Pilot Survey on Measuring Asset Ownership and Entrepreneurship from a Gender Perspective

GEORGIA

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FOREWORD

Among different issues that constraint growth and economic empowerment of women, ownership and control of assets is a key area of concern in many countries. There is a growing evidence from research about a strong relationship between asset ownership and individual well-being across the world and these studies also show that women are often at disadvantage of when compared with men in owning assets as well as their control and use. This has implications on their well-being within the household to which they belong to.

Gender equality issues in employment, wages, poverty, asset ownership and entrepreneurship, and their social and economic empowerment are important issues in Georgian society. To reduce gender inequality the Parliament ratified the United Nations (UN) Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) in 1994 and subsequently ratified many international agreements and adoption of legislative acts followed, including adoption of the 2010 Law on Gender Equality in the country.

High interest in gender issues in the Georgian society as well as developing effective policies for empowerment of women by improving their access to and use of productive assets require sex-disaggregated data. Unfortunately, such data do not exist as most household surveys collect data on assets at the household level, which cannot reveal the intrahousehold distribution and control of assets. Furthermore, under Goal 5 of the Sustainable Development Goals (SDGs), SDG target 5.a, in particular, aims to undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources to be measured by two indicators – a) proportion of total agricultural population with ownership or secure rights over agricultural land (by sex) and (b) share of women among owners or rights-bearers of agricultural land (by type of tenure).

In view of the importance of emerging area of measuring ownership of assets and entrepreneurship from a gender perspective, the National Statistics Office of Georgia (Geostat) agreed to the proposal of the Asian Development Bank (ADB) to conduct a pilot study on asset ownership from a gender perspective within the framework of the joint initiative 'Evidence and Data for Gender Equality (EDGE)' of the United Nations Statistics Division (UNSD) and UN Women. In particular, Geostat conducted a household survey with financial and technical assistance from the Asian Development Bank (ADB) under ADB's Regional Capacity Technical Assistance (R-CDTA) 8243: Statistical Capacity Development for Social Inclusion and Gender Equality to collect individual-level data on ownership and control of the following types of assets using standardized guidelines developed under EDGE initiative: (i) dwelling, (ii) agricultural land, (iii) livestock, (iv) large agricultural equipment, (v) non-

agricultural enterprise and enterprise assets, (vi) other real estate, (vii) consumer durables, (viii) financial assets, (ix) liabilities, and (x) valuables.

This report presents the data collection strategy, survey design and survey operations, data processing, estimation, and analysis and, lessons and other findings of the pilot survey.

This report was prepared by the following Geostat staff: Tengiz Tsekvava, Giorgi Kalakashvili, Tamar Gulua, Teimuraz Paksashvili, and Salome Tvalodze.

Geostat wishes to thank the following project team of ADB led by Kaushal Joshi; and comprising of Arturo Martinez, Jr.; Lakshman Nagraj Rao; Criselda De Dios; Melissa Pascua; Bimal Giri; Hema Swaminathan; Mildred Addawe; Clemence Cruz, Ma. Laarni Revilla, and Christian Flora Mae Soco. The pilot survey implementation and the report also benefitted from the valuable inputs of the following UNSD staff: Haoyi Chen, Francesca Grum, Gulab Singh and Lauren Pandolfelli. Batu Ezugbaia provided overall administrative support.

Through the close collaboration between the Geostat and Asian Development Bank, we are glad that this pilot survey, has provided substantial contributions and inputs to the development of the United Nations Guidelines on Production of Statistics on Ownership of Assets from a Gender Perspective by the UNSD and we put forward this report as an instrument for improving the capacity of national statistical systems in producing reliable sex-disaggregated statistics on ownership of assets and entrepreneurship using standard methods.

Tengiz Tsekvava
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EXECUTIVE SUMMARY

Background and main concepts of the EDGE pilot study

There is a strong need for sex-disaggregated individual data on asset ownership with the objective to measure and address gender equality issues as well as to monitor the Sustainable Development Goals of the 2030 agenda. However, availability of such data around the world is scarce as traditional surveys generally collect asset-related data on a household level.

The Evidence and Data for Gender Equality (EDGE) initiative of the United Nations Statistics Division (UNSD) and UN Women, in collaboration with development organizations, aimed to fill in the existing data and methodological gaps.

Ownership of assets, especially for women, may help improve individual empowerment and household welfare. In particular, women's ownership of assets has been associated with the reduced tendency towards violence against women, a greater bargaining power in household decisions, and better human capital outcomes for their children.

In support of the global EDGE initiative, the Asian Development Bank supported the National Statistical Office of Georgia as well as the statistical offices of Mongolia and the Philippines to conduct a pilot survey on asset ownership and entrepreneurship from a gender perspective.

The survey covered a nationally representative sample of 2,783 households (1,495 in urban and 1,288 in rural area) using a two-stage stratified sampling design. For each sampled household a maximum of three adults were interviewed separately and simultaneously to report assets that they or other members of the household own.

The EDGE framework characterizes ownership as a bundle of rights. Under this bundle of rights, a person may be classified as a **reported owner and documented owner** or has alienation rights over assets characterized by the **right to sell** and the **right to bequeath**. By types of ownership, there are also different **forms of ownership** as assets can be owned either **exclusively** or **jointly**.

A person is considered to be a *reported owner* if at least one respondent within the household reports that person as an owner of a specific asset, and a *documented owner* if the name of the person is listed on the ownership document of a specific asset based on oral enquiry from respondents, and considered to have the right to alienate an asset if the person has a right to sell and/or bequeath a specific asset.

Two data analysis approaches were adopted in this study: *ownership assigned by any respondent* and *self-assigned approach*. Under the *ownership assigned by any respondent approach*, which involves proxy reporting, an individual is considered as an owner when at least one of the interviewed household members identifies the individual as an owner of a particular asset. The *self-assigned ownership approach*, which is more restrictive, considers someone as an owner only when this person names himself/herself as an owner.

An **asset** is any item that provides economic benefits to its owner, when held or used to produce goods and services over time. The pilot survey covered both financial and non-financial assets: (i) dwelling, (ii) agricultural land, (iii) livestock, (iv) large agricultural equipment, (v) nonagricultural enterprise owned by household members and enterprise assets, (vi) other real estate, (vii) consumer durables, (viii) financial assets, (ix) liabilities, and (x) valuables **were selected for survey objectives.**

Main findings of the pilot survey

The incidence of both reported and documented ownership shows that men are more likely to own assets than women. In particular,

- Dwelling has the highest incidence of ownership among core assets. Dwelling-related disparity is more pronounce in documented ownership (almost 13 percentage points) compared to that in reported ownership (5 percentage points).

- The gender gap in the ownership of agricultural land is manifested in the fact that men are more than twice as likely to be documented owners as women. A 14-percentage point gender gap is observed for reported ownership of agricultural land.

