ADePT Livestock User Guide

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ACKNOWLEDGEMENTS

1. INTRODUCTION

ADePT (Automated DEC Poverty Tables) is a free software program developed by the World Bank's Development Research Group to promote easy and quick processing of tables and graphs to study poverty profiles.[1] ADePT analyzes microdata from household survey and outputs print-ready, standardized tables and charts. By automating the analysis of survey data, ADePT minimizes human errors and dramatically reduces the amount of time it takes to produce analytical reports. The Livestock module is one of several different modules have been developed for ADePT to help users produce analysis reports on several different topics; other modules include Poverty, Education, Gender, and Health.

The ADePT Livestock module was developed to facilitate the computation and analysis of livestock statistics and indicators from household survey data. A substantial share of the rural population in developing countries is partially or fully dependent on livestock for their livelihoods. Livestock contribute in multiple ways to household's livelihoods, including through the provision of cash income, food, manure, draft power and hauling services, savings and insurance and social status. Therefore, the livestock sector has a large potential to reduce poverty and contribute to economic growth. In order to better formulate, implement and monitor strategic interventions, it is essential to understand the contribution of livestock to household livelihoods, and the relationships between certain household characteristics and livestock production and productivity. The ADePT Livestock module automates and standardizes the analysis of survey data and the production of analytical tables on the livestock sector.

ADePT Livestock generates a set of tables that describe the key characteristics of the livestock sector and its relationship to household livelihoods. It is intended for use by ministry staff, policy analysts, staff at NGOs and international organizations and researchers interested in getting a better understanding of small-scale livestock activities. By making it simpler and faster to produce analytical reports, ADePT Livestock frees up resources for interpretation of results, thinking about the policy implications of the results, and using the results to design evidence based policies and investments. By making the analysis easier and faster for a wider range of users, ADePT livestock can also increase the demand for utilization of new and existing household survey data.

The ADePT Livestock Module Manual is divided into two major sections:

- "Using ADePT Livestock Module" will explain how to use ADePT Livestock to generate the tables
- "Tables from ADePT Livestock" will walk through the tables in the output file of ADePT Livestock and explain how to interpret the information presented in the tables

This manual provides users who are unfamiliar with the analysis of livestock data with the knowledge they need to use ADePT Livestock to generate the desired tables and to correctly interpret the analysis results. ADePT however assumes that the user has some capabilities at handling survey data. In most

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[1] For more information on ADePT, visit http://go.worldbank.org/0BLFXLPWY0

cases, raw survey data will need to undergo some manipulation before it can be used with ADePT Livestock. The module is designed having in mind data from multi-topic household surveys such as the Living Standards Measurement Study (LSMS) Survey, but can be used with a variety of other types of household survey common in developing countries, such as agricultural sample surveys or livestock censuses.

2. USING ADEPT LIVESTOCK MODULE

Datasets for ADePT Livestock

In order to produce all the possible tables, ADePT Livestock requires four datasets that provide the information on household, livestock ownership and related activities, livestock production, and reference livestock units (LUs). ADePT Livestock supports datasets in Stata®, SPSS®, and tab-delimited text formats.

It is important to note that ADePT Livestock has no data manipulation capabilities so the datasets need to be prepared with the necessary variables *before* they are loaded into ADePT Livestock. One essential thing you need to do in preparing the datasets is to ensure is that all related variables are converted to comparable units, such as kilograms, US Dollars, etc. For example, the variables measuring the value of something should all be in the same currency, whether local or another currency of choice. In the case of the example dataset, all values for those variables are expressed in the local currency of Malawi, Malawian Kwachas. Performing the analysis without first standardizing the units between related variables will lead to inaccurate results. Whenever possible, users should also make sure the values in their data are labeled so that they will appear on the output tables.

The four dataset required for ADePT Livestock (household, livestock, livestock unit coefficients, livestock products) need to each include a specific set of variables. One critical variable common to all datasets is a unique household identifier, a variable that uniquely identifies the household in the data and allows ADePT to link the different files.

Household-level variables include information on key household characteristics (location, income, welfare, land owned) as well as **sampling weights.** All the tables are produced using sampling weights. If sampling weights are not provided, ADePT assumes the survey is self-weighted. Users must check whether the survey they use has sampling weights and if so the weights must be included in the datasets used by ADePT Livestock. Failure to do so will result in inaccurate results.

Livestock-level data include variables on inventories, changes to the herd over the survey reference period, and animal vaccination. The livestock product file includes information on livestock product file includes information on product value and volumes, and sales. Finally, the livestock coefficient file includes a set of coefficient to convert livestock numbers to standard units. These coefficients are usually not included in household survey data so they will have to be found from other sources. Refer to the section on "Key Variables on Analysis" on page 17 of this user's guide for more information on livestock units.

This manual is accompanied by an example dataset based on data from the Malawi Third Integrated Household Survey (IHS3) 2010/2011, courtesy of the Malawi National Statistical Office and Commissioner Mercy Kanyuka. The example shown throughout the manual is based on that dataset to demonstrate how to use the ADePT Livestock module and how to interpret the tables that are generated by the module. All example tables can be replicated by users using the example datasets.

Generating Tables with ADePT Livestock

The instructions in this section are specific to the ADePT Livestock module. For more detailed information about using the ADePT software in general, refer to the ADePT User's Guide.[2]

Perform the following steps to generate tables with ADePT Livestock:

Step 1: Launching the Livestock Module

Launch ADePT Livestock module.

Click the ADePT icon in the Windows® **Start** menu, or by double-clicking on the ADePT icon on your desktop (if present). To open the Livestock module, double click on **Livestock** (see arrow in Figure 1) in the **Select ADePT Module** window.

Figure 1: Selecting Livestock module
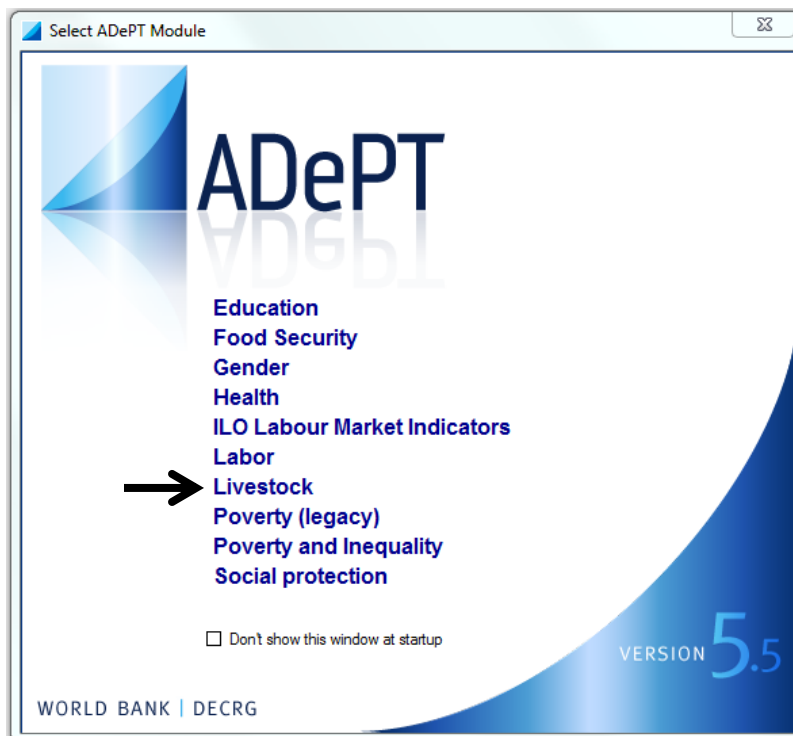
Step 2: Specify Datasets

Specify the datasets that you want ADePT Livestock to analyze.

Figure 2 shows the ADePT Livestock module interface. The datasets can be specified in the upper left panel in the area in the red box in Figure 2. Click the **Select…** button on the right to specify the

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[2] Resources for ADePT, including the User's Guide, are available at: http://go.worldbank.org/1HHHLLELG0

appropriate dataset. A window will appear that will allow the user to browse files and select the appropriate dataset.

To remove a dataset, click the **Clear** button on the right. If you then want to specify another dataset, click on the **Select…** button, and then browse again to select the data file that you want.

Figure 2: Inputting data and mapping variables to fields
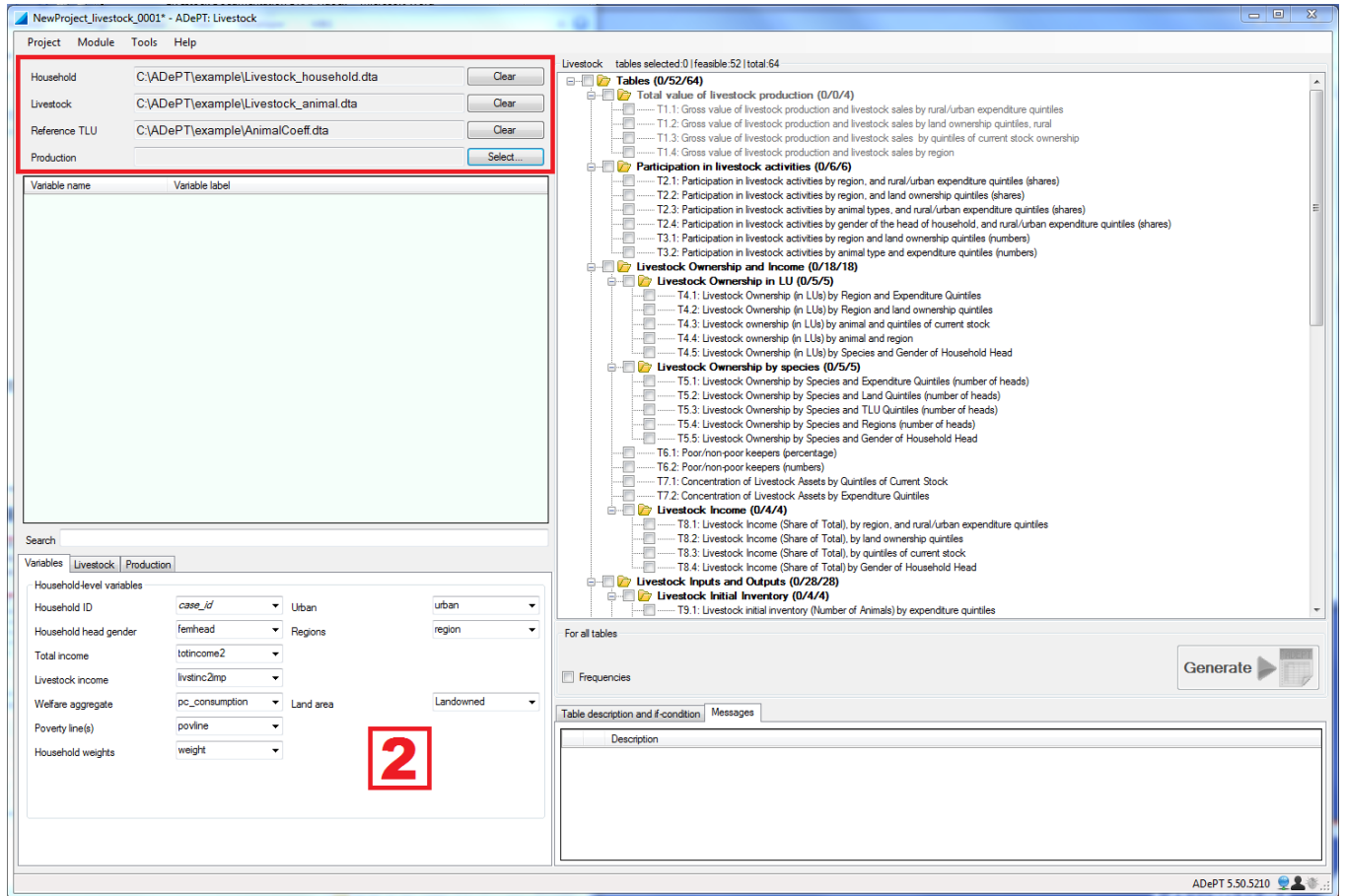
Step 3: Map Variables to Fields

Map the variables in the dataset to the input variable field required by ADePT Livestock

In the lower left panel (see area number 2 in Figure 2), match the variables in the dataset to the fields required by ADePT Livestock to prepare the tables. For example, you can see in Figure 2 that the field Region is matched to the **region** variable.

You can pair the field with the appropriate variable by using one of two methods:

Method 1: In the lower left panel, open the drop down menu and then select the corresponding variable in the dataset, as shown for the **urban** variable in the screen shot in Figure 3.

Figure 3: Mapping variable in drop down menu
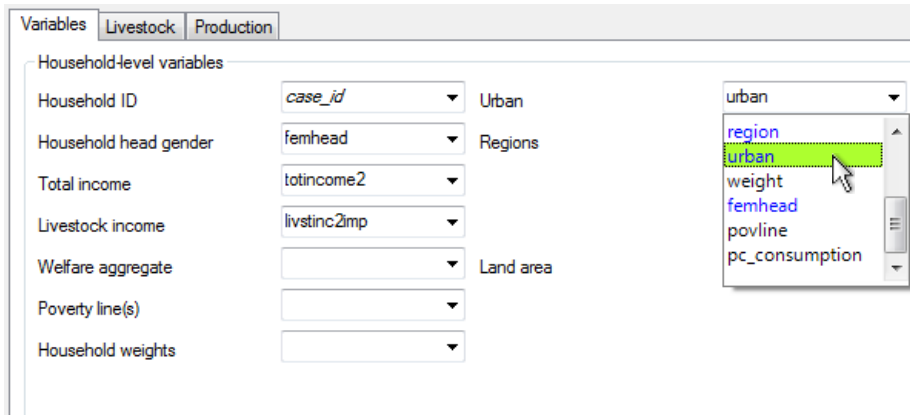
Method 2: Drag the variable name and drop it in the corresponding field in the lower left panel.

Figure 4: Dragging and dropping the variable name into the field
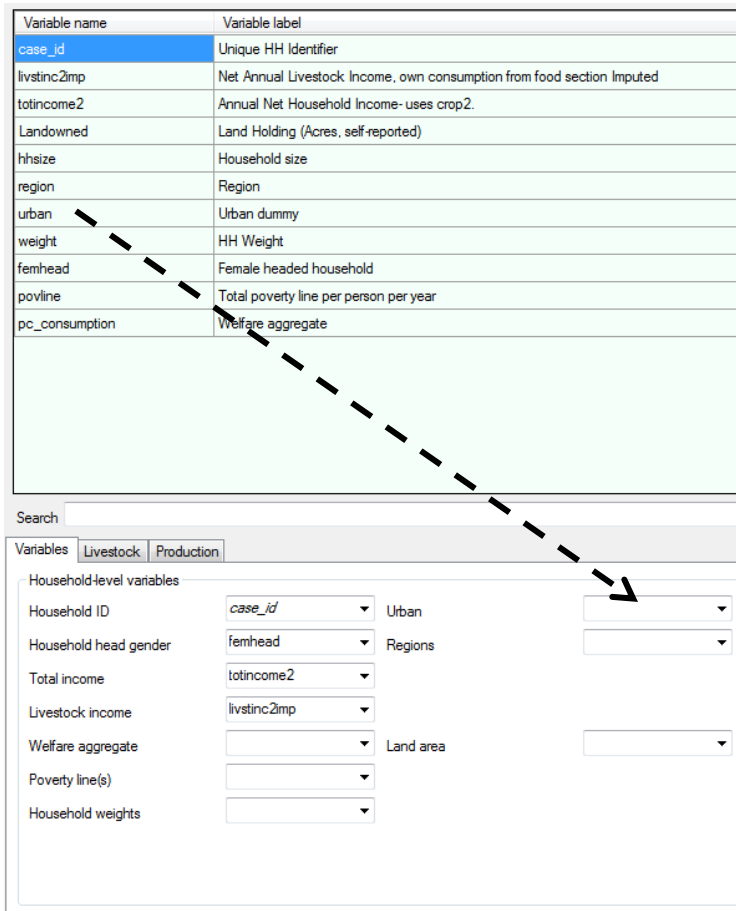
To remove a mapping, highlight the variable name in the input field and then press DELETE or BACKSPACE on the keyboard.

Note: It is important to map as many variables as possible so that ADePT Livestock will be able to generate a wider variety of tables.

For the example data, refer to Table 1 for the correct mapping between the fields on the Variables, Livestock and Production tabs and the variables in the Malawi IHS3 2010/2011 datasets.

Table 1: Mapping variables in the datasets to fields in ADePT Livestock

Field	Description	Example Dataset	Variable in Example Dataset
	VARIABLES TAB		
Household ID	Unique identification number of the household	*Livestock_household.dta*	*case_id*
Household head gender	If the head of the household is a male or female	*Livestock_household.dta*	*femhead*
Total income	Total income for the household (can be daily, weekly, monthly or annually)	*Livestock_household.dta*	*totincome2*
Livestock income	Amount of income from household livestock activities (can be daily, weekly, monthly or annually)	*Livestock_household.dta*	*livstinc2imp*
Welfare aggregate	Economic welfare of the household usually measured by household's per capita/adult equivalent consumption expenditure or income	*Livestock_household.dta*	*pc_consumption*
Poverty line(s)	The poverty line is the cut-off point that separates the poor from the non-poor. This can be the national poverty line, the $1.25/day PPP poverty line or any other cut off that is of interest	*Livestock_household.dta*	*povline*
Household weights	Sampling weights so that statistics calculated from the data can be representative of the whole population. Users **must** provide weights except in the case of self-weighting samples	*Livestock_household.dta*	*weight*
Urban	Denotes whether the household resides in urban or a rural areas	*Livestock_household.dta*	*urban*
Regions	Geographic and administrative areas defined by the national statistics office of that country. The user can use districts or provinces or any other domain relevant to their data.	*Livestock_household.dta*	*region*
Land area	Amount of land owned by the household	*Livestock_household.dta*	*Landowned*
	LIVESTOCK TAB		
Household ID	Unique identification number of the household	*Livestock_animal.dta*	*case_id*
Livestock code	Unique code for each type of animal	*Livestock_animal.dta*	*animal*
Current inventory	Number of animals currently owned by the household	*Livestock_animal.dta*	*livstck_owned*

Initial inventory	Number of animals owned at the beginning of the survey reference period, usually 12 months ago	*Livestock_animal.dta*	*livstck_intialInv*
Sold	Number of animals sold in the survey defined reference period of time, usually in the last 12 months	*Livestock_animal.dta*	*livstck_sold*
Born	Number of new animals born in the survey defined reference period of time, usually in the last 12 months	*Livestock_animal.dta*	*livstck_born*
Lost	Number of animals that were lost to things such as theft or disease in the survey defined reference period of time, usually in in the last 12 months	*Livestock_animal.dta*	*lvstck_lost*
Given away	Number of animals that were given away as a gift to someone outside of the household in the survey defined reference period of time, usually in the last 12 months	*Livestock_animal.dta*	*livstck_given*
Slaughtered	Number of animals that were slaughtered in the survey defined reference period of time, usually in the last 12 months	*Livestock_animal.dta*	*livstck_slaughtered*
Vaccination	Number of animals that were vaccinated in the survey defined reference period of time, usually in the last 12 months	*Livestock_animal.dta*	*livstck_vaccinated*
Value of sold animals	Monetary value of animals sold in the survey defined reference period of time, usually in the last 12 months	*Livestock_animal.dta*	*lvstck_valuesales*
Animal code	Unique code for each type of animal. This must match the codes in the "Livestock code" variable above.	*AnimalCoeff.dta*	*animal*
Animal TLU equivalent	Conversion factor for each type of animal into Livestock Units. See page 17 for more information on livestock units	*AnimalCoeff.dta*	*coeff*
PRODUCTION TAB			
Household ID	Unique identification number of the household	*Livestock_product.dta*	*case_id*
Code of product	Unique code for each type of livestock product	*Livestock_product.dta*	*product_code*
Value of production	Total monetary value of each type of livestock product made by the household in the survey defined reference period of time, usually the last 12 months	*Livestock_product.dta*	*liveprodValue*
Volume of production	Total volume/amount for each type of livestock product made by the household in the survey defined reference period of time, usually the last 12 months	*Livestock_product.dta*	*liveprodVolume*
Total value of sold products	Total monetary value for each type of livestock product made by the household in the survey reference period, usually the last 12 months	*Livestock_product.dta*	*liveprodsalesValue*

Step 4: Select Tables

Select the tables to be generated.

