 PLATE	HEAPED	7B			831	TINA LARGE	23F
	307	TINA LARGE	HEAPED	23D					
Cowpea (khobwe)	308	No. 12 PLATE	FLAT	7A		Roasted groundnuts	832	TABLESPOON	20B
	308	No. 12 PLATE	HEAPED	7B			832	TEASPOON	20A
	308	TINA LARGE	FLAT	23C					
	308	TINA LARGE	HEAPED	23D		Popcorn	833	PACKET	26
	308	BASIN	SMALL	4E					
	308	HEAP		10		Zikondamoyo / Nkate	834	PIECE	9
Macademia nuts	309	PACKET SMALL		26G		KALONGONDA (Mucuna)	835	No. 10 PLATE	6
	309	PACKET LARGE		26I			835	No. 12 PLATE	7