- Comparison of the incidence of immoveable asset ownership by rural-urban residence revealed no significant differences for dwellings and other real estate. Overall, gender disparity related to owning immoveable assets is more pronounced in rural areas.

- The incidence of ownership of livestock among men are 41.6% and 38.6% for women. The gender gap is relatively moderate since livestock in the households is not owned personally but mostly belongs to the household.

- Consumer durables represent the highest and almost equal incidence of ownership between men and women among all other assets (98.3% men versus 98.4% women).

- Among all assets, the declared incidence of financial assets turned out to be the lowest: respondents were not comfortable in discussing their financial assets as well as possessed jewelry.

Analysis of alienation rights, i.e. decision-making with respect to selling or bequeathing assets also revealed a few distinct features of gender disparity:

- The exclusive right to sell or bequeath the asset turned out higher among men than among women owners for all asset categories.
- The gender gap favoring men was particularly evident in relation to alienation rights on agricultural land, large agricultural equipment and other real estate where the gender differences exceeds 10 percentage points.
- More women as compared to men reported not having the right to sell or bequeath the assets that they owned.
- It was found that in some cases even though women are considered owners, they still have limited influence on the decision to sell or bequeath the asset.

The pilot survey attempted to estimate gender disparities with relation to distribution of wealth. Due to a number of limitations the analysis was confined to dwelling units. It was found that men held more of the wealth in the form of dwellings compared to women: 51.5% of the wealth was attributed to men and 48.5% to women as reported owners, whereas in terms of documented ownership the percentage distribution of wealth turned out to be 65.0% for men and 35.0% for women. The difference in wealth distribution is more distinct in rural areas: 59.1% of wealth belonged to men as reported owners, while the wealth gap for documented owners is more profound and men's share constitutes 73.9%.

Conclusions

Data collected through the stand-along EDGE survey represented the first step of collecting individual ownership data and provided first-time indicators on incidence and distribution of ownership for different types of assets. Valuable insights gained from the EDGE initiative will help Geostat in planning its future activities in relation to asset ownership and gender indicators. The pilot survey has also provided substantial inputs for the development of the United Nations methodological guidelines on the subject of producing data on ownership of assets from a gender perspective, which will provide a standardized framework for collection of comparable statistics in this area.

CHAPTER 1: INTRODUCTION

Gender is one of the most discussed topics in Georgia. The subject of gender equality in general as well as more specific gender issues related to employment, wages, poverty, household violence, empowerment of women are present every day on TV and other media. There is an increasing number of gender-associated activities on the part of the government, nongovernment organizations (NGOs), and international organizations in the country.

Government activities can be traced back to as early as 1994 when the Parliament ratified the United Nations (UN) Convention on the Elimination of All Forms of Discrimination against Women (CEDAW). Ratification of a large number of international agreements and adoption of legislative acts followed, including adoption of the 2010 Law on Gender Equality.

High interest in gender issues in the Georgian society as well as implementation of respective evidence-based policies presupposes the need for gender-disaggregated data. Taking into account the limitation of resources, it is not always possible to ensure that all types of data are produced with gender disaggregation. Thus, the Geostat immediately embraced the proposal of the Asian Development Bank (ADB) to conduct a pilot study on Asset Ownership from Gender Perspective within the framework of the joint initiative of the United Nations Statistics Division (UNSD) and UN Women on Evidence and Data for Gender Equality (EDGE).

The EDGE initiative aims to facilitate the regular compilation of sex-disaggregated statistics to promote evidence-based policymaking. It is a multi-stakeholder initiative led by the UNSD and the United Nations Entity for Gender Equality and the Empowerment of Women (UN Women), in collaboration with national statistical offices, ADB, the Food and Agriculture Organization of the United Nations (FAO), the Organisation for Economic Co-operation and Development (OECD), and the World Bank. The initiative was to pilot EDGE surveys in a number of countries globally, of which three countries—Georgia, Mongolia, and the Philippines—were supported by ADB.

The importance of asset ownership data with a gender perspective for policy-making can be seen in a large number of studies manifesting a strong correlation between asset ownership and an individual's well-being. Assets serve as a better proxy for assessing an individual's empowerment than income data since income may be easier to obtain but harder to use because of higher volatility. International experience shows that women are usually at a disadvantage in owning assets. Taking into account that assets can be used to generate revenues, provide cushion against income shocks, and often represent a necessary precondition (collateral) for obtaining a loan, a lower level of asset

ownership among women implies higher rates of poverty, less household expenses on children's education and in general, weaker women's empowerment.

There is an existing data gap related to gender-disaggregated asset ownership in Georgia. In fact, there has been virtually no such data produced at the individual level. No reliable data on individual asset ownership can be obtained from administrative sources either, as the level of informal ownership of some large assets (such as real estate or land) can still be considered quite high, while availability of such data cannot guarantee the real ownership—again, experience from a number countries shows that legal ownership of assets may be nominal, and women-owners are often neglected in the actual use of the asset or benefiting from its proceeds.

Thus, the EDGE pilot survey provided an invaluable opportunity to fill the data gaps in Georgia. The availability of gender-disaggregated data on individual asset-ownership will help in identifying areas to follow-up by policy-makers, while providing additional dimension to researchers and different organizations working on gender issues. In addition, the EDGE pilot survey is the only source with possibilities of developing some of the indicators for the Sustainable Development Goals (SDGs). This report documents the methodological and substantive results from the pilot survey.

Box 1.1: Asset Ownership in the 2030 Sustainable Development Goals Agenda

Gender equality has been recognized as a critical element in the 2030 Sustainable Development Agenda, which has 17 goals and 169 targets to be achieved by 2030. Goal 5 of this Agenda is dedicated to achieving gender equality and empowering all women and girls.

SDG 5 espouses the elimination of all forms of discrimination against all women and girls, and elimination of all forms of harmful practices and violence against women and girls, ensuring recognition of unpaid care work, equal opportunities in leadership roles, and ensuring access to sexual and reproductive health.

SDG 5 also directly addresses asset ownership as a part of monitoring equality among the sexes in terms of economic opportunities. This is included under Target 5.a, which aims to "undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws"[a]. The three indicators for monitoring this target are:

5.A.1	(a)	Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex
	(b)	Share of women among owners or rights-bearers of agricultural land, by type of tenure
5.A.2		Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control

Despite these inclusions, monitoring the progress of such indicators still poses a challenge. Note that these indicators are classified as tier II[b] indicators, which means that (i) data from countries are not yet regularly generated and (ii) guidelines and methodologies in collecting data and computing estimates are developed.

[a] UNSDG Official List of SDG Indicators: https://unstats.un.org/sdgs/indicators/indicators-list/.

[b] SDG 5.a.1 (a) and 5.a.1 (b) indicators were initially proposed as Tier III, i.e., "no internationally established methodology or standards are yet available for the indicator, but methodology/standards are being (or will be) developed or tested," but were reclassified as Tier II indicators by the Interagency Expert Group on Sustainable Development Goals Statistics (IAEG-SDGs) in December 2017. Meanwhile, Tier I indicators are "conceptually clear, has an internationally established methodology and standards are available, and data are regularly produced by countries for at least 50 percent of countries and of the population where the indicator is relevant."