In the upper right panel (See area Number 4 in Figure 5), you will find a list of available tables that can be generated from the data you have specified. Click on the box next to each table to select the table(s) to be generated. If not enough variables are specified to generate a certain table, that table will be *greyed out* such as Table 2.2 and 3.1 in area number 4 of Figure 5. Tables are all greyed out when ADePT Livestock is initially opened and become black as you match more dataset variables to input variable fields.

The tables are grouped into five categories: Total value of livestock production, Participation in livestock activities, Livestock ownership and income, Livestock inputs and outputs, and Analysis of production. ADePT Livestock provides a short description of the table in the lower right panel (see the area in the red box in Figure 5) when you click on the table's name. In Figure 5 below, you can see that Table 1.2 is highlighted and the red box below contains the description for Table 1.2.

Figure 5: Selecting and generating tables

Step 5: Select Option for Frequencies

Select whether you want frequency tables to be included in the output file (see Figure 6 below). In Figure 6, the option for Frequencies is selected so ADePT Livestock will include the number of observations for the analysis for all the tables selected.

Figure 6: Selecting option for frequencies
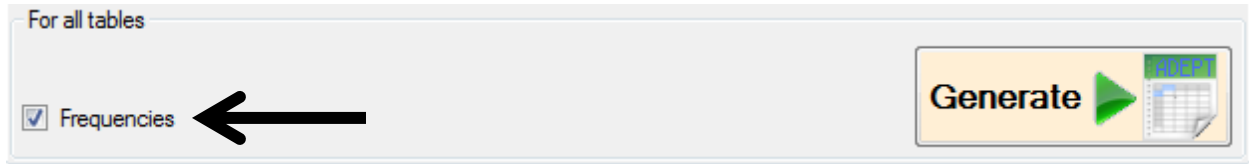
Frequency tables are useful to check whether the statistics produced by ADePT are based on an adequate number of observations. They are also useful to investigate whether the tables are based on the number of observations expected by the user.

Step 6: Generate the Report

Click the button and ADePT Livestock will begin the calculations to generate the tables. You might have to wait from a few seconds to several minutes for the calculations to finish depending on the size of the dataset and the number of tables selected. You will know if ADePT is still working if the icon in the upper left corner ( ) is still moving. As an example, on a computer with an Intel i3 processor and 4GB of RAM running Windows 7, ADePT employs about 30 seconds to produce all the livestock tables using the example files.

If you want to stop the calculations while ADePT is generating the tables, click the button.

While ADePT Livestock is performing the calculations for the tables, it will also flag inconsistencies in the data and those flags will appear in the **Messages** tab of the lower right panel. See the section for Flags and Alerts in this user guide for more information about the list of potential problems that ADePT list in the **Messages** tab.

After the tables are generated, the output will be opened in a compatible spreadsheet program (i.e. Microsoft Excel®). If frequency option was selected for the tables, the frequency tables will be in separate tabs from the table with only the summary statistics. The table with the frequencies will be colored blue and will have the suffix "_FREQ" after the table name (see Figure 7 below).

Figure 7: Tabs in ADePT Livestock output

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Flags and Alerts

Before performing the analysis, ADePT Livestock will perform a series of checks on the data to flag issues that can negatively affect the results produced by ADePT Livestock. You can examine the flags and alerts in the **Messages** tab (see Figure 8).

Figure 8: Messages about inconsistencies and issues in the data being analyzed
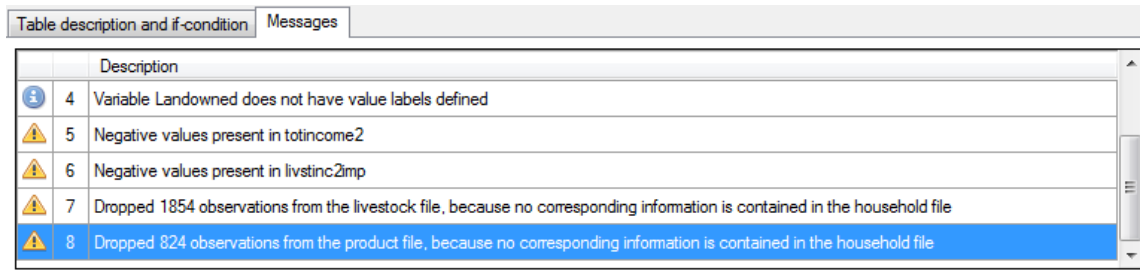
Notifications do not affect the results of the analysis but are issues that the user might want to know. In the case of the example, you can see in Figure 8 that the variable *Landowned* in the example dataset does not have value labels. This does not affect the results of the analysis but value labels might be something you would want to add to the variable to make the tables easier to understand.

Warnings are issues that might affect the results of the analysis so the user should try to resolve these issues if possible. In the case of the example, you can see in Figure 8 that ADePT dropped 1,854 observations from the livestock data file and 824 observations from the product data file because it had no corresponding information in the household data file. This means that there was data in the livestock and product data file but no household data for these livestock-keeping households. You would want to investigate this issue further because this most likely means that there are households missing from the household data file. This could greatly affect the results of your analysis depending on how many households are missing.

Errors prevent the use of a variable in the analysis. This is most likely due to a variable being incorrectly matched to its input field. This will have a huge negative impact on the analysis, and in the case of some critical errors, ADePT Livestock will discontinue its analysis. You should try to fix as many errors as possible as this will most likely have a negative effect on the accuracy of the results ADePT produces.

For more information of the different kinds of problems flagged by ADePT, refer to page 39 in Chapter 5 of the ADePT User Guide.

3. ANALYSIS WITH ADEPT LIVESTOCK

Key Variables for Analysis

Characteristics of livestock ownership and activities can vary significantly depending on certain key variables, such as welfare, assets and geography. A majority of the tables generated by ADePT Livestock present information on the livestock sector with respect to the five key variables listed below.

Welfare Quintiles

Welfare quintiles are the five groups that households in the dataset are classified into based on the value of the household welfare aggregate variable. Household per capita/adult equivalent consumption expenditure are a preferred measure of welfare, although income can also be used. Households in the fifth quintile will have better standard of living and overall household welfare according to this measure than the households in the lower quintiles. The welfare quintiles are calculated separately for the rural, urban and total samples

Land Ownership Quintiles

Land ownership quintiles are the five groups that households in the dataset are classified into based on the amount of land that the household owns. In addition to the quintiles, this variable has an extra category for landless households because many households that participate in livestock activities may not own any land. If an urban/rural variable is specified, the sample for calculating land ownership quintiles is restricted to rural households only. If no urban/rural variable is specified, the sample is all households.

Quintiles of Current Stock Ownership

Quintiles of current stock ownership are the five groups that households in the dataset are classified into depending on the number of livestock that the household currently owns measured in Livestock Units (LUs).

LU is a standardized unit used to describe the total number of livestock of different species in a single number. Livestock of different species are converted into LU using a conversion factor that corresponds to an agreed upon live weight and differs depending on the type of animal and the region of the world.[3] Many countries have also developed country specific conversion factors.

The example dataset uses LU coefficients for Sub Saharan Africa provided in the paper by Chilonda et al (2005)[4] because that is the geographic region that Malawi resides in. Coefficients for other regions are

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[3] For more information on LUs, refer to http://www.lrrd.org/lrrd18/8/chil18117.htm and
http://www.fao.org/ag/againfo/programmes/en/lead/toolbox/Mixed1/TLU.htm
[4] The paper can be found at http://www.lrrd.org/lrrd18/8/chil18117.htm

provided in the same publication, but you can utilize any conversion factor of choice, as long as you make sure that the animal codes for the conversion factors match those in the livestock level file. The codes in the "Livestock code" variable must match the codes in the "Animal code" variable. If the codes do not match, then ADePT Livestock will not be able to employ the correct conversion factors in the relevant tables. If codes are zero or missing, then ADePT will omit those livestock types in any tables expressed in LU's.

Region

Regions for a survey are user or survey defined. In an official national sample survey, these would be geographic and administrative areas defined by the national statistics office of that country. The characteristics of the livestock sector can vary significantly between regions within a country, due to differences in factors such as geography, ethnic groups or climate.

In the example dataset, the region variable does not have value labels, so the tables from ADePT will display the regions as their 1, 2 and 3 values instead of their corresponding names: "Northern," "Central," and "Southern." The user can correct that by adding value labels prior to loading the example data files into ADePT or by editing the output file produced by ADePT.

Gender of Household Head

Gender of the head of the household is whether the household head in the household is a male or female. Tables analyzed by the gender of the head of the household look at gender differences in the livestock sector at the most basic level. This is mostly not satisfactory because it does not capture intra-household dynamics, but since individual level data are not commonly available, the first release of the ADePT Livestock module only includes this minimal level of gender disaggregation.

In the example, this variable does not have value labels so a value of 1 means that the household is a female-headed households and a value of 0 means the household is a male-headed household.

Minimum Number of Observations

ADePT Livestock will not report statistics when the number of observations available is fewer than 5 because the number of observations is considered to be too small to produce any meaningful results. You can use the frequencies table to identify the blank cells in which the statistics were suppressed due to the number of observations being fewer than 5.

4. INTERPRETING THE TABLES

Tables Summary

The tables in ADePT Livestock are organized into five different themes:

- Total Value of Livestock Production: What is the household level average value of livestock production? What are the relationships of the value of livestock production and livestock sales to the key analysis variables?
- Participation in Livestock Activities: What the average level of participation in livestock activities? How does participation in livestock activities vary by region and animal type in relation to the key analysis variables?
- Livestock Ownership and Income: Across all animals and for each animal, what is the livestock holding of an average household in the sample? How does livestock ownership vary by region and animal type with respect to the key analysis variables? How many livestock-keeping households are living below the poverty line? What is the relationship between the share of livestock income and the key analysis variables?
- Livestock Inputs and Outputs: For each kind of animal, what is the average number of animals that are sold, born, vaccinated, etc.? How are different livestock inputs and outputs affected by the key analysis variables? Livestock inputs and outputs variables include: initial inventory, sales, animals born, animals lost, animals given away, animals slaughtered, and animals vaccinated.
- Analysis of Production: For each livestock product, what is the average volume and value of household livestock production? How does the volume and value of household livestock production vary according to the key analysis variables?

All tables use sampling weights provided. If no weights are provided, the sample is assumed to be self-weighting. The users ensure that their datasets contain sampling weights because not using weights when they are required by survey design will result in inaccurate statistics.

Total Value of Livestock Production

The four tables in this section display the relationship between household level average of the value of livestock production and livestock sales with household welfare, land ownership, livestock ownership, and region. The value of livestock production and sales in the tables are reported in the same currency as the matched variables in the dataset. For the tables in this section to be accurate, it is essential that the variables for the value of livestock production, the value of product sales and the value of sale of live animals are reported in the same currency. If you would like to use a different currency, the transformation would have to be carried out outside of ADePT. In the case of the example, the numbers are reported in the local currency, Malawian Kwacha.

Table 1.1

ADePT Livestock table 1.1 describes the household level average value of livestock production and livestock sales by the welfare quintiles for the rural, urban, and total sample. Values are expressed in the currency used in the dataset. The samples for the first two rows are restricted to households that produce any livestock products. The sample for the third row is restricted to households that own at least one animal of any kind.

For reasons of space and readability, the table below displays only the portion of ADePT Livestock Table 1.1 for the rural sample. The actual ADePT output also produces a similar table for the urban and total samples.

Table 2: Gross value of livestock production and livestock sales by welfare quintiles for rural sample (Part of ADePT Livestock Table 1.1)

	Rural Welfare Quintiles					
	1	2	3	4	5	Total
Total Value of Production	7,845.49	7,598.13	16,015.19	18,880.13	18,187.63	14,541.48
Products Sold	481.57	330.32	804.30	2,260.30	3,044.43	1,506.40
Sales of Live Animals	2,663.66	3,874.54	3,621.60	4,704.65	5,984.44	4,232.21

The first row in the table shows the household level averages for total value of production across the five welfare quintiles in each column with the average for the total sample in a sixth column. In this case, the value of livestock production increases as overall household welfare improves. The table shows that the total value of production for rural households who produce any livestock product increases from 7,945.49 Kwacha in the lowest quintile to 18,187.63 Kwacha in the richest quintile. The average total value of production across all rural households is 14,541.48 Kwacha.

The second row displays the household level averages for value of livestock product sold for each welfare quintiles and the total sample. There is also an upward trend as household welfare improves, similar to the first row. Households in the fifth quintile sold 3,044.43 Kwacha worth of livestock product while households in the lowest quintile only sold 481.57 Kwacha worth.

The share of total livestock production that is sold can be determined using the information in the top two rows. The share of products sold will help paint a picture of whether the intention for household livestock production is more for commercial orientation or for household consumption.

The third row shows the household level averages for total sales of live animals for the five welfare quintiles and the total sample. The average total value of sale of live animals for the total sample of rural households that own at least animal of any kind is 4,232.21 Kwacha.

Table 1.2

ADePT Livestock table 1.2 also displays information on livestock production and sales but across land ownership quintiles instead of welfare quintiles. If an urban/rural variable is specified, the sample is

restricted to rural households only. If no urban/rural variable is specified, the sample is all households. The sample for the table displayed below is restricted to only rural households. Values are expressed in the currency used in the dataset. Similar to ADePT Livestock table 1.1, the samples for the first two rows are restricted to households that produce any livestock products. The sample for the third row is restricted to households that own at least one animal of any kind.

Table 3: Gross value of livestock production and livestock sales by land ownership quintiles (ADePT Livestock Table 1.2)

	Quintiles of land ownership						
	Landless	**1**	**2**	**3**	**4**	**5**	**Total**
Total value of production	10,997.17	9,502.93	12,366.80	13,684.15	13,254.98	20,551.94	14,362.96
Products sold	3.04	395.58	1,775.77	1,114.69	809.26	3,151.86	2,677.61
Sales of live animals	1,428.99	2,695.85	2,791.91	3,445.03	5,322.05	6,633.23	4,259.18

This table demonstrates the relationship between the amount of land households own and the household level averages for the value of total livestock production, livestock products sold, and from the sales of live animals.

Similar to the relationship with welfare quintiles, the household level average of the total value of livestock production, shown in the first row, also has an upward trend as the amount of land owned by the household increases. This table also shows that even the landless rural households keep some livestock since landless rural households report an average of 10,997.17 Kwachas for the total value of livestock production and an average of 1,428.99 Kwachas for the total value of sales of live animals.

The second row shows the household level average of the value of products sold for the landless, each land ownership quintile and the total sample of rural households. The household level average of products sold for the entire sample is 2,677.61 Kwacha, vastly greater than the average of 3.04 Kwacha for landless households.

The share of total livestock production that is sold can be determined using the information in the top two rows. The share of products sold will help paint a picture of whether the intention for household livestock production is more for commercial orientation or for household consumption.

The third row shows the household level average of the value of sales of live animals for the landless, each land ownership quintile, and the total sample of rural households. An almost fivefold increase in the average value of sales of live animals can be observed between the landless households and those in the top quintile.

Table 1.3

ADePT Livestock table 1.3 shows the relationship between the household level averages of the value of livestock production and livestock sales with the quintiles of number of livestock, measured in LUs,

currently owned by a household. The sample is restricted to households that are currently livestock owners, meaning that they own at least one animal of any kind. Similar to ADePT Livestock table 1.1 and 1.2, the samples for the first two rows are restricted to households that produce any livestock products. The sample for the third row is restricted to households that own at least one animal of any kind. Values are expressed in the currency used in the dataset.

Table 4: Gross value of livestock production and livestock sales by quintile of current stock ownerships (ADePT Livestock Table 1.3)

	Quintiles of current stock					
	1	**2**	**3**	**4**	**5**	**Total**
Total value of production	10,073.68	8,822.32	12,279.10	12,673.77	25,031.44	14,362.96
Products sold	25.42	49.11	154.70	7,257.00	5,064.00	2,677.61
Sales of live animals	505.93	795.25	2,369.60	4,249.57	13,668.89	4,259.18

In the first row, you can observe that the household level average of total value of production is largely the same in the bottom four quintiles, and then doubles from 12,673.77 Kwacha in the fourth quintile to 25,031.44 Kwacha in the fifth quintile. These numbers suggest that households that own the most livestock produce significantly more products and possibly produce products that attract a higher value, such as milk.

The second row shows the average value of products sold for each quintile of livestock holdings. On average, households in the bottom three quintiles of current stock ownership sell almost none of their livestock production. Although households in the third and fourth quintiles are similar for average value of total livestock production, households in the third quintile sell only 154.70 Kwacha on average while households in the fourth quintile on average sell a vastly greater value of 7,257 Kwacha.

The share of total livestock production that is sold can be determined using the information in the top two rows. The share of products sold will help paint a picture of whether the intention for household livestock production is more for commercial orientation or for household consumption.

The third row in the table shows the household level average value of sales of live animals. Similar to the trend in the total value of production, there is also a large increase in the average value of sales of live animals from 4,249.57 Kwacha in the fourth quintile to 13,668.89 Kwacha in the fifth quintile.

Table 1.4

ADePT Livestock table 1.4 shows the regional differences in the value of livestock production and livestock sales. The sample for this table is restricted to households that are currently livestock owners. The samples for the first two rows are restricted to households that produce any livestock products. The sample for the third row is restricted to households that own at least one animal of any kind. Values are expressed in the currency used in the dataset.

Table 5: Gross value of livestock production and livestock sales by region
(ADePT Livestock Table 1.4)

	Region			
	1	**2**	**3**	**Total**
Total value of production	14,489.96	17,366.68	11,302.16	14,362.96
Products sold	6,803.00	1,943.32	1,008.19	2,677.61
Sales of live animals	5,937.20	3,983.88	3,862.25	4,259.18

From this table, we can see that in the case of Malawi, region 2 has the highest value of livestock production per household at 17,510.85 Kwachas, which could be the result of a higher quantity produced or that this region produced higher value livestock products, such as milk. Despite a higher value of livestock production in region 2, the livestock production in region 1 is more commercially oriented with the value of products sold being 47% the total value of production, while it is only 11% and 9% in region 2 and region 3 respectively. In general, livestock activities in region 1 is more market oriented than in the other two region as the value of products sold and value of sales of live animals significantly higher than the averages for all livestock keeping households.

Participation in Livestock Activities

The tables in this section examine the characteristics of households that participate in livestock activities, such as their household welfare, gender of the household head, and land ownership. It also examines the type of animals that are kept by the livestock keeping households and how that varies in relation to overall household welfare. The tables provide both the share of livestock keeping households and the number of livestock keeping households in each quintile for the tables relating to household welfare and land ownership.

Table 2.1

ADePT Livestock Table 2.1 shows the shares of households participating in livestock activities in each region by welfare quintiles for the rural, urban and total sample. Participation in livestock activity is defined as households that currently own at least one of any kind of animal. Shares are displayed as a decimal value, instead of a percentage value.

For reasons of space and readability, the table below displays only the portion of ADePT Livestock Table 2.1 for the rural sample. The actual ADePT output also produces a similar table for the urban and total samples.

Table 6: Participation in livestock activities by region, and rural/urban welfare quintiles (shares)
(Part of ADePT Livestock Table 2.1)

	Rural welfare quintiles					
	1	**2**	**3**	**4**	**5**	**Total**
Region						
1	0.57	0.64	0.68	0.67	0.53	0.62
2	0.35	0.49	0.56	0.61	0.54	0.52
3	0.37	0.44	0.48	0.48	0.40	0.43
Total	0.39	0.49	0.54	0.56	0.48	0.49

This table displays the relationship between the share of household participating in livestock activities across the five welfare quintiles in each column with the average for the total sample in a sixth column. The shares for each region are displayed separately to reveal any regional differences, but the shares for the total sample are also shown in the last row to show the overall sample average.

This table shows that livestock keeping households make up a significant majority, 0.62 (62%), of all rural households in Region 1 and a slight majority, 0.52 (52%), of all rural households in Region 2. Although not a majority like in Region 1 and 2, a significant share, 0.43 (43%), of all rural household participate in livestock activities in Region 3. It is also interesting to note that livestock ownership is not directly related to welfare levels: the top welfare quintile does not have the highest share of households participating in livestock activities across all the regions, but rather the third or fourth welfare quintile. Region 1 peaks in the third quintile at a share of 0.68 (68%); Region 2 peaks in the fourth quintile at 0.61 (61%); and the maximum share of 0.48 (48%) is in both the third and fourth quintile in Region 3.

Table 2.2

ADePT Livestock table 2.2 shows the shares of livestock participating in livestock activities in each region by land ownership quintiles. If an urban/rural variable is specified, the sample is restricted to rural households only. If no urban/rural variable is specified, the sample is all households. The sample for the table displayed below is restricted to only rural households. Participation in livestock activities is defined as households that own at least one of any kind of animal. Shares are displayed as a decimal value, instead of a percentage value.

Table 7: Participation in livestock activities by region and land ownership quintiles (shares)
(ADePT Livestock Table 2.2)

	Quintiles of land ownership						
	Landless	**1**	**2**	**3**	**4**	**5**	**Total**
Region							
1	0.29	0.52	0.74	0.64	0.73	0.81	0.62
2	0.15	0.33	0.54	0.53	0.69	0.73	0.52
3	0.07	0.37	0.49	0.53	0.62	0.58	0.43
Total	0.14	0.37	0.55	0.54	0.68	0.70	0.49

This table displays the relationship between the share of household participating in livestock activities and different levels of land ownership. The shares for each region are displayed separately to reveal any

regional differences, but the shares for the total sample are also shown in the last row to show the overall picture.

Across all the regions, a positive relationship can be observed in the table between land ownership and household participation in livestock activities. Additionally, far fewer landless rural households keep livestock than rural households that own any land in every region. The most striking example of this would be in Region 3 where only a share of 0.07 (7%) of landless rural households participate in livestock activities compared with the lowest quintile of land ownership where a share of 0.37 (37%) participate in livestock activities.

Table 2.3

ADePT Livestock Table 2.3 is similar to ADePT Livestock Table 2.1 but Table 2.3 shows the share of households that own at least one animal of that kind across the welfare quintiles calculated separately for the rural, urban and total sample. Participation in livestock activity is defined as households that own at least one of any kind of animal. Shares are displayed as a decimal value, instead of a percentage value.

It is important to note that types of animals displayed here are the ones present in the example Malawi IHS3 dataset and will vary according to the type of animals present in the dataset you are analyzing with ADePT Livestock. Users interested in obtaining a specific set of animal type groups (eg large ruminants, small ruminants, poultry) should perform the required data manipulation outside of ADePT.

For reasons of space and readability, the table below displays only the portion of ADePT Livestock Table 2.3 for the rural sample. The actual ADePT output also produces a similar table for the urban and total samples.

Table 8: Participation in livestock activities by animal types, and rural/urban welfare quintiles (shares)
(Part of ADePT Livestock Table 2.3)

	Rural welfare quintiles					
	1	**2**	**3**	**4**	**5**	**Total**
LIVESTOCK CODE						
Calf	0.02	0.03	0.02	0.04	0.04	0.03
Steer/heifer	0.01	0.01	0.01	0.00	0.01	0.01
Cow	0.06	0.06	0.07	0.08	0.10	0.08
Bull/ox	0.04	0.03	0.04	0.05	0.06	0.04
Donkey	0.00	0.00	0.00	0.00	0.00	0.00
Mule/horse	0.00	0.00	0.00	0.00	0.00	0.00
Goat	0.42	0.44	0.44	0.42	0.45	0.44
Sheep	0.01	0.01	0.00	0.01	0.02	0.01
Pig	0.09	0.15	0.15	0.17	0.17	0.15
Chicken-layer	0.00	0.01	0.01	0.01	0.01	0.01
Local-hen	0.61	0.64	0.72	0.74	0.72	0.69
Chicken-broiler	0.00	0.00	0.00	0.01	0.01	0.00
Local-cock	0.30	0.31	0.34	0.38	0.39	0.35
Turkey	0.01	0.00	0.00	0.00	0.01	0.00
Duck	0.05	0.05	0.04	0.04	0.04	0.04
Guinea fowl	0.01	0.01	0.02	0.03	0.02	0.02
Beehive	0.00	0.00	0.00	0.00	0.01	0.00
Other (Specify)	0.03	0.03	0.04	0.04	0.04	0.04

For this table, each row shows the share of households that currently own that type of animal for each welfare quintile and the total sample. For example, you can see that wealthy rural households are more likely to own pigs with a share of 0.17 (17%) of rural households in the fifth quintile are currently pig owners in comparison to only a share of 0.09 (9%) of rural households in the first quintile.

It is also apparent in the table that the majority of rural households in Malawi own some type of poultry, with the largest majority seen in local hen with a share of 0.69 (69%) of all rural households. The table also shows that goats and local cocks are also popular animals in Malawi. You can observe a share of 0.44 (44%) of all rural households currently own goats and a share of 0.35 (35%) currently own local cocks. The table also suggests a slight positive relationship between wealth and ownership of larger animals.

Table 2.4

ADePT Livestock Table 2.4 below presents the shares of households owning at least one animals of any kind by the gender of the head of the household and the welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total sample. Participation in livestock activity is defined as households that own at least one of any kind of animal. Shares are displayed as a decimal value, instead of a percentage value.

The value of "1" signifies female-headed households and the value of "0" signifies male-headed households. In a well-prepared dataset, these values would be properly labeled and ADePT would use the labels as row titles.

For reasons of space and readability, the table below displays only the portion of ADePT Livestock Table 1.1 for the rural sample. The actual ADePT output also produces a similar table for the urban and total samples.

Table 9: Participation in livestock activities by gender of the head of household, and rural/urban welfare quintiles (shares)
(Part of ADePT Livestock Table 2.4)

	Rural welfare quintiles					
	1	2	3	4	5	Total
Female-headed household						
0	0.42	0.52	0.58	0.58	0.50	0.52
1	0.29	0.41	0.41	0.51	0.42	0.40
Total	0.39	0.49	0.54	0.56	0.48	0.49

This table will reveal whether there is any gender difference at the most basic level in the participation of livestock activities. In the table, you can observe that the livestock sector is divided across gender lines with a higher share of male-headed rural households, 0.52 (52%), participating in livestock activities than the female-headed rural households, 0.40 (40%). This is true across all the welfare quintiles although the difference in share of participation between the two groups is less in the wealthier fourth and fifth quintile. In the poorest quintile, only a share of 0.29 (29%) of female-headed rural households participate in livestock activities.

Table 3.1

ADePT Livestock Table 3.1 is similar to ADePT Livestock Table 2.2 by showing the relationship between household participation in livestock activities and land ownership. ADePT Livestock Table 3.1 is similar to ADePT Livestock Table 2.1 but this table shows the *number* of households participating in livestock activities for each category while ADePT Livestock Table 2.2 shows the *share* of households participating in livestock activities. The sample for this table is restricted to rural households only. The numbers of this table will be affected by the population size of each region and the number of total households in each land ownership quintile. Sampling weights are essential for expanding the number of observations to the number of households in the surveyed population. If no sampling weights are provided, these tables will only provide the number of observations.

Table 10: Participation in livestock activities by region and land ownership quintiles (numbers) (ADePT Livestock Table 3.1)

	Quintiles of land ownership						
	Landless	**1**	**2**	**3**	**4**	**5**	**Total**
Region							
1	9,986	44,893	9,674	55,963	24,418	58,746	203,680
2	10,133	88,452	13,277	158,290	76,838	189,278	536,268
3	6,851	200,090	20,574	160,905	42,443	80,700	511,563
Total	26,970	333,436	43,525	375,158	143,699	328,724	1,251,511

This table will show you the total number of households that participate in livestock activities for landless households, each land ownership quintile, and the total sample of rural households. In the case of Malawi, the table shows that the total number of households participating in livestock activities in Region 2 (536,268 households) and Region 3 (511,563 households) is much greater than in Region 1 (203,680 households).

The highest number of livestock keeping households for region 1 and region 2 is in quintile 3 of land ownership, at 55,963 households for region 1 and 158,290 households for region 2. In region 3, the largest number of livestock keeping households belonged to quintile 1 of land ownership with 333,436 households. It can also observed from the table that a large portion of livestock keeping households in region 3 own very little or no land, with about 40.6% of livestock keeping households belong to either the landless category or the lowest quintile of land ownership.

Table 3.2

ADePT Livestock Table 3.2 shows the number of households that own at least one animal of that kind, by welfare quintiles. Welfare quintiles are calculated for both the rural, urban and total sample. ADePT Livestock Table 3.2 is similar to ADePT Livestock Table 2.3 except that it shows the *number* of households that own each animal instead of the *share* of households.

It is important to note that types of animals displayed here are the ones present in the example Malawi IHS3 dataset and will vary according to the type of animals present in the dataset you are analyzing with ADePT Livestock.

For reasons of space and readability, the table below displays only the portion of ADePT Livestock Table 3.2 for the rural sample. The actual ADePT output also produces a similar table for the urban and total samples.

Table 11: Participation in livestock activities by animal type and welfare quintiles (numbers)
(Part of ADePT Livestock Table 3.2)

LIVESTOCK CODE	Rural welfare quintiles					
	1	2	3	4	5	Total
Calf	3,313	6,709	6,598	10,294	8,985	35,900
Steer/heifer	2,192	3,030	3,191	1,271	2,237	11,920
Cow	11,433	15,838	20,149	23,620	24,146	95,186
Bull/ox	7,185	8,206	11,001	13,934	15,188	55,515
Donkey						
Mule/horse						
Goat	84,765	110,629	122,434	122,400	113,124	553,353
Sheep	2,129	2,716	1,119	1,726	3,885	11,575
Pig	18,882	36,608	41,028	47,963	41,187	185,667
Chicken-layer		1,716	2,169	3,101	3,213	10,588
Local-hen	123,082	159,523	198,523	212,898	179,755	873,781
Chicken-broiler		1,135		1,592	1,290	5,143
Local-cock	59,530	76,711	94,818	109,362	96,448	436,869
Turkey	1,063				1,454	4,444
Duck	10,607	12,122	12,176	12,297	9,708	56,910
Guinea fowl	1,336	2,734	5,205	8,568	5,611	23,455
Beehive					1,491	2,794
Other (Specify)	6,514	7,772	10,080	12,478	9,580	46,424

The table shows the animals commonly owned by households in the data. This table shows that that the three types of animals most commonly kept by rural households in Malawi are: local hen (873,781 households), goat (553,353 households), and local cock (426,869 households).

The table also reveals the relationship between the number of households that own a certain kind of animal and overall household welfare. It is interesting to note that the upward trend for the three most commonly owned kinds of animal all peak in the fourth quintile, with fewer rural households keeping these three types of animal in the fifth quintile than in the fourth quintile. We can also see that a larger number of wealthier rural households keep larger animals, such as cows and pigs. To use cows as an example, we can see a progressive increase in the number of households that keep cows as we move from the first welfare quintile to the fifth welfare quintile. There are 11,433 rural households that keep cows in the first welfare quintile; 20,149 rural households that keep cows in the third welfare quintile; and 24,146 rural households that keep cows in the fifth welfare quintile.

Livestock Ownership and Income

Understanding the characteristics of livestock ownership with respect to herd size and composition is essential to understanding the livestock sector. Herd size and composition refer to the characteristics of the types and the quantity of each type of animals owned by a household. The tables in this section reveal the relationship between herd size and composition with respect to variables such as overall household welfare, land ownership, geographic region and gender of the household head. These tables

will show the presence and extent of inequalities and concentrations within the livestock sector with respect to certain animal types and livestock ownership in general.

Tables 4.1-4.5 use the standard unit of LUs to quantify households herd composition across all the different species. For more information on LUs, refer to the section on key analysis variables on page 17 of this user's guide. Note that types of animals that have a missing or zero value for their LU coefficient will not be included in the analysis for Tables 4.1-4.5. In the example, animals listed under the "Other (Specify)" category are not included into the analysis because it has a LU coefficient of zero.

Tables 5.1-5.5 show the household herd composition in terms of headcounts for each animal, instead of in LUs. Tables 6.1 and 6.2 display similar information about poor and non-poor households that own livestock, with Table 6.1 showing the percentage of poor households while Table 6.2 showing the number of poor households. Table 7.1 and 7.2 reveal the concentration in livestock ownership with respect to household livestock holdings and overall household welfare. Table 8.1-8.4 will describe the relationship between the key variables and the share of livestock income of the total household income.

Table 4.1

ADePT Livestock Table 4.1 displays the household level average quantity of livestock owned expressed in LUs by region for each welfare quintile for the rural, urban and total sample. The welfare quintiles are calculated separately for the rural, urban and total sample. The sample for this table is restricted to households that own at least one animal of any type.

For reasons of space and readability, the table below displays only the portion of ADePT Livestock Table 4.1 for the rural sample. The actual ADePT output also produces a similar table for the urban and total samples.

Table 12: Livestock Ownership (in LUs) by Region and Welfare Quintiles
(Part of ADePT Livestock Table 4.1)

	Rural welfare quintiles					
	1	**2**	**3**	**4**	**5**	**Total**
Region						
1	0.84	0.83	0.98	0.99	1.65	1.01
2	0.30	0.48	0.56	0.61	1.39	0.73
3	0.33	0.36	0.52	0.61	0.59	0.48
Total	0.42	0.49	0.62	0.67	1.14	0.68

This table shows the behavior of household level total livestock ownership expressed in LUs as overall household welfare changes for each region and for rural households, urban households and all households in the sample. The averages for each region are displayed separately in each row to reveal any regional differences, but the shares for the total sample are also shown in the last row to show the overall picture.

For the example, the table shows a steady increase in the average value of LUs owned by a household as overall household welfare improves. For the total sample, households in the fifth quintile owned an average of 1.14 LUs while household in the third quintile owned an average of 0.62 LUs and even less in the first quintile with 0.42 LUs.   The table also shows that the household level average of livestock owned is highest in Region 1 with an average holding of 1.01 LUs and lowest in region 3 with an average holding of 0.48 LUs. Across all the welfare quintiles, it seems that households in Region 1 on average own more LUs than the other two regions in Malawi.

Table 4.2

ADePT Livestock Table 4.2 displays the household level average quantity of livestock owned measured in LUs by region for the landless, five quintiles of land ownership and for the total sample. If an urban/rural variable is specified, the sample is restricted to rural households only. If no urban/rural variable is specified, the sample is all households. The sample for the table displayed below is restricted to only rural households.

Table 13: Livestock ownership (in LUs) by region and land ownership quintiles (ADePT Livestock Table 4.2)

		Quintiles of land ownership					
	Landless	**1**	**2**	**3**	**4**	**5**	**Total**
Region							
1	0.20	0.62	0.63	0.74	1.36	1.62	1.01
2	0.19	0.28	0.30	0.78	0.44	1.09	0.73
3	0.13	0.26	0.36	0.48	0.60	1.00	0.48
Total	0.18	0.32	0.40	0.65	0.65	1.16	0.68

This table shows the relationship between the quantity of livestock households own and the amount of land households own. The averages for each region are displayed separately in each row to reveal any regional differences, but the shares for the total sample are also shown in the last row to show the overall picture.

In the case of the example, the table reveals that on average households that own more land also own more LUs of livestock. The largest difference in herd size between the top quintile and the landless can be observed in Region 1 with households in the fifth quintile owning an average of 1.62 LUs while the landless owned only 0.20 LUs. You can also see in the table that even landless households own livestock with the total sample of rural households owning an average of 0.18 LUs. Similar to ADePT Livestock Table 4.1, households in Region 1 in general own LUs of livestock across all the land ownership categories.

Table 4.3

ADePT Livestock Table 4.3 shows the average household animal holdings measured in LUs by type of animal and quintile of current stock owned. The sample for each row is restricted to the households that own at least one of that type of animal, defined as TLU being greater than 0. The consequence of this

definition is that animals that have a LU coefficient of 0 or missing will not appear in this table. The table also reports the overall livestock holding for all animals in each quintile in the last row and the overall livestock holding in LU for each animal in the last column

Table 14: Livestock ownership in (LUs) by animal and quintiles of current stock (ADePT Livestock Table 4.3)

	Quintiles of current stock					
	1	2	3	4	5	Total
LIVESTOCK CODE						
Calf					0.65	0.64
Steer/heifer					0.75	0.74
Cow				0.50	2.30	2.19
Bull/ox				0.50	2.13	2.11
Donkey						
Mule/horse						
Goat		0.10	0.22	0.41	0.79	0.45
Sheep			0.19	0.36	0.49	0.39
Pig			0.20	0.38	1.13	0.77
Chicken-layer	0.03	0.08	0.16	0.15	0.64	0.19
Local-hen	0.03	0.07	0.11	0.09	0.09	0.07
Chicken-broiler	0.02		0.06		0.37	0.12
Local-cock	0.01	0.03	0.03	0.03	0.03	0.03
Turkey			0.10	0.04	0.07	0.07
Duck	0.02	0.05	0.06	0.07	0.06	0.05
Guinea fowl		0.04	0.05	0.06	0.08	0.06
Total	0.02	0.06	0.14	0.25	0.83	0.35

The table shows the differences in the composition and size of livestock ownership as the amount of livestock owned increases. In the example, it can be seen that both the quantity and type of animals owned by households change as a household owns more livestock. The table shows that households in the first quintile own only poultry and very small numbers of poultry, with the average holdings being 0.02 LUs. As household livestock holdings increases, goats and sheep become more important as seen in the second to fourth quintile, with cattle eventually dominating the fifth quintile. It can also be observed that there is a high concentration of livestock ownership in the fifth quintile. Households in the fifth quintile own an average of 0.83 LUs which is more than twice the average of total sample average of 0.35 LUs and the fourth quintile with average household livestock holdings at 0.25 LUs.