Sources: UNSDG website: https://unstats.un.org/sdgs/indicators/indicators-list/; https://unstats.un.org/sdgs/iaeg-sdgs/tier-classification/.

1.1 The Need for Data on Asset Ownership

As mentioned in the introduction, no comprehensive surveys have been conducted in Georgia to measure individual asset ownership. The main focus of the existing household surveys is usually on current expenditures and revenues, while questions on asset ownership remain at the household level.

Even putting aside the lack of individual data, asset data derived from household surveys is quite limited. Surveys that contain questions on assets have different primary objectives; hence, asset-related questions usually represent only a list of available assets, without delving into the details of asset values and functionality.[1] The reasons for deriving only a general list of assets lie precisely in the complexity of data collection: detailed information on household assets negatively affects respondents and could easily jeopardize the quality of primary indicators obtained from the survey.

Regular household surveys in Georgia not only produce key economic variables such as poverty, unemployment, expenditures, and revenues of population, but are also used as sources for different estimations (such as national accounts or inflation), questionnaires have little room for elaborating on the asset ownership perspective at the individual level.

Thus, conducting the EDGE survey in Georgia was beneficial in a number of aspects. Apart from studying all key assets in detail, the survey responds to the data needs outlined in the introduction by (i) addressing questions to individuals rather than household heads or most knowledgeable persons in the household, (ii) focusing on the "principal couple" to underline the gender aspect of asset ownership, and (iii) expanding the notion of ownership beyond formal documented ownership.

As a result, the EDGE survey describes in detail the existing situation with asset ownership in the country. Although responses were not satisfactory in a few areas, the results were able to show overall incidence, distribution, and gender differences related to ownership of assets.

1.2 Survey Implementation

General Country Information. Georgia is located at the crossroads of Europe and Asia in the Caucasus with an estimated population of at 3.72 million persons in 2016[2]. More people live in urban areas (57.2%) than rural areas (42.8%). Georgians constitute the largest ethnic group in the country,

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[1] The only exception represents the dwelling: standard household questionnaires include a large number of questions in relation to dwellings' date of construction, construction materials, value, etc.
[2] Government of Georgia, National Statistics Office. Population.
http:// www.geostat.ge/index.php?action=page&p_id=152&lang=eng

accounting for 86.8% of the population. The next two largest ethnic groups are Azeris (6.3%) and Armenians (4.5%).

The national currency is Georgian Lari. The official language is Georgian, and Georgian and Abkhaz languages in the Autonomous Republic of Abkhazia. The gross domestic product per capita was estimated at $3,852.50 in nominal terms and $9,267.30 in purchasing power parity terms in 2016. The unemployment rate stood at 11.8% in 2016.

Respondents. At most three adult household members were selected as respondents for the pilot survey. The three respondents are the primary respondent, the spouse, and a third adult member in the household. The primary respondent is the adult household member who knows most of household-related information required for the survey. Ideally, the principal couple, i.e., the primary respondent and his or her spouse, should be engaged in the interview. But in case of the spouse's absence, two adult household members were also selected randomly. All interviews were conducted separately and data were entered in separate survey questionnaire.

Interview protocol. The field protocol includes interviewing at most three adult respondents per household, who should be interviewed simultaneously and independently. The respondents were requested to provide self-assigned information on exclusively owned and jointly owned assets and proxy information on assets owned by the rest of adult household members. A team of field enumerators and supervisors conducted the interviews. For all assets, ownership data were collected as reported by the respondents. For some assets like dwelling, agricultural land, and other real estate, respondents were further asked if there are any legal papers supporting the ownership.

Survey period. The EDGE survey data was collected from 26 September 2015 to 20 October 2015.

Reference period. This pertains to the reference time for the particular information requested from the respondents. The reference period for most asset ownership and valuation questions are the actual date of the interview. But reference periods vary for the rest of the questions in the pilot survey, e.g., past week or past year for employment-related questions and past quarter for income and enterprise-related questions. Corresponding reference periods were indicated for these items in the questionnaire.

Statistical unit. The units of observation for the pilot survey are both the household and individual. There are two questionnaires, i.e., household and individual questionnaires. Information for the household questionnaire should ideally be sourced from the primary respondent. In case of absence, the other member of the principal couple should serve as alternate respondent for the household module. Information for the individual questionnaire, comprised of asset ownership questions, should be provided by at most three adult members interviewed independently.

Sampling frame. The sampling frame used for the survey represented the General Population Census conducted in 2014. It was used for selecting enumeration areas as primary sampling units (PSUs) and households as the secondary sampling units (SSUs). Details of the sampling design are discussed in Box 1.2.

<div align="center">Box 1.2: Sampling Design</div>

A two-stage stratified sampling design was adopted for the pilot survey in Georgia with the selection of enumeration areas as primary sampling units (PSUs) from each stratum formed for the purpose. Households within each selected PSUs formed the second stage sampling units (SSUs).

Second-stage stratification. The survey sampling design required information on the number of adults for each household in each selected PSU to further form two second stage strata (SSS-1 and SSS-2):

(i) SSS-1 comprised of all households having three or more adults (aged 18 and over), and
(ii) SSS-2 comprised of the remaining households.

Selection of units. The PSUs were selected within regions with probability proportional to size (PPS), and SSUs were selected following circular systematic sampling with a random start. The sample PSUs in each stratum were drawn in the form of independent sub-samples with a view to generate unbiased estimates of variance of the estimated parameters irrespective of the sampling design adopted.

Sample size—first-stage units. Considering the parameters of interest to be derived from the survey and other relevant indicators for determination of sample size as well as resources available for the survey, the adjusted sample size was 158 PSUs.

Sample size—second-stage units. An equal number of households were selected from each stratum at the PSU level. Thus, with an assumption of 20% non-response rate, 3,160 sample households were selected with 20 households from each PSU. Thus, considering expected non-response 20 households were targeted per PSU with 10 households selected from each second stage stratum. The survey finally collected data from 2,783 households, with 377 households as non-responding households.

Achieving second stage stratification requires updated lists of households, with information on the number of adults per household. A fresh listing of all households in each selected PSU is ideal for the purpose; however, generating this extra listing requires additional resources. Taking into account that the General Population Census was conducted in November 2014, the survey team decided to use the information on the number of adults in the households in the selected PSUs without further updates.

With the available information on the number of adults in the sampled households, each selected PSU were divided into SSS-1 and SSS-2 to select the desired number of sample households from each stratum.

Source: Asian Development Bank.

1.3 Survey Organization

The survey instruments were prepared by the global EDGE team[3], and were contextualized by Geostat in close cooperation with ADB and the UNSD. The questionnaires were likewise subjected to pre-testing, which led to slight modifications. The questionnaires were subsequently finalized and translated to the Georgian language.