Table 4.4

ADePT Livestock Table 4.4 looks at the regional differences between the size and composition of household livestock holding. The table also reports the overall livestock holding for all animals for each region in the last row and the overall livestock holding in LU for each animal in the last column. The sample for each row is restricted to the households that own at least one of that type of animal, defined as TLU being greater than 0. The consequence of this definition is that animals that have a LU coefficient of 0 or missing will not appear in this table.

Table 15: Livestock ownership (in LUs) by animal and region
(ADePT Livestock Table 4.4)

LIVESTOCK CODE	Region 1	2	3	Total
Calf	0.62	0.64	0.66	0.64
Steer/heifer	0.74	0.71		0.74
Cow	1.77	2.31	2.65	2.19
Bull/ox	1.23	4.19	1.11	2.11
Donkey				
Mule/horse				
Goat	0.51	0.46	0.42	0.45
Sheep	0.39	0.33	0.48	0.39
Pig	0.78	0.84	0.63	0.77
Chicken-layer	0.30	0.32	0.08	0.19
Local-hen	0.07	0.07	0.07	0.07
Chicken-broiler		0.16	0.09	0.12
Local-cock	0.02	0.03	0.03	0.03
Turkey		0.08	0.05	0.07
Duck	0.04	0.06	0.05	0.05
Guinea fowl	0.06	0.05	0.08	0.06
Total	0.41	0.38	0.28	0.35

In the example of Malawi, ADePT Livestock Table 4.4 shows that there is only slight regional variation in livestock holding. The least variation in ownership across the regions is local-hen that has an average household holding of 0.07 LUs across all the regions. The largest difference appears the ownership of bull/ox with Region 2 with an average holding of 4.19 LUs while Region 2 has a holding of only 1.23 LUs and Region 3 with a holding of 1.11 LUs. The table also does not show one region specializing in one type of animal while another in another type of animal. The types of animals owned in all the regions are mostly similar.

Table 4.5

ADePT Livestock Table 4.5 shows average household animal holdings measured in LUs by type of animal and gender of the head of household. The table also reports the overall livestock holding for all animals for each region in the last row and the overall livestock holding in LU for each animal in the last column. The sample for each row is restricted to the households that own at least one of that type of animal, defined as TLU being greater than 0. The consequence of this definition is that animals that have a LU coefficient of 0 or missing will not appear in this table.

Table 16: Livestock Ownership (in LUs) by species and gender of household head (number of heads) (ADePT Livestock Table 4.5)

	Female headed household		
	0	**1**	**Total**
LIVESTOCK CODE			
Calf	0.66	0.48	0.64
Steer/heifer	0.76	0.35	0.74
Cow	2.30	1.43	2.19
Bull/ox	2.18	1.23	2.11
Donkey			
Mule/horse			
Goat	0.47	0.38	0.45
Sheep	0.41	0.29	0.39
Pig	0.78	0.68	0.77
Chicken-layer	0.22	0.06	0.19
Local-hen	0.07	0.07	0.07
Chicken-broiler	0.14	0.08	0.12
Local-cock	0.03	0.02	0.03
Turkey	0.07		0.07
Duck	0.05	0.05	0.05
Guinea fowl	0.06	0.06	0.06
Total	0.38	0.24	0.35

This table will help reveal any gender difference at the basic household level in size and composition of livestock holdings. In the example dataset, the variable for the gender of the household head had no value labels so you can see that the columns have a value of "0" and "1". In the table, the value of "0" represents male-headed households and "1" represents female-headed households. For the example, ADePT Livestock Table 4.5 reveals that male-headed households on average own more livestock than female-headed households. Overall, male-headed households had holdings of 0.38 LUs while female-headed household held less at 0.24 LUs. The difference in livestock holdings between the two groups is apparent in the larger animals, such as cows and bull/ox. A large almost four times difference is also observed in chicken-layer with male-headed households owning 0.22 LUs of chicken-layers while female headed ones only owned 0.06 LUs.

Table 5.1

ADePT Livestock Table 5.1 presents the average number of animals owned for households owning that type of animal, by rural, urban and total welfare quintiles. The welfare quintiles are calculated separately for the rural, urban and total sample. The number of observations varies in each row as it is restricted to households that own that type of animal.

For reasons of space and readability, the table below displays only the portion of ADePT Livestock Table 5.1 for the rural sample. The actual ADePT output also produces a similar table for the urban and total samples.

Table 17: Livestock ownership by species and welfare quintiles
(Part of ADePT Livestock Table 5.1)

	Rural welfare quintiles					
	1	**2**	**3**	**4**	**5**	**Total**
LIVESTOCK CODE						
Calf	1.6	2.5	1.9	2.2	4.1	2.6
Steer/heifer	2.3	2.1	2.8	2.3	5.2	3.0
Cow	2.9	2.8	4.1	4.5	6.0	4.3
Bull/ox	2.7	2.6	2.6	1.9	9.5	4.3
Donkey						
Mule/horse						
Goat	3.6	4.3	4.5	4.5	5.4	4.5
Sheep	4.2	3.5	4.2	2.9	4.3	3.9
Pig	3.2	2.9	4.0	4.3	4.3	3.8
Chicken-layer		4.5	13.5	9.6	41.5	19.1
Local-hen	5.9	6.8	7.2	7.0	8.7	7.2
Chicken-broiler		2.7		22.3	8.1	11.0
Local-cock	2.4	2.7	2.4	2.4	2.9	2.6
Turkey	3.1				5.2	6.7
Duck	5.0	5.0	5.1	4.6	5.1	5.0
Guinea fowl	4.3	7.3	4.4	6.2	8.2	6.3
Beehive					2.3	2.9
Other (Specify)	12.0	9.2	15.1	11.3	17.5	13.1

This table shows the relationship of overall household welfare changes with the average number of animals owned by households for each type of animal. In the case of the example, you can see that there is a slight positive correlation between the average number of animals owned and overall household welfare in some types of animal, such as goat and local-hen. In the case of goat, the first quintile owns an average of 3.6 goats, increasing slightly to 4.5 goats in the third quintile, and increasing even more to 5.4 goats in the fifth quintile. You can also see in the table that rural households in the fifth quintile on average own more cattle. This difference is very apparent for bull/ox with the fifth quintile owning an average of 9.5 heads while the other welfare quintiles only own on average of 1.9-2.7 heads.

Table 5.2

ADePT Livestock Table 5.1 shows the average number of animals owned for households owning that type of animal, by quintiles of land ownership. If an urban/rural variable is specified, the sample is restricted to rural households only. If no urban/rural variable is specified, the sample is all households. The sample for the table displayed below is restricted to only rural households. The number of observations varies in each row as it is restricted to households that own that type of animal.

Table 18: Livestock ownership by species and land quintiles (number of heads)
(ADePT Livestock Table 5.2)

LIVESTOCK CODE	Landless	1	2	3	4	5	Total
			Quintiles of land ownership				
Calf		1.8	1.4	1.9	2.4	3.2	2.5
Steer/heifer		2.3		2.5	3.1	3.6	3.0
Cow		2.1	1.9	3.8	5.9	5.0	4.4
Bull/ox		2.7	1.5	13.3	3.3	2.4	4.2
Donkey							
Mule/horse							
Goat	3.2	3.5	3.3	4.1	4.2	5.8	4.5
Sheep		3.1		3.5	4.4	4.1	3.9
Pig	2.8	2.9	3.4	4.0	3.3	4.5	3.9
Chicken-layer		5.7		7.2		61.9	19.2
Local-hen	7.5	6.2	5.9	7.4	6.8	8.3	7.3
Chicken-broiler		6.1				15.4	12.0
Local-cock	2.4	2.5	2.2	2.3	2.7	2.8	2.6
Turkey				4.2		8.6	6.7
Duck		4.2		5.1	4.6	5.9	5.1
Guinea fowl		7.0		6.0	4.1	7.1	6.4
Beehive				1.8			2.9
Other (Specify)		11.9	7.6	12.4	12.9	15.0	14.2

This table shows how the types and number of animals owned by households change as the amount of land owned differs. In the case of the example, you can observe in this table that even though landless households do own some livestock, they own only four types of animals: goat, pig, local-hen and local-cock. Meanwhile, rural households that own land own a wider variety of animals. In general, there does not seem to be any significant pattern in the number of animals owned between the different land ownership quintiles. The only exception to this being chicken-layer where the fifth quintile owned an average of 61.9 heads of chicken-layer while the third quintile owned only 7.2 heads.

Table 5.3

ADePT Livestock Table 5.3 displays the average number of animals owned for households owning that type of animal, by quintile of current stock measured in LU. The number of observations varies in each row as it is restricted to households that own that type of animal.

Table 19: Livestock ownership by species and LU Quintiles (number of heads)
(ADePT Livestock Table 5.3)

	Quintiles of current stock					
	1	**2**	**3**	**4**	**5**	**Total**
LIVESTOCK CODE						
Calf					2.6	2.5
Steer/heifer					3.0	3.0
Cow				1.0	4.6	4.4
Bull/ox				1.0	4.3	4.2
Donkey						
Mule/horse						
Goat		1.0	2.2	4.1	7.9	4.5
Sheep			1.9	3.6	4.9	3.9
Pig			1.0	1.9	5.7	3.9
Chicken-layer	2.6	8.1	15.5	15.4	63.7	19.2
Local-hen	2.7	7.1	11.4	8.7	9.4	7.3
Chicken-broiler	2.2		6.2		37.4	12.0
Local-cock	1.4	2.5	3.3	2.9	2.9	2.6
Turkey			9.8	4.5	7.0	6.7
Duck	2.4	5.2	5.6	6.9	5.7	5.1
Guinea fowl		3.8	5.1	5.6	7.8	6.4
Beehive						2.9
Other (Specify)	13.0	12.9	14.6	16.8	15.2	14.2

This table reveals the characteristics of herd size and composition and how they correlate to the size of a household's current stock. In the case of the example, this table shows that households that own very little livestock own only poultry. As the size of the household's stock increases, so does the diversity in the types of animals owned. You can see that households in the fourth and fifth quintile own cattle while households in the lower quintiles do not. A steep increase can be observed in the average number of chicken-layers owned between the fourth and fifth quintiles. Households in the fifth quintile own an average of 63.7 chicken-layers while households in the fourth and third quintile own only a quarter of that amount at 15.4 and 15.5, respectively.

Table 5.4

ADePT Livestock Table 5.4 displays the average number of animals owned for households owning that type of animal, by region. The number of observations varies in each row as it is restricted to households that own that type of animal.

Table 20: Livestock ownership by species and regions (number of heads)
(ADePT Livestock Table 5.4)

	Region			
	1	**2**	**3**	**Total**
LIVESTOCK CODE				
Calf	2.5	2.6	2.6	2.5
Steer/heifer	3.0	2.8		3.0
Cow	3.5	4.6	5.3	4.4
Bull/ox	2.5	8.4	2.2	4.2
Donkey				
Mule/horse				
Goat	5.1	4.6	4.2	4.5
Sheep	3.9	3.3	4.8	3.9
Pig	3.9	4.2	3.1	3.9
Chicken-layer	30.2	31.8	7.6	19.2
Local-hen	7.4	7.3	7.2	7.3
Chicken-broiler		16.1	8.6	12.0
Local-cock	2.1	2.8	2.6	2.6
Turkey		7.5	4.9	6.7
Duck	4.4	6.0	4.7	5.1
Guinea fowl	6.3	5.2	7.8	6.4
Beehive	2.6			2.9
Other (Specify)	13.6	16.9	12.6	14.2

The table will reveal any regional variations in the quantity and types of animals owned by households. For the example, there does not seem to be much variation in the types of animals owned as households in all three regions own about the same types of animals. It also seems that no one region has households that own the highest quantity of animals for all the types of animals. One interesting difference to note is in the case of chicken-layer where households in Region 3 own an average of 7.6 heads while households in Region 1 and Region 2 both own about 4 times as much at 30.2 heads and 31.8 heads, respectively. Additionally, you can see that households in Region 2 own an average of 8.4 heads for Bull/Ox. This amount is about 4 times the amount owned on average by households in the other two regions.

Table 5.5

ADePT Livestock Table 5.5 shows the average number of animals owned for households owning that type of animal, by gender of the household head. The number of observations varies in each row as it is restricted to households that own that type of animal.

Table 21: Livestock ownership by species and gender of household head
(ADePT Livestock Table 5.5)

	Female headed household		
	0	**1**	**Total**
LIVESTOCK CODE			
Calf	2.6	1.9	2.5
Steer/heifer	3.0	1.4	3.0
Cow	4.6	2.9	4.4
Bull/ox	4.4	2.5	4.2
Donkey			
Mule/horse			
Goat	4.7	3.8	4.5
Sheep	4.1	2.9	3.9
Pig	3.9	3.4	3.9
Chicken-layer	21.6	5.9	19.2
Local-hen	7.4	6.5	7.3
Chicken-broiler	13.6	7.9	12.0
Local-cock	2.6	2.5	2.6
Turkey	6.8		6.7
Duck	5.1	5.0	5.1
Guinea fowl	6.5	5.6	6.4
Beehive	2.8		2.9
Other (Specify)	14.5	12.1	14.2

This table will help reveal any gender difference at the basic household level in the number and types of livestock owned by households. In the example dataset, the variable for the gender of the household head had no value labels so you can see that the columns have a value of "0" and "1". In the table, the value of "0" represents male-headed households and "1" represents female-headed households.

From the example table, you can observe that male-headed households own more animals than female-headed households for every type of animal. The difference is greatest for chicken-layers with male-headed households owning an average of 21.6 chicken-layers while female-headed households only own an average of 5.9 chicken-layers.

Table 6.1

ADePT Livestock Table 6.1 shows the percentage of households that are poor and non-poor for the households that own that type of animal. The number of observations varies in each row as it is restricted to households that own that type of animal.

Poor households have a per-capita consumption that is less than the specified poverty line while non-poor households have a per-capita consumption that is greater than the specified poverty line. The poverty line can be the national poverty line, the $1.25/day PPP poverty line or any other cut off that is of interest to the user. It is important to ensure that the poverty line variable and the household consumption variable must both be in reference to the same time period. For example, if the poverty

line is per-capita per day, then the household consumption must also be in reference to this same time period. Otherwise, the two variables have to be converted accordingly so that they both have the same time reference.

Table 22: Poor/Non-poor keepers (Percentage)
(ADePT Livestock Table 6.1)

	Non poor	Poor	Total
LIVESTOCK CODE			
Calf	63.78	36.22	100.00
Steer/heifer	39.76	60.24	100.00
Cow	63.43	36.57	100.00
Bull/ox	62.73	37.27	100.00
Donkey			
Mule/horse			
Goat	55.75	44.25	100.00
Sheep	58.70	41.30	100.00
Pig	60.35	39.65	100.00
Chicken-layer	77.21	22.79	100.00
Local-hen	58.32	41.68	100.00
Chicken-broiler	65.39	34.61	100.00
Local-cock	58.66	41.34	100.00
Turkey	64.84	35.16	100.00
Duck	51.23	48.77	100.00
Guinea fowl	70.25	29.75	100.00
Beehive	87.29		100.00
Other (Specify)	60.67	39.33	100.00

This table will reveal the types of animal that are more often owned by poor households. In the case of the example, you can see that a majority of livestock owners are non-poor for almost all animal types, with the exception of steer/heifer. The difference varies between animal types. You can see that in the case of goats, the difference is slight with 55.75% of households owning goats classified as non-poor. On the hand, a large majority of 77.21% of households that own chicken-layers are considered non-poor.

Table 6.2

ADePT Livestock Table 6.2 is similar to Table 6.1 except that it shows the *number* of households that are classified as poor and non-poor out of the households that own that type of animal. The number of observations varies in each row as it is restricted to households that own that type of animal.

Poor households have a per-capita consumption that is less than the specified poverty line while non-poor households have a per-capita consumption that is greater than the specified poverty line. The poverty line can be the national poverty line, the $1.25/day PPP poverty line or any other cut off that is of interest to the user. It is important to ensure that the poverty line variable and the household consumption variable must both be in reference to the same time period. For example, if the poverty line is per-capita per day, then the household consumption must also be in reference to this same time

period. Otherwise, the two variables have to be converted accordingly so that they both have the same time reference.

Table 23: Poor/Non-poor keepers (numbers)
(ADePT Livestock Table 6.2)

	Non poor	Poor	Total
LIVESTOCK CODE			
Calf	24,153	13,716	37,869
Steer/heifer	5,059	7,665	12,724
Cow	63,008	36,321	99,329
Bull/ox	36,996	21,983	58,979
Donkey			
Mule/horse			
Goat	319,302	253,409	572,712
Sheep	7,173	5,047	12,220
Pig	118,916	78,112	197,028
Chicken-layer	9,627	2,842	12,469
Local-hen	538,265	384,617	922,881
Chicken-broiler	3,452	1,827	5,279
Local-cock	272,028	191,699	463,727
Turkey	3,004	1,629	4,634
Duck	32,862	31,283	64,145
Guinea fowl	16,858	7,140	23,998
Beehive	2,439		2,794
Other (Specify)	30,717	19,914	50,630

This table will provide you with information about how many poor, non-poor and total households own each type of animal. From the example table, you can see that the three types of animal that are owned by the largest number of households are local-hen, local-cock and goat. You can see that largest number by far is for local-hen with 922,881 households in total owning at least one local-hen. Out of that total, 538,265 are non-poor households and 384,617 are poor households. Goats are also a very popular animal with a total of 572,712 households in Malawi owning at least one goat.

Table 7.1

ADePT Livestock Table 7.1 shows the percentage of total livestock owned for each quintile of current livestock holding. The sample for this table is restricted to households that own at least one animal of any kind.

Table 24: Concentration of livestock assets (Percentage) by quintiles of current stock
(ADePT Livestock Table 7.1)

	Quintiles of current stock					
	1	2	3	4	5	Total
Total	1.0	2.7	6.5	14.9	74.9	100.0

This table will reveal if any quintile of livestock owners have a higher concentration of livestock. You can see in the table that a substantial share of livestock holding is concentrated in the top twenty percent of livestock ownership. Households in the fifth quintile own approximately 75 percent of all livestock in Malawi. The difference is stark in comparison to households in the first quintile who own only 1 percent of total livestock.

Table 7.2

ADePT Livestock Table 7.2 shows the percentage of total livestock owned for each welfare quintile for the rural, urban and total sample. The sample for this table is restricted to households that own at least one animal of any kind.

For reasons of space and readability, the table below displays only the portion of ADePT Livestock Table 7.2 for the rural sample. The actual ADePT output also produces a similar table for the urban and total samples.

Table 25: Concentration of livestock assets (Percentage) by welfare quintiles
(Part of ADePT Livestock Table 7.2)

	Rural welfare quintiles					
	1	2	3	4	5	Total
Total	9.8	14.5	20.0	22.6	33.2	100.0

This table will show the concentration of livestock ownership across the different welfare quintiles. There is an upward trend between the concentration of livestock owned and improved overall household welfare. Also, you can see that the fifth quintile holds 33.2 percent of all livestock owned by rural households in Malawi, so no one welfare quintile owns the majority of the livestock. The difference between the concentration of livestock between the fifth and first welfare quintiles is also not that great with the first welfare quintile owning 9.8 percent of all livestock owned by rural household in Malawi.

Table 8.1

ADePT Livestock Table 8.1 displays the average share of livestock income by both region and welfare income for the rural, urban and total sample. The share of livestock income is the proportion of the total household income made by the livestock income. Values for share of livestock income that are greater than 3 and less than -3 were considered out-of-range, and therefore households with out-of-range values for share of livestock income were excluded from the analysis for this table. The sample for this table is restricted to households that own at least one animal of any kind.