Training. Two levels of training were conducted. The first level was designed for trainers and the second level was given to field enumerators and supervisors. Officials and staff from UNSD and ADB provided expert advice and guidance during the training. The training, which was held for 2 to 4 days, included lectures, simulated interviews and field exercise interviews.

Quality assurance of fieldwork. To ensure the quality of field operations, the team supervisor worked closely with interviewers by providing guidance and recommendations at the field enumeration area. Apart from the supervision, Geostat's central office staff visited regional centers after the first few days of the fieldwork. They met all interviewers and provided additional guidance based on completed questionnaires.

In addition, a full-scale fieldwork monitoring by Geostat's internal audit staff was performed, which included checks of all interviewers at randomly selected addresses of the respondents.

Data Flow, documentation, and data processing. Data management followed a systematic process. At the end of each interview and prior to leaving the sample households, field enumerators were required to assess the accomplished questionnaire and ensure complete entry of information asked for each question. The questionnaires were then forwarded to the team supervisors for further checking of completeness, consistency, and reliability of information. Errors were noted and the questionnaires were returned to the enumerators for rectification. Filled out questionnaires were transmitted to the data entry team for further assessment.

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[3] The EDGE survey instruments were based on the experience gained from Methodological Experiment on Measuring Asset Ownership from a Gender Perspective (MEXA), which was a partnership of global EDGE project with the World Bank Living Standards Measurement Study (LSMS) program for the design, implementation and analysis of a methodological household survey experiment to test different respondent selection protocols for collecting data on asset ownership and control at the individual level implemented with in collaboration with Uganda Bureau of Statistics (UBoS). World Bank. "Kilic, T., and Moylan, H. (2016). "Methodological experiment on measuring asset ownership from a gender perspective (MEXA): technical report." Washington, DC: World Bank.
http://siteresources.worldbank.org/INTLSMS/Resources/3358986-1423600559701/MEXA_Technical_Report.pdf

CHAPTER 2: CONCEPTS AND METHODOLOGY

Chapter 2 discusses the concepts and definitions used in the pilot surveys. It also discusses the data requirements for measuring ownership and control of asset from a gender perspective. Details on types of assets covered in the survey, modes of acquisition of assets, bundle of ownership rights, along with other key concepts and how these were operationalized in the pilot survey operations are provided in this chapter. The chapter also includes a discussion of various analytical measures used to examine gender disparities in asset ownership in the succeeding chapters, and ends with a discussion of the data issues encountered during the data processing phase.

2.1 Key Concepts

2.1.1 Conceptual Framework

It is instructive to start this chapter with a discussion of the conceptual framework used for measuring asset ownership from a gender perspective. Data collection on individual level asset ownership and control that can provide evidence on the disparities that may exist between men and women is the central theme of the EDGE initiative. It is also important to consider legal framework and cultural norms and customs to see how they shape the patterns observed from data. Further, the types of data collected should provide the evidence needed for policy making to bridge gender gap.

In general, ownership is associated with a bundle of rights that define different types of ownership. Different types of ownership rights with respect to the access to, use of, and/or decisions related to management of assets may be bestowed upon different household members. For example, a certain household member may have rights to use an asset, but may not have the right to manage or decide the sale of the asset. Likewise, it may also be the case that a person may report ownership, but the legal document may not reflect this or may not in reality possess the right to manage the asset.

Figure 2.1 illustrates the conceptual framework for collecting data on asset ownership and presents ownership as a bundle of rights. Under this framework, ownership is associated with a bundle of rights, which, in turn, defines different types of ownership. Under these bundle of rights, a person may be classified as a *reported owner* (if at least one respondent within the household reports him/her as an owner of a specific asset), *documented owner* (if their name is listed on the ownership document of a specific asset based on oral enquiry from respondents), or has alienation rights over assets characterized by the *right to sell* (if they have the ability to permanently transfer the asset in return for cash or in-kind) and the *right to bequeath* (if they have the ability to give the asset by oral or written will).

In addition to types of ownership, there are also different forms of ownership since assets can be owned either exclusively or jointly by individuals. A person may be classified as an *exclusive owner* if he/ she is the sole owner of a specific asset, or a *joint owner* if the person co-owns a specific asset with other member[s] and/or nonmember[s] of the household. Exclusive ownership is depicted by the non-overlapping sections of the circles corresponding to men and women's assets while joint ownership is depicted by the overlapping portion in Figure 2.1.

There are many ways that an owner can acquire assets, including acquisition through purchase, inheritance, or gifts. Also, as assets are a store of value, a monetary figure can be attached to them, and the resulting wealth from these assets both for the individual and household can be computed. How individuals acquire assets and how much the assets are worth are aspects of asset ownership that need to be examined carefully, as both can reveal inequalities in asset ownership for men and women. For one, differences in the modes of acquisition may indicate issues in the accessibility of assets and have policy relevance for inheritance, marital regimes, and purchase. Gender gaps in wealth provide a complementary perspective to gaps in incidence of assets as they account for differences in quality of assets and in the number of assets owned.

As the conceptual framework in Figure 2.1 illustrates, there are several factors that shape patterns of asset ownership. One such factor is the country context, which includes a country's legal framework—its customary laws, statutory laws, marital regimes—and social norms. These may affect who can own and access assets, as well as who may manage these assets. For example, statutory laws can stipulate that assets may be equally accessed and owned by both men and women. However, some traditions, such as strong preferences toward the male offspring, influence how women access or own assets. In some cases, assets such as land and dwelling that are viewed as more valuable assets, are bequeathed to sons, since they are believed to be more capable of handling such assets. In addition, marital regimes in some countries promote asset-related regulation, which in turn affect how are assets are owned and managed by men and women.

Who can own, and access assets has implications for individuals, households, and communities. Under the conceptual framework, sex-disaggregated data can provide the needed evidence for policies that can lead to women's empowerment, sustainable livelihoods, and poverty alleviation.

Gathering data on asset ownership would not only help in lending relevance in the gendered analysis of the discourse, but also in formulating evidence-based policies that could impact individual and social welfare, especially in the three areas: women's empowerment, sustainable livelihoods, and poverty alleviation, as previously discussed.