For reasons of space and readability, the table below displays only the portion of ADePT Livestock Table 8.1 for the rural sample. The actual ADePT output also produces a similar table for the urban and total samples.

Table 26: Livestock income (share of total), by region, and rural/urban welfare quintiles (Part of ADePT Livestock Table 8.1)

	Rural welfare quintiles					
	1	2	3	4	5	Total
Region						
1	0.10	0.12	0.14	0.13	0.19	0.13
2	0.08	0.11	0.09	0.11	0.12	0.10
3	0.11	0.10	0.11	0.10	0.13	0.11
Total	0.10	0.11	0.11	0.11	0.13	0.11

This table will show how much livestock income contributes to household livelihood and how the size of the contribution changes in relation to overall household welfare. It will also reveal any regional differences in the contribution of livestock income to household livelihood.

The example table shows that there is more variation in the in the share of livestock income in region 1 as overall household welfare changes. You can also observe that livestock income contributes more to household livelihoods in region 1. For the case of rural livestock keeping households, it seems that livestock income contribute slightly more to total household income as overall household income improves. You can see in the last row in the table for the total rural sample that livestock income on average has a share of 0.10 for households in the first quintile, maintains a share of 0.11 for the second to fourth quintile, and 0.13 for households in the fifth quintile.

Table 8.2

ADePT Livestock Table 8.2 displays the average share of livestock income by land ownership quintiles. The share of livestock income is the proportion of the total household income made by the livestock income. Values for share of livestock income that are greater than 3 and less than -3 were considered out-of-range, and therefore households with out-of-range values for share of livestock income were excluded from the analysis for this table. If an urban/rural variable is specified, the sample is restricted to rural households only. If no urban/rural variable is specified, the sample is all households. The sample for the table displayed below is restricted to only rural households. The sample for this table is restricted to households that own at least one animal of any kind.

Table 27: Livestock income (share of total), by land ownership quintiles (ADePT Livestock Table 8.2)

	Quintiles of land ownership						
	Landless	1	2	3	4	5	Total
Share of livestock income	0.14	0.09	0.08	0.11	0.11	0.13	0.11

This table reveals the relationship between the average contribution of livestock income to total household income and the amount of land owned. For the example, the table shows that livestock income on average has a share of 0.11 of the total income for all rural households. From looking at the numbers on the table, it appears that livestock income make up a slightly larger share of total household income for rural households that own no land and that own the most land in the fifth quintile. For

landless households, livestock income has a share of 0.14 of the total household income. Similarly, livestock income comprises a share of 0.13 of total household income for rural households in the fifth quintile.

Table 8.3

ADePT Livestock Table 8.3 shows the average share of livestock income by quintile of current stock. The share of livestock income is the proportion of the total household income made by the livestock income. Values for share of livestock income that are greater than 3 and less than -3 were considered out-of-range, and therefore households with out-of-range values for share of livestock income were excluded from the analysis for this table. The sample for this table is restricted to households that own at least one animal of any kind.

Table 28: Livestock income (share of total), by quintile of current stock
(ADePT Livestock Table 8.3)

	Quintiles of current stock					
	1	**2**	**3**	**4**	**5**	**Total**
Share of livestock income	0.07	0.09	0.10	0.11	0.17	0.11

The table will reveal the relationship between the size of household livestock holdings and how much livestock income contributes to total household income. In the example table, you can see that as household own more livestock, livestock income also make up a greater share of total household income. Livestock income only makes up an average of 0.07 of total household income for the first quintile, 0.09 for the second, and 0.10 for the third quintile. On the other hand, livestock income comprises a larger average share of 0.17 of total household income for household owning the most livestock in the fifth quintile.

Table 8.4

ADePT Livestock Table 8.4 shows the average share of livestock income by the gender of the household head. The share of livestock income is the proportion of the total household income made by the livestock income. Values for share of livestock income that are greater than 3 and less than -3 were considered out-of-range, and therefore households with out-of-range values for share of livestock income were excluded from the analysis for this table. The sample for this table is restricted to households that own at least one animal of any kind.

Table 29: Livestock income (share of total) by gender of household head
(ADePT Livestock Table 8.4)

	Female headed household		
	0	**1**	**Total**
Share of livestock income	0.11	0.11	0.11

This table will help reveal any gender difference at the basic household level in the contribution of livestock income to total household income. In the example dataset, the variable for the gender of the

household head had no value labels so you can see that the columns have a value of "0" and "1". In the table, the value of "0" represents male-headed households and "1" represents female-headed households.

In the example, the table shows that there is no gender difference at the household level in the share of livestock income. Livestock income comprises a share of 0.11 of total household income for both male-headed and female-headed households.

Livestock Inputs and Outputs

The tables in this section provide information on household livestock activities by the different types of animal. Livestock activities include sales, slaughter, births, and vaccinations. All the tables in this section are similar and all the statistics in the tables are presented in the common unit of number of heads. The tables in this section also refer to the same reference period used in the survey. For example, if the reference period for the number of animals sold is the last 12 months, then Tables 10.1-10.4 will also be in reference to the last 12 months.

The set of tables in this section provide summarizing information on the size and composition of herd size and on the different elements of herd change over the survey reference period. Tables 9.1-9.4 provide information about the household initial inventory for each type of animal and its relationship to the key analysis variables. Tables 10.1-10.4 will reveal the relationship between the key analysis variables and the amount of livestock sold for each type of animal. Tables 11.1-11.4 will provide similar information for the number of livestock born. Tables 12.1-12.4 will show the quantity of livestock lost for each type of animal by the key analysis variables. Tables 13.1-13.4 provide similar information for livestock given away as gifts. Tables 14.1-14.4 provide information on the number of livestock slaughtered for each animal with respect to the key analysis variables. Tables 15.1-15.4 look at the relationship of livestock vaccination for each animal to the key analysis variables.

Table 9.1

ADePT Livestock Table 9.1 provides information on the average initial inventory for households owning that type of animal, by the welfare quintiles for the rural, urban and total sample. The welfare quintiles are calculated separately for the rural, urban and total sample. The initial inventory is considered to be the number of animals owned at the beginning of the survey reference period (ie the last 12 months). For example, if the survey reference period is the last 12 months, then the initial inventory would be the number of animals the household owned for each type of animal 12 months before the interview. The number of observations varies in each row as it is restricted to households that own that type of animal.

For reasons of space and readability, the table below displays only the portion of ADePT Livestock Table 9.1 for the rural sample. The actual ADePT output also produces a similar table for the urban and total samples.

Table 30: Livestock initial inventory (Number of Animals) by welfare quintiles (Part of ADePT Livestock Table 9.1)

	Rural welfare quintiles					
	1	**2**	**3**	**4**	**5**	**Total**
LIVESTOCK CODE						
Calf	0.5	0.7	0.5	1.0	1.5	0.9
Steer/heifer	1.7	2.4	2.9	2.4	5.2	3.0
Cow	2.8	2.9	4.0	5.1	6.1	4.5
Bull/ox	2.8	2.9	2.5	1.9	2.7	2.5
Donkey						
Mule/horse						
Goat	3.5	4.2	4.5	4.4	5.2	4.4
Sheep	5.5	3.7	2.5	2.5	3.5	3.7
Pig	2.3	2.4	2.9	3.2	3.3	2.9
Chicken-layer		11.4	17.9	7.3	42.1	20.5
Local-hen	6.3	9.2	7.6	7.6	8.6	7.9
Chicken-broiler		1.3		3.2	10.5	4.4
Local-cock	2.5	2.5	2.9	2.6	3.3	2.8
Turkey	6.0				4.0	5.7
Duck	5.3	6.1	4.2	4.8	4.3	4.9
Guinea fowl	4.3	5.0	5.9	6.2	6.5	5.9
Beehive					1.5	2.7
Other (Specify)	6.0	9.0	17.7	9.9	16.3	12.2

The table will reveal the differences in the average initial inventory for the different welfare quintiles. For example, you can see that rural households in the third quintile owned an average of 4.5 goats while households in the first quintile owned an average of 3.5 goats. In the case of local-hens, you can see that rural households belonging to the second welfare quintile had the largest average initial stock with 9.2 local-hens.

Table 9.2

ADePT Livestock Table 9.2 provides information on the average initial inventory for households owning that type of animal, by land ownership quintiles. The initial inventory is considered to be the number of animals owned at the beginning of the survey reference period (ie the last 12 months). For example, if the survey reference period is the last 12 months, then the initial inventory would be the number of animals the household owned for each type of animal 12 months before the interview. If an urban/rural variable is specified, the sample is restricted to rural households only. If no urban/rural variable is specified, the sample is all households. The sample for the table displayed below is restricted to only rural households. The number of observations varies in each row as it is restricted to households that own that type of animal.

Table 31: Livestock initial inventory (number of animals) by land ownership quintiles (ADePT Livestock Table 9.2)

LIVESTOCK CODE	Landless	1	2	3	4	5	Total
			Quintiles of land ownership				
Calf		0.2	0.0	0.6	0.3	1.3	0.9
Steer/heifer		2.6		2.4	3.4	3.4	3.0
Cow		2.5	1.8	4.2	6.0	5.0	4.5
Bull/ox		2.8	1.3	2.3	3.4	2.4	2.5
Donkey							
Mule/horse							
Goat	3.2	3.3	3.0	3.9	4.7	5.6	4.4
Sheep		3.2		3.1	2.8	4.3	3.6
Pig	1.8	1.7	1.7	3.1	2.8	3.6	3.0
Chicken-layer		12.3		9.9		57.6	20.0
Local-hen	7.0	7.0	6.7	7.4	7.0	9.8	7.9
Chicken-broiler		6.8				3.5	4.3
Local-cock	2.0	2.6	2.3	2.6	3.4	2.9	2.8
Turkey				4.8		3.4	5.8
Duck		5.2		4.1	4.1	6.1	5.3
Guinea fowl		10.3		4.2	4.1	7.0	5.9
Beehive				1.2			2.7
Other (Specify)		11.3	8.3	11.8	9.9	14.9	12.6

The table shows the differences in average household initial inventory for the different land ownership quintiles. For the example, you can see that landless household had an average initial inventory of 3.2 goats, 1.8 pigs, 7 local-hens and 2 local-cocks. The largest number of this table is for the case of chicken-layer for the fifth land ownership quintile with an average initial inventory of 57.6 heads.

Table 9.3

ADePT Livestock Table 9.3 shows the average initial inventory for households owning that type of animal, by quintiles of current stock ownership. Livestock ownership quintiles are calculated on the total LU measures. The initial inventory is considered to be the number of animals owned at the beginning of the survey reference period (ie the last 12 months). For example, if the survey reference period is the last 12 months, then the initial inventory would be the number of animals the household owned for each type of animal 12 months before the interview. The number of observations varies in each row as it is restricted to households that own that type of animal.

Table 32: Livestock initial inventory (number of animals) by quintiles of current stock (ADePT Livestock Table 9.3)

LIVESTOCK CODE	Quintiles of current stock					
	1	2	3	4	5	Total
Calf					0.9	0.9
Steer/heifer					3.0	3.0
Cow				1.0	4.7	4.5
Bull/ox				0.5	2.5	2.5
Donkey						
Mule/horse						
Goat		1.2	2.4	4.2	7.5	4.4
Sheep			2.5	4.2	3.8	3.6
Pig			1.2	2.1	3.9	3.0
Chicken-layer	9.9	6.5	10.0	16.1	62.5	20.0
Local-hen	5.0	9.3	9.7	8.0	9.0	7.9
Chicken-broiler	1.0		3.6		3.6	4.3
Local-cock	1.8	2.7	3.6	2.9	3.2	2.8
Turkey			6.7	7.8	4.1	5.8
Duck	2.9	6.2	5.9	6.3	5.4	5.3
Guinea fowl		4.3	4.6	4.9	7.0	5.9
Beehive						2.7
Other (Specify)	8.2	16.7	11.9	15.7	11.8	12.6

This table shows the differences in the average initial inventory for each type of animal, by quintiles of current stock. In the case of the example, you can see in the table that households that own very little livestock in the first quintile have an average of 9.9 chicken-layers. On the other hand, households owning the most livestock in the fifth quintile own an average of 62.5 chicken-layers. For pigs, households in the third quintile own an average of 1.2 pigs while households in the fifth quintile own an average of 3.9 pigs.

Table 9.4

ADePT Livestock Table 9.4 displays the average household initial inventory for each animal for households owning that type of animal, by region. The initial inventory is considered to be the number of animals owned at the beginning of the survey reference period (ie the last 12 months). For example, if the survey reference period is the last 12 months, then the initial inventory would be the number of animals the household owned for each type of animal 12 months before the interview.

Table 33: Livestock initial inventory (number of animals) by region
(ADePT Livestock Table 9.4)

	Region			
	1	**2**	**3**	**Total**
LIVESTOCK CODE				
Calf	0.5	1.4	1.0	0.9
Steer/heifer	3.0	3.0		3.0
Cow	3.5	4.6	5.9	4.5
Bull/ox	2.5	2.4	2.1	2.5
Donkey				
Mule/horse				
Goat	4.5	4.5	4.4	4.4
Sheep	5.2	2.9	4.1	3.6
Pig	2.8	3.4	2.3	3.0
Chicken-layer	22.6	31.4	11.1	20.0
Local-hen	7.5	7.4	8.7	7.9
Chicken-broiler		6.4	2.3	4.3
Local-cock	2.6	2.9	3.0	2.8
Turkey		7.6	5.5	5.8
Duck	3.8	5.6	5.5	5.3
Guinea fowl	6.5	4.2	7.2	5.9
Beehive	1.1			2.7
Other (Specify)	12.5	15.7	10.4	12.6

This table reveals any regional differences in average initial inventory. In the example, you can observe that the average initial inventory varies slightly between regions for cows. Households in region 1 had an average initial inventory of 3.5 cows, region 2 with an average of 4.6 cows, and an average of 5.9 cows for the initial inventory in region 3. On the other hand, the average initial inventory for goats is about the same for all three regions. Households in region 1 and 2 both have an average initial inventory of 4.5 goats while households in region 3 have an average initial inventory of 4.4 goats.

Table 10.1

ADePT Livestock Table 10.1 provides information on the average number of animals sold for each type of animal for households owning that type of animal, by the welfare quintiles for the rural, urban and total sample. The welfare quintiles are calculated separately for the rural, urban and total sample. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals sold is the last 12 months, then this table will also be referring to the last 12 months. The number of observations varies in each row as it is restricted to households that own that type of animal.

For reasons of space and readability, the table below displays only the portion of ADePT Livestock Table 10.1 for the rural sample. The actual ADePT output also produces a similar table for the urban and total samples.

Table 34: Livestock sales (number of animals) by welfare quintiles
(Part of ADePT Livestock Table 10.1)

	Rural welfare quintiles					
	1	**2**	**3**	**4**	**5**	**Total**
LIVESTOCK CODE						
Calf	0.0	0.1	0.0	0.1	0.0	0.1
Steer/heifer	0.0	0.3	0.1	0.1	0.0	0.1
Cow	0.2	0.1	0.2	0.4	0.3	0.3
Bull/ox	0.2	0.3	0.1	0.1	0.1	0.2
Donkey						
Mule/horse						
Goat	0.6	1.0	0.8	0.8	0.8	0.8
Sheep	1.6	0.2	0.7	0.1	0.3	0.5
Pig	0.6	0.8	0.8	0.7	0.9	0.8
Chicken-layer		1.3	5.7	0.8	0.3	1.7
Local-hen	0.9	0.9	0.8	0.9	0.9	0.9
Chicken-broiler		0.0		0.0	0.0	0.7
Local-cock	0.4	0.3	0.4	0.3	0.4	0.4
Turkey	2.8				0.0	1.4
Duck	0.4	0.6	0.9	0.5	0.6	0.6
Guinea fowl	0.3	0.1	2.1	0.5	0.7	0.8
Beehive					0.0	0.0
Other (Specify)	0.1	0.6	2.1	1.0	1.7	1.2

The table shows the differences in the amount of livestock sold for each type of animal between the different welfare quintiles. In the example, you can see that the quantity of animals sold in Malawi is very low in general. The average number of animals sold was less than 1 head in the last 12 months for the total rural sample for almost all types of animals. The three exceptions are chicken-layer with an average of 1.7 heads sold, turkey with 1.4 heads sold and other types of animals at an average of 1.2 heads sold.

Table 10.2

ADePT Livestock Table 10.2 provides information on the average number of animals sold for each type of animal for households owning that type of animal, by land ownership quintiles. If an urban/rural variable is specified, the sample is restricted to rural households only. If no urban/rural variable is specified, the sample is all households. The sample for the table displayed below is restricted to only rural households. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals sold is the last 12 months, then this table will also be referring to the last 12 months. The number of observations varies in each row as it is restricted to households that own that type of animal.

Table 35: Livestock sales (number of animals) by land ownership quintiles (ADePT Livestock Table 10.2)

	Quintiles of land ownership						
	Landless	**1**	**2**	**3**	**4**	**5**	**Total**
LIVESTOCK CODE							
Calf		0.1	0.0	0.0	0.0	0.1	0.0
Steer/heifer		0.4		0.1	0.2	0.0	0.1
Cow		0.2	0.2	0.2	0.5	0.3	0.3
Bull/ox		0.2	0.2	0.3	0.2	0.1	0.1
Donkey							
Mule/horse							
Goat	0.7	0.7	0.6	0.7	1.1	0.9	0.8
Sheep		0.1		0.4	0.0	0.8	0.6
Pig	0.1	0.5	0.4	0.7	0.8	1.0	0.8
Chicken-layer		1.5		2.4		0.1	1.5
Local-hen	0.8	0.8	1.1	0.9	0.8	0.8	0.9
Chicken-broiler		0.0				1.4	4.5
Local-cock	0.1	0.3	0.6	0.4	0.4	0.4	0.4
Turkey				0.7		0.0	1.4
Duck		0.7		0.4	0.6	0.5	0.6
Guinea fowl		0.0		0.6	0.0	1.4	0.9
Beehive				0.0			0.0
Other (Specify)		0.9	3.1	0.5	0.6	2.2	1.2

This table shows the differences in the average number of livestock sold between the different land ownership quintiles. In the example table, you can observe that very few cattle are sold by households across all the land ownership quintiles. Using cows as an example, the largest quantity sold is an average of 0.5 cows in the last 12 months for rural households in the fourth land ownership quintile, and the total rural sample selling an average of only 0.3 cows in the last 12 months.

Table 10.3

ADePT Livestock Table 10.3 shows the average number of livestock sold for each type of animal for households owning that type of animal, by quintiles of current stock ownership. Livestock ownership quintiles are calculated on the total LU measures. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals sold is the last 12 months, then this table will also be referring to the last 12 months. The number of observations varies in each row as it is restricted to households that own that type of animal.