Figure 2.1: Conceptual Framework for Measuring Asset Ownership and Control from a Gender Perspective
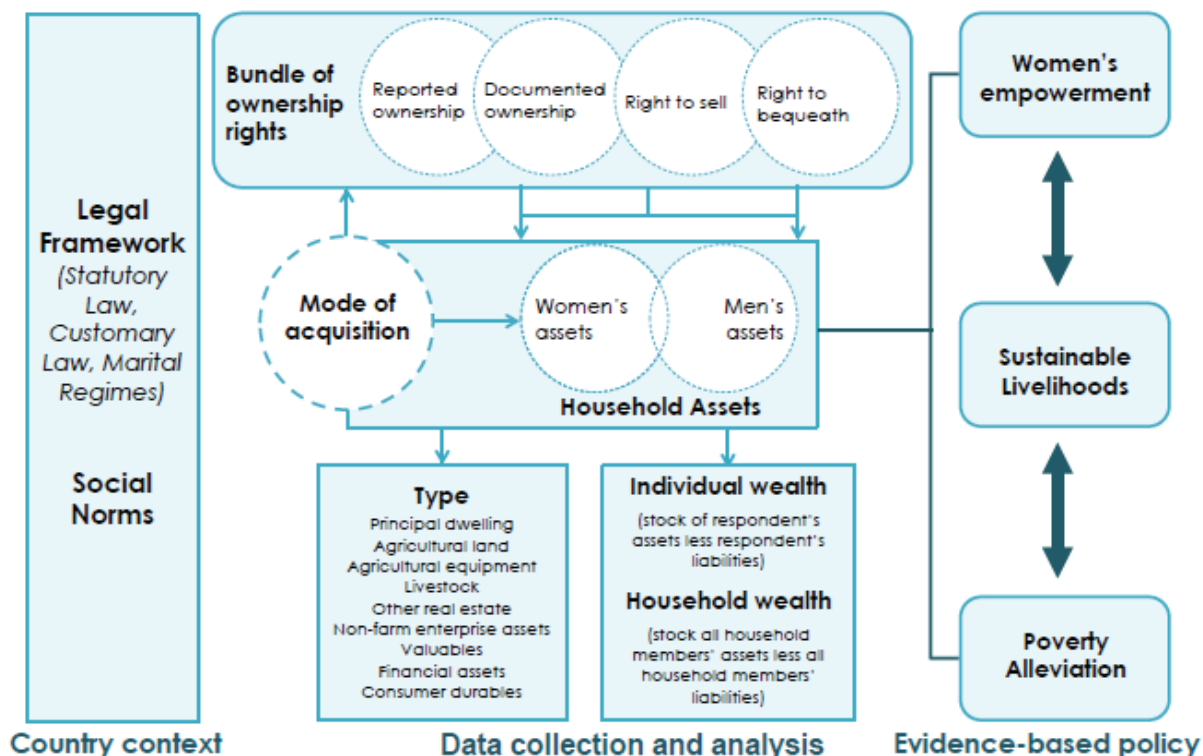
Source: United Nations, Department of Economics and Social Affairs, Statistics Division. Forthcoming. UN Guidelines for Producing Statistics on Asset Ownership from a Gender Perspective from Household Surveys. https://unstats.un.org/edge/methodology/asset/

2.1.2 Objectives of Pilot Surveys

The *Pilot Survey on Measuring Asset Ownership and Entrepreneurship from a Gender Perspective* under ADB's technical assistance are stand-alone surveys conducted in Georgia, Mongolia, and the province of Cavite in the Philippines. The pilot surveys were conducted to test and refine the methodology under the EDGE initiative for conducting household surveys to collect individual-level data on asset ownership and entrepreneurship. Results obtained during the survey were also used to assess, both quantitatively and qualitatively, the following:

(i) the design of the EDGE modules to ensure that questions are clear, response categories are adequate for the survey population, difficult and/or sensitive questions are identified, and concepts are operationalized well;

(ii) the feasibility of interviewing the household members selected for interview per the EDGE field protocols; and

(iii) the relevance of the proposed EDGE global indicators to the country context.

Lessons learned, and results obtained from the three pilot surveys contributed to the development of a standardized set of definitions, guidelines, and practices with respect to producing statistics on individual level asset ownership by the UNSD.

The data collection strategy followed in the three pilot countries was a stand-alone survey. Other methods such as an appended shorter questionnaire to a main survey were tested under the EDGE project in three other countries. These countries other than Uganda where MEXA was implemented are: Maldives, Mexico, and South Africa. Table 2.1 provides an overview of data collection strategies tested and scope of pilot surveys under EDGE initiative in seven pilot countries.

Table 2.1: Overview of Evidence and Data for Gender Equality Pilots

Country	Data Collection Strategy	Asset Coverage	Sample Size	Dates of data collection
Georgia[a]	Stand-alone survey	All assets	3,160 households (nationally representative)	September 2015 to October 2015
Maldives	Appended to HIES	All core assets + financial assets and liabilities[b]	HIES subsample of 285 households on three islands	May 2016
Mexico	Appended to ENH	All core assets + financial assets and liabilities[b]	ENH subsample of 8,204 households	June 2015 to October 2015
Mongolia[a]	Stand-alone survey	All assets	3,008 households (nationally representative)	September 2015 to November 2015
Philippines[a]	Stand-alone survey	All assets	1,536 households (representative of the province of Cavite)	September 2015 to October 2015
South Africa	Stand-alone survey	All assets (except valuables) + household decision making module	1,946 households in Kwazulu-Natal province	August 2016 to September 2016
Uganda	Stand-alone survey	All assets	2,720 households	June 2014 to August 2014

ENH = National Household Survey, HIES =Household Income and Expenditure Survey.
[a] Pilot country supported under ADB's technical assistance.
[b] Core set of assets comprise of dwelling, agricultural land, and other real estate.

Source: United Nations, Department of Economics and Social Affairs, Statistics Division. Forthcoming. UN Guidelines for Producing Statistics on Asset Ownership from a Gender Perspective from Household Surveys.

2.1.3 Assets Defined

An asset is any item that provides economic benefits to its owner, when held or used to produce goods and services over time. These economic benefits may either be in the form of income or holding gains.[4] Losses may also be incurred, due to asset depreciation.

An asset has three attributes: (i) its ownership rights can be enforced; (ii) it can be used to produce goods, services, or capital, as well as to store value; and (iii) its use generally spans a year or more. Although social and human capital (such as education, health, and skills) may be considered assets based on this broad definition, the scope of the pilot surveys is limited to physical and financial assets.

Since the pilot survey focuses on measuring individual-level asset ownership, the information obtained through the survey are on assets owned by individual adult male and female members of the household, and any assets belonging to unincorporated non-agricultural enterprise that the household runs. The asset definition in the survey is in line with the definition of assets in the System of National Accounts (SNA)[5]. However, the survey also included items that are not necessarily considered within the asset boundary of the 2008 SNA, such as consumer durables and small agricultural equipment. This is because consumer durables represent a significant part of household assets and may be especially important for women's livelihoods.

2.1.4 Assets Covered

The pilot survey covered both financial and nonfinancial assets. Financial assets consist of all financial claims, shares, or other equity in corporations such as deposits, equity or shares, bond, and loans made (money lent). Nonfinancial assets consist of dwellings, livestock, agricultural equipment, non-agricultural enterprise and enterprise assets, other real estate, valuables, and agricultural land. However, as mentioned above, some items not considered as assets under the 2008 SNA asset boundary, such as consumer durables and small agricultural equipment, were included in the survey, since these assets can be a significant part of household assets and some of these may be used for productive activities by the households and may provide additional information in measuring household- and individual-level well-being.