Table 36: Livestock sales (number of animals) by quintile of current stock (ADePT Livestock Table 10.3)

	Quintiles of current stock					
	1	**2**	**3**	**4**	**5**	**Total**
LIVESTOCK CODE						
Calf					0.1	0.0
Steer/heifer					0.1	0.1
Cow				0.0	0.3	0.3
Bull/ox				0.0	0.2	0.1
Donkey						
Mule/horse						
Goat		0.3	0.6	0.8	1.1	0.8
Sheep			1.0	0.5	0.6	0.6
Pig			0.3	0.6	1.0	0.8
Chicken-layer	1.2	1.1	0.6	2.6	0.2	1.5
Local-hen	0.7	0.9	1.2	0.9	0.8	0.9
Chicken-broiler	0.0		2.8		19.0	4.5
Local-cock	0.2	0.3	0.7	0.3	0.4	0.4
Turkey			1.8	1.4	0.0	1.4
Duck	0.7	0.8	0.7	0.5	0.4	0.6
Guinea fowl		0.0	2.0	0.4	0.9	0.9
Beehive						0.0
Other (Specify)	0.4	3.4	1.9	1.3	0.5	1.2

This table shows the differences in the average number of animal sold between the quintiles of current stock. From the example, you can see that it is not always the case that households that own more livestock also sell more livestock. In the case of chicken-layer, households in the first quintile of current stock sold an average of 1.2 chicken-layers in the last 12 months while households in the fifth quintile sold fewer at an average of 0.2 chicken-layers in the same time period. The most striking number is that households in the fifth quintile sold an average of 19 heads of chicken-broiler in the last 12 months.

Table 10.4

ADePT Livestock Table 10.4 shows the average number of animals sold for households owning that type of animal, by region. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals sold is the last 12 months, then this table will also be referring to the last 12 months. The number of observations varies in each row as it is restricted to households that own that type of animal.

Table 37: Livestock sales (number of animals) by regions
(ADePT Livestock Table 10.4)

	Region			
	1	**2**	**3**	**Total**
LIVESTOCK CODE				
Calf	0.1	0.0	0.0	0.0
Steer/heifer	0.2	0.0		0.1
Cow	0.2	0.2	0.4	0.3
Bull/ox	0.2	0.0	0.2	0.1
Donkey				
Mule/horse				
Goat	0.6	0.7	1.0	0.8
Sheep	0.3	0.6	0.7	0.6
Pig	0.6	1.0	0.7	0.8
Chicken-layer	0.4	0.7	2.4	1.5
Local-hen	0.6	0.9	1.0	0.9
Chicken-broiler		0.0	9.1	4.5
Local-cock	0.3	0.4	0.5	0.4
Turkey		2.0	1.3	1.4
Duck	0.1	0.8	0.6	0.6
Guinea fowl	0.5	0.9	1.0	0.9
Beehive	0.0			0.0
Other (Specify)	0.7	1.9	0.9	1.2

This table reveals any region differences in the average number of livestock being sold. In the example table, it appears that the households in region 3 sold more animals in the last 12 months than the other two regions for most types of animals. One example of this is in the case of goats, where households in region 3 sold an average of 1 goat in the last 12 months, while households in region 2 sold an average of 0.7 goats and households in region 1 sold an average of 0.6 goats.

Table 11.1

ADePT Livestock Table 11.1 provides information on the average number of animals born for each type of animal to households owning that type of animal, by the welfare quintiles for the rural, urban and total sample. The welfare quintiles are calculated separately for the rural, urban and total sample. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals born is the last 12 months, then this table will also be referring to the last 12 months. The number of observations varies in each row as it is restricted to households that own that type of animal.

For reasons of space and readability, the table below displays only the portion of ADePT Livestock Table 11.1 for the rural sample. The actual ADePT output also produces a similar table for the urban and total samples.

**Table 38: Livestock born (number of animals) by welfare quintiles
(Part of ADePT Livestock Table 11.1)**

	Rural welfare quintiles					
	1	**2**	**3**	**4**	**5**	**Total**
LIVESTOCK CODE						
Calf	1.2	2.0	1.2	1.3	2.8	1.8
Steer/heifer	0.0	0.0	0.0	0.0	0.0	0.0
Cow	0.0	0.0	0.0	0.0	0.0	0.0
Bull/ox	0.0	0.0	0.0	0.0	0.0	0.0
Donkey						
Mule/horse						
Goat	1.2	1.6	1.7	1.6	2.0	1.6
Sheep	0.3	0.6	0.8	0.9	1.9	1.0
Pig	1.6	1.6	2.2	2.4	2.8	2.2
Chicken-layer		4.0	7.8	8.2	1.9	5.5
Local-hen	5.4	6.3	7.2	7.4	8.8	7.2
Chicken-broiler		0.1		2.9	2.9	2.9
Local-cock	1.9	2.1	1.9	2.3	2.8	2.2
Turkey	5.2				4.7	7.2
Duck	4.8	2.6	5.2	3.1	3.3	3.8
Guinea fowl	2.1	3.5	2.0	2.6	3.7	2.8
Beehive					0.7	1.0
Other (Specify)	5.7	6.2	10.1	6.5	10.7	8.0

The table will reveal if there is any relationship between the number of animals born and overall household welfare. In the example, we can see that there is a slightly positive relationship between the average number of animals born and overall household welfare for rural households. In the case of local-hen, you can observe that an average of 5.4 local-hens were born in the last 12 months to rural households in the first quintile. That number increases to an average of 7.2 local-hens born to rural households in the third quintile and then 8.8 local-hens born to rural households in the fifth quintile.

Table 11.2

ADePT Livestock Table 11.2 provides information on the average number of animals born for each type of animal to households owning that type of animal, by land ownership quintiles. If an urban/rural variable is specified, the sample is restricted to rural households only. If no urban/rural variable is specified, the sample is all households. The sample for the table displayed below is restricted to only rural households. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals born is the last 12 months, then this table will also be referring to the last 12 months. The number of observations varies in each row as it is restricted to households that own that type of animal.

Table 39: Livestock born (number of animals) by land ownership quintiles
(ADePT Livestock Table 11.2)

		Quintiles of land ownership					
	Landless	1	2	3	4	5	Total
LIVESTOCK CODE							
Calf		1.6	1.4	1.4	2.1	1.9	1.8
Steer/heifer		0.0		0.0	0.0	0.0	0.0
Cow		0.0	0.0	0.0	0.0	0.0	0.0
Bull/ox		0.0	0.0	0.0	0.0	0.0	0.0
Donkey							
Mule/horse							
Goat	0.8	1.3	1.2	1.5	1.6	2.1	1.6
Sheep		0.6		1.1	0.6	1.3	1.0
Pig	1.3	1.7	1.7	2.2	2.2	2.6	2.2
Chicken-layer		5.8		3.4		6.8	5.5
Local-hen	7.1	6.2	7.3	7.3	7.5	7.9	7.2
Chicken-broiler		3.6				1.8	2.9
Local-cock	2.1	1.8	2.9	2.1	2.3	2.5	2.2
Turkey				5.9		5.4	7.2
Duck		3.4		3.8	2.7	4.0	3.8
Guinea fowl		2.5		2.2	1.7	3.9	2.8
Beehive				0.4			1.0
Other (Specify)		6.5	2.6	6.9	8.6	10.1	8.0

This table will show if there is any correlation between the amount of land owned and the number of animals born to the household. In the example case, there does not seem to be a clear relationship between land ownership and number of animals born. For goats, you can see that the average number of goats born in the last 12 months to rural households is 1.3 for the first land ownership quintile, 1.2 for the second land ownership quintile, and 1.5 for the fifth quintile.

Table 11.3

ADePT Livestock Table 11.3 shows the average number of livestock born for each type of animal to households owning that type of animal, by quintiles of current stock ownership. Livestock ownership quintiles are calculated on the total LU measures. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals born is the last 12 months, then this table will also be referring to the last 12 months. The number of observations varies in each row as it is restricted to households that own that type of animal.

Table 40: Livestock born (number of animals) by quintiles of current stock (ADePT Livestock Table 11.3)

	Quintiles of current stock					
	1	**2**	**3**	**4**	**5**	**Total**
LIVESTOCK CODE						
Calf					1.8	1.7
Steer/heifer					0.0	0.0
Cow				0.0	0.0	0.0
Bull/ox				0.0	0.0	0.0
Donkey						
Mule/horse						
Goat		0.2	0.7	1.6	2.8	1.6
Sheep			0.7	1.0	1.5	1.2
Pig			0.4	0.8	3.5	2.2
Chicken-layer	2.7	9.3	6.4	6.8	4.7	5.9
Local-hen	3.7	7.2	11.0	8.4	8.1	7.2
Chicken-broiler	0.0		2.9		3.1	2.8
Local-cock	1.1	2.3	3.4	2.4	2.4	2.3
Turkey			10.9	1.9	5.7	7.0
Duck	3.0	3.0	6.4	5.6	2.7	3.9
Guinea fowl		0.7	1.0	4.2	4.1	3.1
Beehive						1.0
Other (Specify)	10.8	11.3	11.3	8.5	8.8	9.1

This table will show any relationship between the size of household livestock holdings and the average number of animals born to the household. In the example table, there does not seem to be a clear correlation between the size of current stock and the number of animals born. If you look at the case of local-hen, you can observe that in the average number of local-hens born to households in the third quintile is 11 in the last 12 months. The amount decreases to an average of 8.4 local hens born to households in the fourth quintile and 8.1 local hens born to households in the fifth quintile holding the most livestock.

Table 11.4

ADePT Livestock Table 11.4 shows the average number of animals born to households owning that type of animal, by region. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals born is the last 12 months, then this table will also be referring to the last 12 months. The number of observations varies in each row as it is restricted to households that own that type of animal.

Table 41: Livestock born (number of animals) by region
(ADePT Livestock Table 11.4)

	Region			
	1	**2**	**3**	**Total**
LIVESTOCK CODE				
Calf	2.0	1.5	1.5	1.7
Steer/heifer	0.0	0.0		0.0
Cow	0.0	0.0	0.0	0.0
Bull/ox	0.0	0.0	0.0	0.0
Donkey				
Mule/horse				
Goat	1.6	1.7	1.6	1.6
Sheep	0.4	1.5	1.0	1.2
Pig	2.1	2.5	1.8	2.2
Chicken-layer	3.7	10.0	3.5	5.9
Local-hen	6.8	7.2	7.4	7.2
Chicken-broiler		1.4	3.9	2.8
Local-cock	2.0	2.6	1.9	2.3
Turkey		12.4	4.3	7.0
Duck	2.8	4.5	3.7	3.9
Guinea fowl	2.7	1.9	4.5	3.1
Beehive	1.6			1.0
Other (Specify)	6.8	12.3	7.7	9.1

This table will reveal any regional differences in the average number of animals born for each type of animal. For the example, it seems that there are more animals born in region 2 in the last 12 months for a majority of the animals. The difference is most stark in the case of chicken-layer where an average of 10 are born in region 2 while it is only 3.7 in region 1 and 3.5 in region 3. On the other hand, the difference is slight in the case of pigs with an average of 2.5 born in the last 12 months to households in region 2, 2.1 born to households in region 1, and 1.8 born to households in region 3.

Table 12.1

ADePT Livestock Table 12.1 provides information on the average number of animals lost for each type of animal to households owning that type of animal, by the welfare quintiles for the rural, urban and total sample. The welfare quintiles are calculated separately for the rural, urban and total sample. The number of observations varies in each row as it is restricted to households that own that type of animal.

Animals lost refer to loss of animal for reasons such as theft and death due to disease. Users may need to manipulate the data outside of ADePT to aggregate multiple variables for different type of losses, depending on the level of detail available in the survey of interest. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals lost is the last 12 months, then this table will also be referring to the last 12 months.

For reasons of space and readability, the table below displays only the portion of ADePT Livestock Table 12.1 for the rural sample. The actual ADePT output also produces a similar table for the urban and total samples.

Table 42: Livestock lost (number of animals) by welfare quintiles
(Part of ADePT Livestock Table 12.1)

	Rural welfare quintiles					
	1	2	3	4	5	Total
LIVESTOCK CODE						
Calf	0.0	0.0	0.0	0.0	0.0	0.0
Steer/heifer	0.0	0.0	0.1	0.0	0.0	0.0
Cow	0.0	0.0	0.0	0.1	0.2	0.1
Bull/ox	0.0	0.0	0.0	0.0	0.1	0.0
Donkey						
Mule/horse						
Goat	0.2	0.2	0.3	0.3	0.3	0.3
Sheep	0.0	0.0	0.0	0.1	0.1	0.1
Pig	0.3	0.0	0.1	0.2	0.3	0.2
Chicken-layer		1.0	0.2	2.2	0.4	1.0
Local-hen	1.4	1.4	1.8	2.0	2.1	1.8
Chicken-broiler		0.2		0.8	0.0	0.3
Local-cock	0.4	0.4	0.3	0.5	0.4	0.4
Turkey	0.5				1.0	1.4
Duck	1.2	1.2	1.5	0.4	0.5	1.0
Guinea fowl	1.1	0.5	0.5	2.1	0.9	1.2
Beehive					0.0	0.0
Other (Specify)	0.6	1.2	2.7	1.1	1.3	1.4

This table will show if any welfare quintiles have lost more animals more than other quintiles. In the case of the example, we can see that poultry is the type of animals that are most commonly lost. For local-hen, an average of 1.8 local-hens was lost in the last 12 months by all rural households. The fourth and fifth welfare quintiles on average lose slightly more local-hens, with rural households in the fifth quintile losing an average of 2.1 local-hens and an average of 2 local-hens in the fourth quintile.

Table 12.2

ADePT Livestock Table 12.2 provides information on the average number of animals born for each type of animal to households owning that type of animal, by land ownership quintiles. If an urban/rural variable is specified, the sample is restricted to rural households only. If no urban/rural variable is specified, the sample is all households. The sample for the table displayed below is restricted to only rural households. The number of observations varies in each row as it is restricted to households that own that type of animal.

Animals lost refer to loss of animal for reasons such as theft and death due to disease. Users may need to manipulate the data outside of ADePT to aggregate multiple variables for different type of losses,

depending on the level of detail available in the survey of interest. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals lost is the last 12 months, then this table will also be referring to the last 12 months.

Table 43: Livestock lost (number of animals) by land ownership quintiles (ADePT Livestock Table 12.2)

	Quintiles of land ownership						
	Landless	**1**	**2**	**3**	**4**	**5**	**Total**
LIVESTOCK CODE							
Calf		0.0	0.0	0.0	0.0	0.0	0.0
Steer/heifer		0.0		0.0	0.1	0.0	0.0
Cow		0.0	0.0	0.0	0.4	0.1	0.1
Bull/ox		0.0	0.0	0.0	0.0	0.0	0.0
Donkey							
Mule/horse							
Goat	0.1	0.2	0.1	0.2	0.3	0.3	0.3
Sheep		0.1		0.1	0.0	0.0	0.1
Pig	0.2	0.1	0.1	0.1	0.4	0.2	0.2
Chicken-layer		3.1		0.3		0.8	1.0
Local-hen	2.5	2.1	2.1	1.7	1.5	1.6	1.8
Chicken-broiler		0.0				0.5	0.3
Local-cock	0.2	0.3	0.6	0.3	0.4	0.5	0.4
Turkey				0.6		0.2	1.4
Duck		1.6		0.8	0.6	0.8	1.0
Guinea fowl		5.0		0.3	1.1	1.5	1.2
Beehive				0.0			0.0
Other (Specify)		1.0	0.0	1.8	1.6	1.6	1.4

This table will reveal any relationship between the amount of land owned and the number of animals lost. For the example, there does not seem to be any clear relationship between the amount of land owned and the number of livestock lost in Malawi. For the case of goats, landless households lost only an average of 0.1 goats in the last 12 months while rural households in the fourth and fifth quintile both lost an average of 0.3 goats in the same time period. On the other hand, landless households lost an average of 2.5 local-hens in the last 12 months while households in the fourth and the fifth land ownership quintile both lost less at on average, at 1.5 and 1.6 respectively.

Table 12.3

ADePT Livestock Table 12.3 shows the average number of livestock lost for each type of animal to households owning that type of animal, by quintiles of current stock ownership. Livestock ownership quintiles are calculated on the total LU measures. The number of observations varies in each row as it is restricted to households that own that type of animal.

Animals lost refer to loss of animal for reasons such as theft and death due to disease. Users may need to manipulate the data outside of ADePT to aggregate multiple variables for different type of losses,

depending on the level of detail available in the survey of interest. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals lost is the last 12 months, then this table will also be referring to the last 12 months.

Table 44: Livestock lost (number of animals) by quintiles of current stock (ADePT Livestock Table 12.3)

	Quintiles of current stock					
	1	**2**	**3**	**4**	**5**	**Total**
LIVESTOCK CODE						
Calf					0.0	0.0
Steer/heifer					0.0	0.0
Cow				0.0	0.1	0.1
Bull/ox				0.0	0.0	0.0
Donkey						
Mule/horse						
Goat		0.2	0.2	0.2	0.4	0.3
Sheep			0.1	0.0	0.1	0.1
Pig			0.1	0.2	0.2	0.2
Chicken-layer	1.1	5.9	0.6	0.2	2.3	1.6
Local-hen	1.6	1.9	2.2	1.7	1.8	1.8
Chicken-broiler	0.2		0.0		0.8	0.3
Local-cock	0.3	0.4	0.4	0.5	0.4	0.4
Turkey			3.4	1.1	0.6	1.4
Duck	0.9	1.0	1.8	1.1	0.8	1.1
Guinea fowl		1.4	0.2	1.6	1.3	1.2
Beehive						0.0
Other (Specify)	2.0	1.9	1.3	1.2	1.2	1.4

This table will show how the size of household livestock holdings correlates with the number of animals lost. For the example table, there does not appear to be a clear pattern between the average number of livestock lost and the size of household livestock holdings. For some animals, households owning the most livestock lose the most animals. This is the case for goats with the quintile lost an average of 0.4 goats in the last 12 months while the other quintiles only lost an average of 0.2 goats. However, sometimes another quintile loses the largest number of animals such as the case for local hen. You can see that the third quintile loses the most local-hens with an average of 2.2 local-hens lost in the last 12 months.

Table 12.4

ADePT Livestock Table 12.4 shows the average number of animals lost to households owning that type of animal, by region. Animals lost refer to loss of animal for reasons such as theft and death due to disease. Users may need to manipulate the data outside of ADePT to aggregate multiple variables for different type of losses, depending on the level of detail available in the survey of interest. The table will share the same reference period as the one used in the survey. For example, if the reference period for

the number of animals given away as gifts is the last 12 months, then this table will also be referring to the last 12 months.

Table 45: Livestock lost (number of animals) by regions
(ADePT Livestock Table 12.4)

	Region			
	1	**2**	**3**	**Total**
LIVESTOCK CODE				
Calf	0.0	0.0	0.0	0.0
Steer/heifer	0.0	0.1		0.0
Cow	0.0	0.1	0.2	0.1
Bull/ox	0.0	0.0	0.0	0.0
Donkey				
Mule/horse				
Goat	0.1	0.3	0.3	0.3
Sheep	0.0	0.0	0.1	0.1
Pig	0.1	0.1	0.4	0.2
Chicken-layer	1.0	2.8	0.9	1.6
Local-hen	1.9	1.5	2.0	1.8
Chicken-broiler		0.3	0.1	0.3
Local-cock	0.6	0.4	0.4	0.4
Turkey		3.2	0.9	1.4
Duck	1.2	0.8	1.3	1.1
Guinea fowl	1.7	0.5	1.5	1.2
Beehive	0.0			0.0
Other (Specify)	0.7	1.6	1.5	1.4

The table will reveal any regional differences in the average number of livestock lost. In the case of the example, it appears that region 3 loses the largest number of animals for most types of animals. The exceptions to this would be for chicken-layer, turkey, and goat. In the case of goat, households in region 2 and region 3 both lost an average of 0.3 goats in the last 12 months. For chicken-layer, households in region 2 lost an average of 2.8 animals in the last 12 months, while households in region only lost an average of 1 animal and households in region 3 lost an average of 0.9 animals in the last 12 months.

Table 13.1

ADePT Livestock Table 13.1 provides information on the average number of animals given away as gifts for each type of animal to households owning that type of animal, by the welfare quintiles for the rural, urban and total sample. The welfare quintiles are calculated separately for the rural, urban and total sample. The number of observations varies in each row as it is restricted to households that own that type of animal. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals given away as gifts is the last 12 months, then this table will also be referring to the last 12 months.

For reasons of space and readability, the table below displays only the portion of ADePT Livestock Table 13.1 for the rural sample. The actual ADePT output also produces a similar table for the urban and total samples.

Table 46: Livestock given away (number of animals) by welfare quintiles (Part of ADePT Livestock Table 13.1)

	Rural welfare quintiles					
	1	**2**	**3**	**4**	**5**	**Total**
LIVESTOCK CODE						
Calf	0.0	0.0	0.0	0.0	0.0	0.0
Steer/heifer	0.0	0.0	0.0	0.0	0.0	0.0
Cow	0.0	0.0	0.0	0.1	0.0	0.0
Bull/ox	0.1	0.0	0.0	0.0	0.0	0.0
Donkey						
Mule/horse						
Goat	0.1	0.1	0.1	0.1	0.1	0.1
Sheep	0.0	0.0	0.0	0.0	0.1	0.0
Pig	0.2	0.0	0.1	0.2	0.2	0.1
Chicken-layer		0.4	0.3	1.1	0.0	0.4
Local-hen	0.4	0.5	0.7	0.6	0.7	0.6
Chicken-broiler		0.1		0.1	0.0	0.1
Local-cock	0.1	0.1	0.2	0.2	0.2	0.2
Turkey	0.0				0.0	0.3
Duck	0.2	0.2	0.4	0.3	0.4	0.3
Guinea fowl	0.1	0.1	0.1	0.8	0.1	0.4
Beehive					0.0	0.4
Other (Specify)	0.1	0.5	2.1	0.5	1.0	0.9

This table will show any correlation between overall household welfare and the number of animals given away. In the example, you can see there are not that many animals given in general across all the welfare quintiles. Most of the animals given away are poultry and smaller animals. In the case of goats, rural households in all welfare quintiles give away an average of 0.1 goats in the last 12 months. For local-hens, households in the fifth and third welfare quintile gave away the largest amount at 0.7 local-hens in the last 12 months.

Table 13.2

ADePT Livestock Table 13.2 provides information on the average number of animals given away as gifts for each type of animal to households owning that type of animal, by land ownership quintiles. If an urban/rural variable is specified, the sample is restricted to rural households only. If no urban/rural variable is specified, the sample is all households. The sample for the table displayed below is restricted to only rural households. The number of observations varies in each row as it is restricted to households that own that type of animal. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals given away as gifts is the last 12 months, then this table will also be referring to the last 12 months.

Table 47: Livestock given away (number of animals) by land ownership quintiles (ADePT Livestock 13.2)

	Quintiles of land ownership						
	Landless	1	2	3	4	5	Total
LIVESTOCK CODE							
Calf		0.0	0.0	0.0	0.0	0.0	0.0
Steer/heifer		0.0		0.0	0.0	0.0	0.0
Cow		0.2	0.0	0.0	0.0	0.0	0.0
Bull/ox		0.0	0.0	0.0	0.0	0.0	0.0
Donkey							
Mule/horse							
Goat	0.2	0.1	0.1	0.1	0.2	0.1	0.1
Sheep		0.0		0.1	0.0	0.0	0.0
Pig	0.0	0.1	0.0	0.1	0.2	0.1	0.1
Chicken-layer		0.5		0.2		0.2	0.4
Local-hen	0.6	0.5	0.6	0.6	0.8	0.7	0.6
Chicken-broiler		0.0				0.1	0.1
Local-cock	0.2	0.1	0.1	0.1	0.2	0.2	0.2
Turkey				0.3		0.1	0.3
Duck		0.2		0.4	0.0	0.3	0.3
Guinea fowl		0.1		0.1	0.2	0.6	0.4
Beehive				0.0			0.4
Other (Specify)		0.9	0.8	0.6	0.9	1.2	0.9

The table shows the relationship between the average number of animals given away as gifts to other households and the amount of land owned. In the case of the example, there does not seem to be any clear relationship between the two variables. One interesting thing is that landless households on average give away as gifts as many animals as rural households that own more land in the last 12 months. Looking at the case of local-hen, landless households give away an average of 0.6 local-hens, which is equivalent to the average number of local-hens given away by both the second and third quintile of land ownership. This case is also true for goats where landless households gave away 0.2 goats on average, which is equivalent or slightly more than the other quintiles.

Table 13.3

ADePT Livestock Table 13.3 shows the average number of livestock given away as gifts for each type of animal to households owning that type of animal, by quintiles of current stock ownership. Livestock ownership quintiles are calculated on the total LU measures. The number of observations varies in each row as it is restricted to households that own that type of animal. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals given away as gifts is the last 12 months, then this table will also be referring to the last 12 months.

Table 48: Livestock given away (number of animals) by quintiles of current stock (ADePT Livestock Table 13.3)

	Quintiles of current stock					
	1	**2**	**3**	**4**	**5**	**Total**
LIVESTOCK CODE						
Calf					0.0	0.0
Steer/heifer					0.0	0.0
Cow				0.3	0.0	0.0
Bull/ox				0.0	0.0	0.0
Donkey						
Mule/horse						
Goat		0.0	0.1	0.1	0.2	0.1
Sheep			0.0	0.0	0.1	0.0
Pig			0.1	0.1	0.2	0.1
Chicken-layer	0.1	1.7	0.0	0.4	0.5	0.5
Local-hen	0.4	0.7	0.9	0.6	0.7	0.6
Chicken-broiler	0.0		0.0		0.2	0.1
Local-cock	0.0	0.2	0.2	0.2	0.2	0.2
Turkey			0.9	0.0	0.1	0.3
Duck	0.3	0.2	1.1	0.3	0.2	0.4
Guinea fowl		0.2	0.1	0.3	0.6	0.4
Beehive						0.4
Other (Specify)	1.1	2.3	0.6	0.9	0.7	0.9

This table will reveal any correlation between the average number of animals given away and the size of current household livestock holdings. For the example case, there appears to be no relationship between the average number of animals given away and household herd size. For some types of animals, the fifth quintile gives away the most animals, as in the case of goat with an average of 0.2 given away in the last 12 months. For another type of animal, households in the second quintile give away significantly more animals as in the case of chicken-layer. Households in the second quintile gave away an average of 1.7 chicken-layers, which is much greater than the second largest average number, 0.5 chicken-layers, given away by the fifth quintile in the last 12 months.

Table 13.4

ADePT Livestock Table 13.4 shows the average number of animals given away as gifts to households owning that type of animal, by region. Animals lost refer to loss of animal for reasons such as theft and death due to disease. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals given away as gifts is the last 12 months, then this table will also be referring to the last 12 months.

Table 49: Livestock given away (number of animals) by regions (ADePT Livestock Table 13.4)

	Region			
	1	**2**	**3**	**Total**
LIVESTOCK CODE				
Calf	0.0	0.0	0.0	0.0
Steer/heifer	0.0	0.0		0.0
Cow	0.1	0.0	0.1	0.0
Bull/ox	0.0	0.0	0.0	0.0
Donkey				
Mule/horse				
Goat	0.1	0.1	0.1	0.1
Sheep	0.0	0.0	0.1	0.0
Pig	0.1	0.2	0.1	0.1
Chicken-layer	0.3	0.8	0.4	0.5
Local-hen	0.8	0.6	0.6	0.6
Chicken-broiler		0.0	0.1	0.1
Local-cock	0.2	0.2	0.1	0.2
Turkey		0.6	0.2	0.3
Duck	0.6	0.5	0.3	0.4
Guinea fowl	1.0	0.2	0.1	0.4
Beehive	0.0			0.4
Other (Specify)	1.2	1.3	0.5	0.9

This table will reveal if there are any regional differences in the average number of animals given away as gifts. For the example table, there does not seem to be any obvious differences between the regions in terms of the average number of animals given away. For local-hen, households in region 1 give away slightly more at an average of 0.8 local-hens in the last 12 months. In the case of chicken-layer, households in region 2 give away more at 0.8 chicken-layers given away on average in the last 12 months. For the case of goats, households across all three regions give away an average of 0.1 goats in the last 12 months.

Table 14.1

ADePT Livestock Table 14.1 provides information on the average number of animals slaughtered for each type of animal to households owning that type of animal, by the welfare quintiles for the rural, urban and total sample. The welfare quintiles are calculated separately for the rural, urban and total sample. The number of observations varies in each row as it is restricted to households that own that type of animal. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals slaughtered is the last 12 months, then this table will also be referring to the last 12 months.

For reasons of space and readability, the table below displays only the portion of ADePT Livestock Table 14.1 for the rural sample. The actual ADePT output also produces a similar table for the urban and total samples.

Table 50: Livestock slaughtered (number of animals) by welfare quintiles
(Part of ADePT Livestock Table 14.1)

	Rural welfare quintiles					
	1	2	3	4	5	Total
LIVESTOCK CODE						
Calf	0.0	0.0	0.0	0.0	0.2	0.1
Steer/heifer	0.0	0.0	0.0	0.0	0.0	0.0
Cow	0.0	0.0	0.1	0.0	0.2	0.1
Bull/ox	0.0	0.0	0.0	0.0	0.0	0.0
Donkey						
Mule/horse						
Goat	0.1	0.2	0.2	0.2	0.2	0.2
Sheep	0.0	0.0	0.1	0.6	0.0	0.1
Pig	0.0	0.3	0.4	0.4	0.7	0.4
Chicken-layer		0.0	2.4	0.1	0.6	0.7
Local-hen	1.1	1.3	1.4	1.7	1.6	1.4
Chicken-broiler		0.0		0.1	0.2	0.1
Local-cock	0.2	0.3	0.3	0.3	0.4	0.3
Turkey	4.6				0.0	1.3
Duck	0.9	0.5	0.5	0.7	0.6	0.6
Guinea fowl	0.0	0.0	0.0	0.0	0.3	0.1
Beehive					0.0	0.6
Other (Specify)	0.0	0.6	0.0	0.3	0.7	0.3

The table shows the relationship between overall household welfare and the average number of animals slaughtered. The example table shows that not that many animals are slaughtered in general. The most number of local-hens are slaughtered by rural households, and there is a very slight upward relationship between overall household welfare and the average number of local-hen slaughtered in the last 12 months. Rural households in the fifth quintile slaughter an average of 1.6 local-hens and rural households in the fourth quintile slaughter an average of 1.7 local hens, both of which are greater than the average of 1.1 local-hens slaughtered by rural households in the first quintiles.

Table 14.2

ADePT Livestock Table 14.2 provides information on the average number of animals slaughtered for each type of animal to households owning that type of animal, by land ownership quintiles. If an urban/rural variable is specified, the sample is restricted to rural households only. If no urban/rural variable is specified, the sample is all households. The sample for the table displayed below is restricted to only rural households. The number of observations varies in each row as it is restricted to households that own that type of animal. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals slaughtered is the last 12 months, then this table will also be referring to the last 12 months.

Table 51: Livestock slaughtered (number of animals) by land ownership quintiles (ADePT Livestock Table 14.2)

	Quintiles of land ownership						
	Landless	1	2	3	4	5	Total
LIVESTOCK CODE							
Calf		0.0	0.0	0.2	0.2	0.0	0.1
Steer/heifer		0.0		0.0	0.1	0.0	0.0
Cow		0.1	0.0	0.1	0.0	0.1	0.1
Bull/ox		0.0	0.0	0.0	0.0	0.0	0.0
Donkey							
Mule/horse							
Goat	0.3	0.1	0.2	0.1	0.1	0.2	0.2
Sheep		0.1		0.0	0.1	0.2	0.1
Pig	0.0	0.1	0.1	0.6	0.4	0.4	0.4
Chicken-layer		0.0		1.3		0.2	0.7
Local-hen	1.1	1.4	2.3	1.5	1.5	1.3	1.4
Chicken-broiler		0.0				0.2	0.1
Local-cock	0.3	0.2	0.4	0.3	0.3	0.3	0.3
Turkey				4.7		0.0	1.3
Duck		0.7		0.5	0.1	0.6	0.6
Guinea fowl		0.0		0.0	0.0	0.0	0.1
Beehive				0.0			0.6
Other (Specify)		0.4	0.2	0.3	0.0	0.6	0.3

This table will reveal any correlation between the average number of animals slaughtered and the amount of land owned. For the case of the example, there does not seem to be any relationship between the number of animals slaughtered and the land ownership. You can observe that almost no cattle are slaughtered. Similarly, a total average of 0.2 goats and 0.4 pigs are slaughtered by all rural households in the last 12 months. Households in the third quintile slaughter the most pigs at a very low average of 0.6 pigs in the last 12 months.

Table 14.3

ADePT Livestock Table 14.3 shows the average number of animals slaughtered for each type of animal to households owning that type of animal, by quintiles of current stock ownership. Livestock ownership quintiles are calculated on the total LU measures. The number of observations varies in each row as it is restricted to households that own that type of animal. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals slaughtered is the last 12 months, then this table will also be referring to the last 12 months.

**Table 52: Livestock slaughtered (number of animals) by quintiles of current stock
(ADePT Livestock Table 14.3)**

	Quintiles of current stock					
	1	**2**	**3**	**4**	**5**	**Total**
LIVESTOCK CODE						
Calf					0.1	0.1
Steer/heifer					0.0	0.0
Cow				0.0	0.1	0.1
Bull/ox				0.0	0.0	0.0
Donkey						
Mule/horse						
Goat		0.1	0.1	0.2	0.3	0.2
Sheep			0.1	0.3	0.0	0.1
Pig			0.4	0.4	0.3	0.4
Chicken-layer	0.0	0.0	0.0	2.0	0.2	0.8
Local-hen	1.4	1.6	2.0	1.3	0.9	1.4
Chicken-broiler	0.0		0.2		0.2	0.1
Local-cock	0.2	0.3	0.5	0.1	0.3	0.3
Turkey			0.0	0.0	0.0	1.3
Duck	1.0	0.4	0.9	0.7	0.3	0.6
Guinea fowl		0.5	0.0	0.0	0.0	0.1
Beehive						0.6
Other (Specify)	0.2	0.2	0.4	0.4	0.8	0.5

This table will show any relationship between the size of current household livestock holdings and the number of animals slaughtered. For the example table, it seems like households in the third quintile slaughtered the most number of poultry on average compared to the other quintiles. Households in the third quintile slaughtered an average of 2.0 local-hens, 0.5 local-cocks, and 0.9 ducks in the last 12 months. In comparison, households in the fifth quintile with the largest stock slaughtered an average of 0.9 local-hens, 0.3 local-cocks and 0.3 ducks in the last 12 months.

Table 14.4

ADePT Livestock Table 14.4 shows the average number of animals slaughtered by households owning that type of animal, by region. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals slaughtered is the last 12 months, then this table will also be referring to the last 12 months.

Table 53: Livestock slaughtered (number of animals) by region
(ADePT Livestock Table 14.4)

	Region			
	1	**2**	**3**	**Total**
LIVESTOCK CODE				
Calf	0.0	0.2	0.0	0.1
Steer/heifer	0.0	0.0		0.0
Cow	0.1	0.1	0.0	0.1
Bull/ox	0.0	0.0	0.0	0.0
Donkey				
Mule/horse				
Goat	0.1	0.2	0.2	0.2
Sheep	0.0	0.2	0.0	0.1
Pig	0.2	0.6	0.2	0.4
Chicken-layer	0.1	0.5	1.2	0.8
Local-hen	0.5	1.6	1.7	1.4
Chicken-broiler		0.1	0.1	0.1
Local-cock	0.2	0.4	0.3	0.3
Turkey		0.0	2.0	1.3
Duck	0.1	0.6	0.7	0.6
Guinea fowl	0.0	0.0	0.2	0.1
Beehive	0.0			0.6
Other (Specify)	0.0	1.0	0.3	0.5

This table will show if there are any regional differences in the number of animals slaughtered. For the example case, it does not seem that any one region slaughters more animals in general. Looking at local-hens, households in region slaughtered an average of 0.5 local-hens in the last 12 months while households in region 2 slaughtered 1.6 local-hens and 1.7 local-hens in region 3. The average number of goats slaughtered in the last 12 months is even smaller for all the regions. Region 1 slaughtered an average of 0.1 goats in the last 12 months and an average of 0.2 goats slaughtered in region 2 and 3.

Table 15.1

ADePT Livestock Table 15.1 provides information on the average number of animals vaccinated for each type of animal to households owning that type of animal, by the welfare quintiles for the rural, urban and total sample. The welfare quintiles are calculated separately for the rural, urban and total sample. The number of observations varies in each row as it is restricted to households that own that type of animal. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals vaccinated is the last 12 months, then this table will also be referring to the last 12 months.

For reasons of space and readability, the table below displays only the portion of ADePT Livestock Table 15.1 for the rural sample. The actual ADePT output also produces a similar table for the urban and total samples.

Table 54: Livestock vaccination (number of animals) by welfare quintiles
(Part of ADePT Livestock Table 15.1)

| | Rural welfare quintiles | | | | | |
	1	2	3	4	5	Total
LIVESTOCK CODE						
Calf	0.1	0.1	0.8	0.2	0.1	0.3
Steer/heifer	0.1	0.0	0.1	1.3	0.0	0.2
Cow	0.0	0.1	1.2	0.1	0.1	0.3
Bull/ox	0.1	0.1	0.6	0.1	0.2	0.2
Donkey						
Mule/horse						
Goat	0.0	0.0	0.0	0.0	0.0	0.0
Sheep	0.0	0.0	0.0	0.0	0.0	0.0
Pig	0.2	0.0	0.0	0.0	0.1	0.0
Chicken-layer		0.0	0.0	0.0	0.0	0.0
Local-hen	0.1	0.1	0.2	0.1	0.2	0.1
Chicken-broiler		0.8		0.0	0.0	0.2
Local-cock	0.1	0.0	0.1	0.0	0.1	0.1
Turkey	0.0				0.0	0.0
Duck	0.0	0.0	0.0	0.0	0.0	0.0
Guinea fowl	0.0	0.0	0.5	0.0	0.0	0.1
Beehive					0.0	0.0
Other (Specify)	0.0	0.0	0.0	0.0	0.0	0.0

This table will reveal if there is any relationship between overall household welfare and the number of animals that are vaccinated. For the example case, it appears that households in the third quintile vaccinated more of their animals for most types of animals than the other welfare quintiles. A good example of this would be in the case of cows where households in the third quintile vaccinated an average of 1.2 cows while households in the other quintiles vaccinated an average of 0.1 cows. It also appears that the majority of vaccinations occur with cattle.

Table 15.2

ADePT Livestock Table 15.2 provides information on the average number of animals vaccinated for each type of animal to households owning that type of animal, by land ownership quintiles. If an urban/rural variable is specified, the sample is restricted to rural households only. If no urban/rural variable is specified, the sample is all households. The sample for the table displayed below is restricted to only rural households. The number of observations varies in each row as it is restricted to households that own that type of animal. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals slaughtered is the last 12 months, then this table will also be referring to the last 12 months.