Dwellings. A dwelling unit refers to the structure in which a household lives and on the plot of land on which the unit is built. A dwelling unit is also used entirely or primarily as residence, including any

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[4] These are the gains incurred due to owning or holding an asset, usually due to the appreciation of the asset's value.
[5] The System of National Accounts (SNA) is the internationally agreed standard set of recommendations on how to compile measures of economic activity. (https://unstats.un.org/unsd/nationalaccount/sna.asp)

associated structures such as garage. Other dwellings not used as principal dwelling are categorized under "other real estate."

Agricultural land. An agricultural land refers to agricultural parcels held or owned wholly or partly by a member (or members) of a household. These are used for agricultural production purposes, without regard to title, legal form, or size. Each agricultural parcel owned should be recorded in the listing of assets.

Livestock. Livestock comprises any animal, birds, and insects—excluding aquatic animals—that are kept or reared in captivity for agriculture[6]. Domestic animals used as pets (e.g., cats, dogs) are excluded, unless they are being raised or kept for food or agricultural purposes.

The list of livestock also varies according to what was applicable to the pilot countries. The countries were given the option to include livestock considered important in their economy and for households. The survey did not collect data on each individual livestock, but only total number for each type of livestock.

Large agricultural equipment. Agricultural equipment refers to any machinery and equipment used for agriculture and can be classified as either small or large. Pilot countries have taken different approaches to differentiate large from small agricultural equipment (i.e., effective capacity,[7] value, size, etc.). Georgia pilot survey did not include small agricultural equipment as these are generally considered belonging to all household members and it is not easy to assign ownership at the individual level.

The pilot countries also included other types of large agricultural equipment in their questionnaire. In the questionnaire for Georgia, there were distinctions between hand tractors, mini tractors, and tractors with larger capacity. Respondents were also given the option to list other large agricultural equipment they may have. If two or more of the same type of large agricultural equipment were present, these were listed by year of manufacture, from newest to oldest.

Photographs of different agricultural equipment were also included in the manual to facilitate the enumerators' and respondents' correct identification of large and small agricultural equipment.

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[6] Based on the definition of Food and Agriculture Organization of the United Nations (FAO).
[7] For example, the classification of multicrop juice extractor is based on the input capacity (household or small scale input capacity of up to 15 kilograms per hour; commercial or large scale input capacity of more than 40 kilograms per hour).

Non-agricultural enterprise and enterprise assets. Enterprises are defined as entities engaged in the production or distribution of goods or services for sale, either in whole or in part, regardless of the size or scale of the product.

Distinctions were made between agricultural and non-agricultural enterprises, as well as between incorporated and unincorporated enterprises. Agricultural enterprises are those that produce or sell non-processed agricultural goods such as fruits, milk, vegetables, and wool. Enterprises that produce agricultural by-products (e.g., bread, cheeses, and textile) or sell items such as firewood or charcoal fall under non-agricultural enterprises. For instance, if a household member grows and sells agricultural products like grapes this is considered as agricultural activity. However, if a household member sells wine produced from homegrown grapes, then it is considered as a non-agricultural activity.

Incorporated enterprises are legal entities that exist for the purpose of producing goods and services for the market. Engaging in the sale of these goods and services may prove to be profitable to its owner, either in pecuniary terms or otherwise. These kinds of enterprises are owned by one or more shareholders, and these shareholders have the capacity to appoint a person to manage this enterprise. In contrast, unincorporated enterprises are usually found in the household sector, and may not always be classified as legal entities. However, they are engaged in the production or sale of goods and services made available to the market.

In the survey, enterprises considered were non-agricultural enterprises that are currently operating, closed temporarily, or operating seasonally and owned by one or more adults in the household. The enterprise may be run from the premises of the household or outside of the household and can also be an informal enterprise or a formal one of any size. For instance, one-person operations that provide goods and/or services to other non-household members or groups were classified as enterprises.

Enterprise assets are those held by the non-agricultural enterprises such as equipment, machinery, furniture, or stock of material. For unincorporated enterprises, the assets that cannot be distinguished due to mixed use were recorded under household assets.

Other real estate. Classified under other real estate are dwellings (other than the principal dwelling used by the household), nonresidential buildings other than the dwellings, and non-agricultural land, either urban or rural. These may be used as store of value, by one or more of the household members, or leased or rented out to other parties. Also, included under this category are incomplete dwellings. While they are yet to be used as primary residence, they are still considered as assets

insofar as the intended user is deemed to have taken ownership, either due to its ongoing construction or due to the existence of a sale or purchase contract.

Consumer durables. Goods that may be used for repeated or continuous consumption for a period of 1 year or more are called consumer durables. Items such as cars and other vehicles, computers, furniture, kitchen equipment, and laundry appliances are considered consumer durables. Consumer durables that are not working or functional and not intended to be repaired are excluded.

Financial assets and liabilities. Financial assets are an important component of the wealth of households and individuals. Examples of financial assets included in the survey are commercial bank accounts, bonds, equities (stocks or shares), informal savings programs, life insurance, microfinance accounts, and pension funds. Loans made by the households and/or individuals to others were also included as financial assets.

The survey also collected data on financial liabilities, which include money borrowed from private individuals or enterprises.

Valuables. These are items that are non-financial in nature, but can be kept as store of value and are not used in production. The worth of these valuables is expected to appreciate over time, or, at the very least, remain unchanged in real terms. These can be viewed as an alternative form of investment, and may be used as collateral or sold in exchange for money. Valuables may come in the form of precious metals and stones, antiques, art objects, jewelry, and collections of items—such as books, cards, and stamps—that are of considerable value. In some countries, emphasis is given to the ownership of jewelry for women.

2.1.5 Bundle of Ownership Rights

Within the framework of the pilot surveys, ownership is conceptualized as a bundle of rights in the form of types of ownership. With this approach, two types of ownership are defined as reported and documented—while two others are conceptualized as alienation rights—the rights to sell and to bequeath. These types of ownership are defined as follows.

- **Reported ownership.** This type of ownership is exhibited when an individual or individuals consider himself/ herself to be an owner of an asset or are assigned as owners by a proxy respondent. This is regardless of whether or not their names appear on the document of legal ownership of an asset. This is purely based on a respondent's perception. Examining reported ownership is of interest, as this may be considered an indicator of the empowering effect of owning assets. Also, in some cases, reported ownership may be the sole indicator of a

person's ownership status (i.e., when the ownership document is not available in some developing countries or when property rights are not well established).

- **Documented ownership.** A person is said to have documented ownership over an asset when their name appears on the ownership document of that asset. An individual having documented ownership can enforce or claim their rights in law and is usually more protected by laws compared to owners whose names are not on the ownership document. Documents pertaining to asset ownership usually include one or more of these: a formal deed or title, a purchase agreement, or a certificate of customary ownership. The required documents may vary from country to country. In the surveys, the documented ownership status were collected as informed by the respondents by oral inquiry and without verifying the documents.