Table 55: Livestock vaccination (number of animals) by land ownership quintiles (ADePT Livestock Table 15.2)

	Quintiles of land ownership						
	Landless	**1**	**2**	**3**	**4**	**5**	**Total**
LIVESTOCK CODE							
Calf		0.1	0.2	0.1	0.0	0.4	0.3
Steer/heifer		0.0		0.1	0.0	0.4	0.2
Cow		0.1	0.2	0.1	0.0	0.5	0.3
Bull/ox		0.1	0.2	0.2	0.0	0.3	0.2
Donkey							
Mule/horse							
Goat	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Sheep		0.0		0.0	0.0	0.0	0.0
Pig	0.0	0.1	0.0	0.0	0.1	0.0	0.0
Chicken-layer		0.0		0.0		0.0	0.0
Local-hen	0.4	0.1	0.2	0.2	0.1	0.1	0.1
Chicken-broiler		0.0				0.0	0.2
Local-cock	0.0	0.0	0.1	0.1	0.1	0.0	0.1
Turkey				0.0		0.0	0.0
Duck		0.0		0.0	0.0	0.0	0.0
Guinea fowl		0.0		0.0	0.0	0.3	0.1
Beehive				0.0			0.0
Other (Specify)		0.0	0.0	0.0	0.0	0.0	0.0

This table will reveal any correlation between the amount of land owned and the types and number of animals vaccinated. In the example case, you can observe that landless households on average vaccinate more of their goats and local-hens than the other land ownership quintiles. If you look at the case of goats, landless households vaccinate an average of 0.2 goats while households in the other quintiles vaccinate almost none of their goats. On the other hand, you can also see that households in the fifth quintile are on average vaccinate more cattle than the other quintiles.

Table 15.3

ADePT Livestock Table 15.3 shows the average number of animals vaccinated for each type of animal to households owning that type of animal, by quintiles of current stock ownership. Livestock ownership quintiles are calculated on the total LU measures. The number of observations varies in each row as it is restricted to households that own that type of animal. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals vaccinated is the last 12 months, then this table will also be referring to the last 12 months.

Table 56: Livestock vaccination (number of animals) by quintiles of current stock (ADePT Livestock Table 15.3)

	Quintiles of current stock					
	1	**2**	**3**	**4**	**5**	**Total**
LIVESTOCK CODE						
Calf					0.3	0.3
Steer/heifer					0.3	0.3
Cow				0.1	0.4	0.4
Bull/ox				0.0	0.2	0.2
Donkey						
Mule/horse						
Goat		0.0	0.0	0.0	0.0	0.0
Sheep			0.0	0.0	0.0	0.0
Pig			0.0	0.0	0.1	0.1
Chicken-layer	0.0	0.0	0.0	4.7	0.0	1.8
Local-hen	0.0	0.1	0.4	0.1	0.2	0.2
Chicken-broiler	0.9		0.0		6.1	1.4
Local-cock	0.0	0.1	0.1	0.0	0.1	0.1
Turkey			0.0	0.0	0.0	0.0
Duck	0.0	0.0	0.0	0.0	0.0	0.0
Guinea fowl		0.0	0.0	0.9	0.0	0.1
Beehive						0.0
Other (Specify)	0.0	0.0	0.0	0.0	0.0	0.0

This table will reveal any correlation between the number of animals vaccinated and the household herd size. From the example table, it appears that very few animals are vaccinated regardless of the number of animals owned. The maximum case for number of local-hens vaccinated is in the third quintile where a very small number of 0.4 local-hens were vaccinated on average. Households that do own cattle also vaccinate very few of them. Households in the fifth quintile vaccinated on average 0.4 cows, 0.3 calves and steers/heifers, and 0.2 bulls/oxen.

Table 15.4

ADePT Livestock Table 15.4 shows the average number of animals vaccinated by households owning that type of animal, by region. The table will share the same reference period as the one used in the survey. For example, if the reference period for the number of animals vaccinated is the last 12 months, then this table will also be referring to the last 12 months.

Table 57: Livestock vaccination (number of animals) by region
(ADePT Livestock Table 15.4)

	Region			
	1	**2**	**3**	**Total**
LIVESTOCK CODE				
Calf	0.3	0.2	0.6	0.3
Steer/heifer	0.2	0.8		0.3
Cow	0.2	0.2	0.9	0.4
Bull/ox	0.2	0.1	0.8	0.2
Donkey				
Mule/horse				
Goat	0.1	0.0	0.0	0.0
Sheep	0.0	0.0	0.0	0.0
Pig	0.1	0.1	0.0	0.1
Chicken-layer	3.1	3.8	0.0	1.8
Local-hen	0.1	0.1	0.2	0.2
Chicken-broiler		0.0	2.8	1.4
Local-cock	0.0	0.1	0.0	0.1
Turkey		0.0	0.0	0.0
Duck	0.0	0.0	0.0	0.0
Guinea fowl	0.0	0.0	0.3	0.1
Beehive	0.0			0.0
Other (Specify)	0.0	0.0	0.0	0.0

The table will reveal any regional differences in the vaccination of animals. In the case of the example, you can see that households in region 3 vaccinated more animals on average for most types of animals, especially in the case of cattle. Households in region 3 vaccinated an average of 0.9 cows while households in region 1 and 2 only vaccinated an average of 0.2 cows. The same is true in terms of bulls/oxen where households in region 3 vaccinated an average of 0.8 animals while that number was 0.1 animals in region 2 and 0.2 animals in region 1.

Analysis of Production

The tables in this section provide information on the quantity and value of livestock production for each type of product (ie chicken eggs, milk). They will help paint a picture of the relationship between the value and volume of household production of different livestock products, and the key variables, such as overall household welfare and gender of the household head. Tables 16.1-16.4 look at the determinants of the volume of household livestock production for each type of product. To complement tables the analysis of production volume, tables 17.1-17.4 will look at the value of household production for each type of product and how that varies in relation to the key variables. The sample for the tables in this section has been restricted to households that are producers of any livestock products. The different types of product in the rows will vary depending on what type of product is present in your dataset.

Table 16.1

ADePT Livestock Table 16.1 shows the average volume of household production for each type of product, by welfare quintiles for the rural, urban and total sample. The number of observations for each product will vary because it has been restricted to households that produce that type of product. The unit for each row will be the same as the unit used in the dataset for that product. The unit of each product may vary because it may be more useful to measure different products with different units (ie liters for milk and kilograms for meat). The different types of product in the rows will vary depending on what type of product is present in your dataset.

For reasons of space and readability, the table below displays only the portion of ADePT Livestock Table 16.1 for the rural sample. The actual ADePT output also produces a similar table for the urban and total samples.

Table 58: Livestock products (volume) by welfare quintiles
(Part of ADePT Livestock Table 16.1)

	Rural welfare quintiles					
	1	2	3	4	5	Total
PRODUCT CODE						
Cow milk	105.0	208.6	691.6	936.5	1,015.0	725.0
Chicken eggs	61.3	64.8	77.4	85.0	112.4	81.4
Guinea fowl eggs		55.0	50.2	135.3	322.9	170.9
Meat	9.2	10.7	11.6	16.0	19.2	14.1
Honey						6.2
Skins and hides		1.6		1.3	2.6	2.1
Manure	157.8	173.4	184.2	201.1	245.4	203.4
Other (specify)	46.2	19.1	24.0	4.4	13.6	17.5

This table will show if there is any relationship between the volume of production and overall household welfare. In the example table, an upward trend can be observed for every product as overall household welfare improves. If you look at milk production, rural households in the fifth welfare quintile produce on average 1,015 liters of milk, a tenfold increase from the average of 105 liters produced by rural households in the first welfare quintile. The increase is not as steep for the case of chicken eggs. Rural households in the fifth welfare quintile on average produced only 112.4 pieces of eggs, which is less than twice as much as the average volume (61.3 pieces of eggs) produced by those in the first welfare quintile.

Table 16.2

ADePT Livestock Table 16.2 displays the average volume of household production for each type of product, by land ownership quintiles. If an urban/rural variable is specified, the sample is restricted to

rural households only. If no urban/rural variable is specified, the sample is all households. The sample for the table displayed below is restricted to only rural households.

The number of observations for each product will vary because it has been restricted to households that produce that type of product. The unit for each row will be the same as the unit used in the dataset for that product. The unit of each product may vary because it may be more useful to measure different products with different units (ie liters for milk and kilograms for meat). The different types of product in the rows will vary depending on what type of product is present in your dataset.

Table 59: Livestock products (volume) by land ownership quintiles
(ADePT Livestock Table 16.2)

	Quintiles of land ownership						
	Landless	**1**	**2**	**3**	**4**	**5**	**Total**
PRODUCT CODE							
Cow milk		522.1	1,174.4	641.7	648.6	798.4	725.0
Chicken eggs	57.4	71.7	38.6	84.3	72.7	98.8	81.4
Guinea fowl eggs		193.7		262.3		134.6	170.9
Meat	6.2	10.0	9.6	15.8	12.0	16.1	14.1
Honey							6.2
Skins and hides				1.9		2.5	2.1
Manure		282.8	92.8	157.0	253.1	187.6	203.4
Other (specify)	6.0	29.1		18.6	16.9	13.0	17.5

The table shows the relationship between the size of household livestock production and the amount of land owned for each type of product. In the example case of Malawi, there is an upward trend for the majority of the types of products between amount of land owned and volume produced. The table also shows that landless households produce only two types of products: chicken eggs and meat. Landless households produced an average of 57.4 pieces of chicken eggs and 6.2 kilograms of meat. You can see in the table that rural household in the third and fifth quintile produces the most amount of meat on average, 15.8 kilograms for the third quintile and 16.1 kilograms for the fifth quintile.

Table 16.3

ADePT Livestock Table 16.3 shows average volume of production for each livestock product, by livestock ownership quintiles. Livestock ownership quintiles are calculated on the total LU measures. The number of observations for each product will vary because it has been restricted to households that produce that type of product. The unit for each row will be the same as the unit used in the dataset for that product. The unit of each product may vary because it may be more useful to measure different products with different units (ie liters for milk and kilograms for meat). The different types of product in the rows will vary depending on what type of product is present in your dataset.

Table 60: Livestock products (volume) by quintiles of current stock
(ADePT Livestock Table 16.3)

	Quintiles of current stock					
	1	2	3	4	5	Total
PRODUCT CODE						
Cow milk				1,188.8	658.4	688.1
Chicken eggs	67.2	69.7	97.6	78.5	103.8	82.4
Guinea fowl eggs			55.3	107.6	206.5	170.5
Meat	7.0	11.2	12.9	15.7	22.4	14.3
Honey						6.2
Skins and hides			2.0	2.4	1.9	2.1
Manure	488.3	120.3	233.1	186.2	198.9	203.0
Other (specify)	34.2	25.3	8.9	14.5	15.5	19.3

This table will reveal any correlation between household livestock holdings and livestock production. For the example case, there appears to be a positive relationship between the size of household livestock holdings and the average volume of production for chicken eggs and meat. The increase is steeper for meat as households in the first quintile produced an average of 7 kilograms of meat while households in the fifth quintile produced an average of 22.4 kilograms of meat. One interesting thing to note is that the amount of livestock manure produced by households in the first quintile is 488.3 kilograms, which is about three times greater than all the other quintiles. Another interesting thing to notice is that only households in the fourth and fifth quintile produce milk, with households in the fourth quintile producing an average of 1,188.8 liters of milk and the fifth quintile producing an average of 658.4 liters of milk.

Table 16.4

ADePT Livestock Table 16.4 displays the average volume of household production by region. The number of observations for each product will vary because it has been restricted to households that produce that type of product. The unit for each row will be the same as the unit used in the dataset for that product. The unit of each product may vary because it may be more useful to measure different products with different units (ie liters for milk and kilograms for meat). The different types of product in the rows will vary depending on what type of product is present in your dataset.

Table 61: Livestock products (volume) by regions
(ADePT Livestock Table 16.4)

	Region			
	1	2	3	Total
PRODUCT CODE				
Cow milk	723.5	852.8	524.2	688.1
Chicken eggs	66.2	89.6	88.3	82.4
Guinea fowl eggs	92.4	137.1	238.0	170.5
Meat	12.8	16.3	12.3	14.3
Honey				6.2
Skins and hides		1.9	3.0	2.1

Manure	48.5	165.7	283.7	203.0	
Other (specify)	7.9	18.8	30.5	19.3	

This table will reveal any differences between regions in the amount of household livestock production for the different types of products. For the example case, you can see that region 2 produces the most amount of milk in Malawi. On average, a household in region 2 produce 852.8 liters of cow's milk while region 1 only produces 723.5 liters and region 3 only 524.2 liters. On the other hand, region 3 produces the most guinea fowl eggs with 238 guinea fowl eggs on average per household.

Table 17.1

ADePT Livestock Table 17.1 shows the average value of household production for each type of product, by welfare quintiles for the rural, urban and total sample. The number of observations for each product will vary because it has been restricted to households that produce that type of product. Values are expressed in the currency used in the dataset. For comparability, it is essential for the value of all the products to be measured in the same currency. The different types of product in the rows will vary depending on what type of product is present in your dataset.

For reasons of space and readability, the table below displays only the portion of ADePT Livestock Table 17.1 for the rural sample. The actual ADePT output also produces a similar table for the urban and total samples.

Table 62: Livestock products (value) by welfare quintiles
(ADePT Livestock Table 17.1)

	Rural welfare quintiles					
	1	**2**	**3**	**4**	**5**	**Total**
PRODUCT CODE						
Cow milk	5,371.5	8,955.7	26,846.0	57,278.8	34,073.2	33,454.0
Chicken eggs	1,432.7	1,466.6	1,894.9	1,819.1	2,256.5	1,798.9
Guinea fowl eggs		995.9	1,196.7	2,235.2	2,634.1	1,950.5
Meat	18,388.8	15,108.3	24,857.5	30,713.7	26,434.8	24,345.3
Honey						5,266.8
Skins and hides		36.2		65.6	80.8	74.8
Manure	7,829.9	5,267.7	13,109.0	10,693.7	12,051.8	10,530.2
Other (specify)	16,760.3	6,731.1	9,128.8	1,732.7	3,953.7	6,163.8

This table shows any patterns in the value of household livestock production for each product with respect to welfare quintiles. The trends in this table should be similar to those in Table 16.1. For the example case, we can see that meat attracts a higher value. Households in the fourth quintile have the highest value of household production for meat at an average value of 30,713.7 Malawian Kwacha. Eggs have a much lower value than meat with the maximum value of average household production being 2,256.5 Malawian Kwacha in the fifth welfare quintile.

Table 17.2

ADePT Livestock Table 17.2 displays the average value of household production for each type of product, by land ownership quintiles. If an urban/rural variable is specified, the sample is restricted to rural households only. If no urban/rural variable is specified, the sample is all households. The sample for the table displayed below is restricted to only rural households. The number of observations for each product will vary because it has been restricted to households that produce that type of product. Values are expressed in the currency used in the dataset. For comparability, it is essential for the value of all the products to be measured in the same currency. The different types of product in the rows will vary depending on what type of product is present in your dataset.

Table 63: Livestock products (value) by quintiles of land ownership
(ADePT Livestock Table 17.2)

	Quintiles of land ownership						
	Landless	**1**	**2**	**3**	**4**	**5**	**Total**
PRODUCT CODE							
Cow milk		32,144.7	58,627.3	27,217.4	23,753.4	36,563.2	33,454.0
Chicken eggs	1,373.7	1,510.3	787.3	1,821.8	1,906.6	2,155.1	1,798.9
Guinea fowl eggs		1,494.7		1,004.5		1,991.7	1,950.5
Meat	28,105.1	22,460.9	25,769.6	24,976.8	23,786.6	24,668.2	24,345.3
Honey							5,266.8
Skins and hides				62.5		100.4	74.8
Manure		6,143.0	7,502.9	8,404.6	8,526.4	14,790.1	10,530.2
Other (specify)	2,482.6	9,629.9		7,063.6	7,219.5	3,957.5	6,163.8

This table will show how the value of household production for each product changes in relation to the amount of land owned. In the example case, you can see that no one land ownership quintile has the highest average value of household production for all products. Household meat production is about equivalent for all the land ownership quintiles. Interestingly, households in the second land ownership quintile have the highest average value of household production for cow milk at 58,627.3 Malawian Kwacha. This far exceeds the fifth land ownership quintile with an average value of 36,563.2 Malawian Kwacha for household production of cow milk.

Table 17.3

ADePT Livestock Table 17.3 shows the average value of household production for each livestock product, by livestock ownership quintiles. Livestock ownership quintiles are calculated on the total LU measures. The number of observations for each product will vary because it has been restricted to households that produce that type of product. Values are expressed in the currency used in the dataset. For comparability, it is essential for the value of all the products to be measured in the same currency. The different types of product in the rows will vary depending on what type of product is present in your dataset.

Table 64: Livestock products (value) by quintiles of current stock
(ADePT Livestock Table 17.3)

	Quintiles of current stock					
	1	**2**	**3**	**4**	**5**	**Total**
PRODUCT CODE						
Cow milk				46,575.5	32,262.7	32,790.6
Chicken eggs	1,429.1	1,583.8	2,314.8	1,657.4	2,161.7	1,806.9
Guinea fowl eggs			1,127.7	1,510.8	2,145.0	1,943.4
Meat	21,762.3	22,520.6	26,970.0	22,065.9	28,927.5	24,537.7
Honey						5,266.8
Skins and hides			15.7	96.3	75.0	74.8
Manure	3,343.4	4,044.5	4,499.9	8,379.1	15,325.7	10,496.8
Other (specify)	12,505.3	9,549.8	2,457.2	4,917.7	5,239.6	6,864.7

This table will reveal any relationship between the average value of household livestock production and current livestock holdings for each type of product. In the example table, you can see that the average value of manure increases as household livestock holdings increases. Households that own the least amount of livestock in the first quintile produce only 3,343.4 Malawian Kwacha worth of manure while households in the fifth quintile produce 15,325.7 Malawian Kwacha worth. This relationship is expected as one would expect households that own more livestock to also be producing more manure. Another interesting thing to note is that the average value of meat production does not change significantly as household livestock holdings increases.

Table 17.4

ADePT Livestock Table 17.4 displays the average value of household production by region. The number of observations for each product will vary because it has been restricted to households that produce that type of product. Values are expressed in the currency used in the dataset. For comparability, it is essential for the value of all the products to be measured in the same currency. The different types of product in the rows will vary depending on what type of product is present in your dataset.

Table 65: Livestock products (value) by regions
(ADePT Livestock Table 17.4)

	Region			
	1	**2**	**3**	**Total**
PRODUCT CODE				
Cow milk	23,081.5	60,339.3	29,607.3	32,790.6
Chicken eggs	1,348.7	2,015.0	1,967.9	1,806.9
Guinea fowl eggs	1,498.3	3,231.5	1,383.4	1,943.4
Meat	32,231.9	22,411.4	22,976.6	24,537.7
Honey				5,266.8
Skins and hides		71.3	92.7	74.8
Manure	6,052.1	13,654.3	6,908.1	10,496.8
Other (specify)	3,069.0	5,954.4	11,448.7	6,864.7

The table will reveal any regional differences in the value of household livestock production for each type of product. In the case of the example, it appears that region 2 has the highest value of household production for almost all types of products with the exception of meat, and skin and hides. The difference is very apparent in the case of cow milk where the average value of cow milk production in region 2 of 60,339.3 Malawian Kwacha is about twice as much as the average value of the other two regions. The average value of meat production is greatest in region 1 at 32,231.9 Malawian Kwacha.