- **Right to sell.** This refers to the ability of an individual to permanently give an asset away in exchange for cash or other payments in-kind. The right to sell is an alienation right and is most commonly linked to ownership, except in cases where an asset, usually land, cannot be given away due to laws or social norms. This may be true for countries where the state owns the land.[8] The data were collected in the survey based on the information provided by the respondents.

- **Right to bequeath.** An individual with the right to bequeath an asset is someone who can bestow an asset unto another person, either via written or oral will, after death. It is also an alienation right and can be considered more universal than the right to sell, since some assets may be bequeathed but not sold. The data were collected in the survey based on the information provided by the respondents.

The types of ownership and rights mentioned do not necessarily coincide in a single person. For example, a person may be identified as a reported owner of a dwelling, but not as a documented owner. This implies that, while the person declares ownership of the dwelling, that individual will not have the necessary authority to undertake a legal transaction to sell the dwelling, since this transaction requires ownership documents. Similarly, individuals legally owning the asset may not necessarily have *de facto* authority in the household to undertake a legal sale transaction without the sanction of, say, the head of the household (often a male member), due to the existing cultural and societal norms. Thus, the degree of control over assets will also vary across countries and may be either exacerbated or alleviated by existing statutory or customary laws, social norms, and existing gender disparities.

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[8] In Nigeria, for example, the state owns the land, and the governor of that state grants statutory rights of occupancy. The occupant does not have the right to sell, sub-lease, or transfer possession of the land without consent from the governor. Doing so is considered "overriding the public interest." (International Centre for Nigerian Law. 1990. *Land Use Act.* http://www.nigeria-law.org/Land%20Use%20Act.htm [accessed on 8 June 2017].)

2.1.6 Forms of Ownership

Assets may be owned either exclusively or jointly. In exclusive ownership, a specific asset is owned solely by an individual, whereas in joint ownership, an asset is owned by an individual in conjunction with one or more individuals from the same or a different household.

Each form of ownership might lead to different rights and benefits to the owners. For exclusive ownership, the owner usually possesses the bulk of the rights. For joint ownership, the rights possessed by each of the owners may differ. For example, it may be the case that the joint owners are entitled to different uses of a specific asset. Given these mechanisms, establishing the form of ownership is essential along with the type of ownership.

Within households, the most common form of joint ownership is among married or partnered adults. The form of ownership assumed among these couples may be influenced by existing laws on regimes of property ownership within marriage. Generally, there are three marital regimes—common property, partial community property, and separation of property. Under common property regimes, all property owned by either individual in the couple is deemed joint property. Under partial community regimes, property brought to or inherited during marriage is considered individual property, while any asset acquired during the marriage is considered joint property. All properties are deemed exclusively owned under separation of property regimes, and marriage does not confer any rights to the spouse's property. While countries may have a default regime, couples may choose their regime at the time of marriage, and, in some cases, the type of marriage, whether civil, customary, or religious, may have associated property arrangements.

Although joint ownership of assets is commonly observed among couples, an asset may also be co-owned with parents, adult children, siblings, relatives, or non-related individuals from different households.

2.1.7 Modes of Acquisition of Assets

There is a multitude of ways that assets can be acquired by individuals. Examining individual-level data on modes of acquisition can reveal patterns or differences in acquisition for men and women. Studying how individuals obtain assets can reveal patterns on how differently or similarly men and women acquire assets. Differences in how men and women typically acquire assets may be indicative of some issues in practices or legislation that affect asset acquisition. For example, if more men compared to women acquire assets through inheritance, it may point toward a preference toward sons when it comes to bequeathing assets or existence of laws or customs that favor men in inheritance of assets.

In the pilot survey, seven major modes of acquisition were identified: (i) purchase, (ii) inheritance (due to either natal or marital family member), (iii) means of marital law or custom, (iv) allocation or gift (either from a household member or from a non-household member), (v) means of a government program, (vi) encroachment, or (vii) others, where respondents give a different answer from the listed mods. The owner or owners of a non-agricultural enterprise were also given the option to answer if they founded the enterprise.

2.1.8 Hidden Assets

Another area of interest in asset ownership are "hidden assets." These are assets owned by any adult household member, but are hidden from one or more household members. Data on hidden assets will be able to shed light on who are more likely to hide assets, which assets are typically hidden, and from whom these assets are usually hidden. Collecting data on hidden assets would also give an idea whether or not asset owners are likely to hide certain types of assets from other household members.

However, capturing information on hidden assets can be challenging. This is because most surveys are conducted at the household level, and household interviews usually rely on proxy-reported data by the most knowledgeable member of the household. In cases where interviews are conducted individually, a question on hidden assets may be met with reluctance from the respondent, as this can be viewed as a sensitive question. Considering that the hidden assets might have implications on the well-being of individuals, attempts using different methods have been made in earlier studies to capture their prevalence. Box 2.1 discusses how previous studies operationalized the collection of data on hidden assets.

Box 2.1 Recording Hidden Assets–Experiences from the Gender Asset Gap Project and the Methodological Experiment on Measuring Asset Ownership from a Gender Perspective

Hidden Assets in the Gender Asset Gap Project

The Gender Asset Gap Project (GAGP) is a data-gathering initiative conducted in Ecuador, Ghana, and Karnataka state in India. It collects information regarding ownership of, access to, and control over assets at an individual level, through the conduct of household surveys.[a]

In the survey conducted in Karnataka, India, for example, no explicit question on hidden assets was included in the questionnaires. Instead, it prepared an inventory of assets owned by any household member either exclusively or jointly first by gathering information from a household questionnaire, thus preparing a common inventory of assets owned by any member of the household by posing the following question:

"Does anyone in this household have [TYPE OF ASSET]?"

Later, during the separate individual interviews, a household asset inventory was used to identify owners of each asset. In addition, the following question was posed to each respondent to find out if the individual respondent would like to add any other asset through the following question:

"Besides the [ASSET] already mentioned, does anyone in your household have any other [TYPE OF ASSET]?"

While such an approach circumvents the need to inquire about hidden assets directly, such an approach can be tricky. Respondents may only know about additional assets of their own, and not of fellow household members. There might be reluctance on the part of respondents to add more assets to an already prepared household inventory of assets. Since both household and individual interviews were lengthy, there can be intended or unintended omission due to fatigue for both the enumerator and the respondent. The technical report for the Methodological Experiment on Measuring Asset Ownership from a Gender Perspective (MEXA) notes these, and adds that the results garnered for hidden assets under the GAGP surveys were near-negligible.[b]

Hidden Assets in the Methodological Experiment on Measuring Asset Ownership from a Gender Perspective

In MEXA, data on hidden assets were collected in a direct manner. A set of three questions were posed for asset owners. In the MEXA treatment arm which collected assets data from individual adult respondents, the following questions were posed:

"Are there any household members above the age of 18 that do not know about your ownership of this [ASSET]?"
Are you the only member of your household above the age of 18 that knows about your ownership of this [ASSET?]
Which household member above the age of 18 does not know about your ownership of this [ASSET]?

The experiment not only attempts to reveal the existence of hidden assets, but also aims to identify up to three household members from whom the assets are hidden. Similar to GAGP, challenges in responses (e.g., reluctance in providing answers on sensitive questions, respondent and enumerator fatigue) are also applicable to this approach. The data from MEXA suggest that except for the financial assets the response prevalence of hidden non-financial assets was low.

Box Table 2.1: Results on Hidden Assets—Methodological Experiment on Measuring Asset Ownership from a Gender Perspective

Module	Number of Respondents Owning an Asset			Number of Owners Reporting a Hidden Asset			
	Overall (n)	Male (%)	Female (%)	Overall (n)	Overall (%)	Male (%)	Female (%)
Agricultural Parcels	833	62.3	37.7	25	3.0		
Large livestock	1,014	53.5	46.5	49	4.8		
Large agricultural equipment	102	66.7	33.3	0	0.0		
Non-farm enterprises	536	42.5	57.5	1	0.2		
Other real estate	154	67.1	32.9	4	2.6		
Financial assets (accounts)	795	46.9	53.1	111	14.0	16.4	12.8
Financial assets (loans)	287	56.4	43.6	78	27.2	25.3	29.6
Liabilities	410	51.1	48.9	93	22.7	24.6	17.7

Source: Table 24 (p. 73). T. Kilic, T. & and H. Moylan, H. (2016). Methodological Experiment on Measuring Asset Ownership from a Gender Perspective (MEXA) Technical Report. http://siteresources.worldbank.org/INTLSMS/Resources/3358986-1423600559701/MEXA_Technical_Report.pdf

[a] In Her Name: Measuring the Gender Asset Gap a Pilot Study to Collect Sex-Disaggregated Asset Data in Ecuador, Ghana, and India. Indian Institute of Management. Bangalore. http://www.iimb.ac.in/node/12755
[b] T. Kilic, T. & and H. Moylan, H. (2016). Methodological Experiment on Measuring Asset Ownership from a Gender Perspective (MEXA)—Technical Report. World Bank.

To collect data on hidden assets, the three pilot surveys conducted under the EDGE Initiative tested the MEXA approach in the different country contexts by including these two questions:

"Are there any household members above the age of 18 that do not know about your ownership of this [ASSET]?"

Which household member above the age of 18 does not know about your ownership of this [ASSET]?

These questions were included in the modules for agricultural land, large agricultural equipment, non-agricultural enterprise and enterprise assets, other real estate, and financial assets and liabilities.

Results from the pilot survey yielded the same pattern as that in MEXA. Incidences for hidden assets are generally low, except for hidden financial assets or liabilities. This may be due to the nature of financial assets: that they are easier to hide often unintentionally, the information is not shared with other household members, as compared to assets like dwellings or agricultural land.

These results are discussed in more detail in Chapter 3.

2.1.9 Valuation of Assets

Since an asset has economic value, it is possible to compute the monetary equivalent of that value. This monetary equivalent gives an estimate of wealth, be it at the household or individual level. Obtaining information on an asset's value is important since it reflects a multitude of attributes of an asset, such as location, quality, or size. In addition, data on an asset's value can reveal gender wealth gaps and thus further sources of disparity, particularly in financial capability and economic empowerment between men and women.

However, reporting the monetary value of assets for the respondents may not be an easy task for a variety of factors. Respondents may not possess sufficient information about the value of the asset or similar assets resulting in unintended over- or under-reporting; there could be an unwillingness to disclose information or refusal to provide value. It also probable that there is an absence of rental or sale markets for certain assets in some locations. While this is the case, asking respondents to provide an estimate for the value of an asset is still the most straightforward approach, and commonly used by surveys. The EDGE surveys collected data on valuation of assets to assess the feasibility of collecting such information through the survey.

The pilot survey, following principles from the 2008 SNA and the Organisation for Economic Co-operation and Development's Guidelines for Micro Statistics on Household Wealth, collected data on assets and liabilities valued at market prices. Market prices are values at which assets are exchanged (or could be exchanged) in actual transactions. In other words, these are the amounts of money that willing buyers pay to acquire something from willing sellers[9]. In addition, the assets and liabilities were recorded consistently at current market values, as on the date of the survey and not at their original valuation at the time of asset acquisition.

Under the EDGE pilot surveys, estimates for an asset's value were obtained by asking the respondent "How much it would be worth (in the local currency), should the asset be sold on the day of the

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[9] UN. 2009. *System of National Accounts 2008.* New York. paragraphs 3.118 and 3.119

interview?" Other conditions were added to the question for some assets. For dwellings, for example, the question on valuation considers both the dwelling structure and plot of land.[10] Lastly, estimates for the value of each item under a specific type of asset were obtained.

2.2 Target Respondents and Interview Protocol

2.2.1 Identifying Target Respondents

An important aspect of the study is identifying target respondents. To help develop the guidelines on this, the EDGE project, in collaboration with the World Bank's Living Standard Measurement Study—Integrated Surveys on Agriculture team, conducted the MEXA, hosted by the Uganda Bureau of Statistics, to decide who in the household should be interviewed for collecting reliable data on the ownership and control of assets at the individual level. For this purpose, five interview settings, referred to as treatment arms,[11] were tested as part of the experiment.

The findings were then considered at the EDGE Mid-term Review Technical Meeting in December 2014[12] where it was agreed that there is clear value addition to interviewing more than one household member about information on individual level asset ownership and control. To build on the results of the methodological survey experiment, the three national statistical offices (NSOs) of the participating developing member countries of the Asian Development Bank (ADB) agreed to conduct stand-alone pilot surveys, whose target respondents are the principal couple and additional adult household members. The number of adults to be interviewed in addition to the principal couple in each country will depend on the household population dynamics of the country, more specifically on the average adult household size. Accordingly, it was decided to interview a maximum of three adults in each sampled household.

Following Treatment Arm 4 of the MEXA experiment, each respondent will be asked questions about the assets they own and provide proxy information on the assets owned by other members of the

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[10] The question for the dwelling is as follows: *"If this dwelling and the plot of land on which it is located were to be sold today, how much could be received for it?"*

[11] Treatment Arm 1: most knowledgeable adult member; Treatment Arm 2: on randomly selected member of principal couple; Treatment Arm 3: principal couple interviewed together; Treatment Arm 4 principal couple and two adults (asked about assets of each adult household members); and Treatment Arm 5: principal couple and two adults (asked about assets owned exclusively or jointly).

[12] The UNSD and the UN Women, in collaboration with the Kitakyushu Forum on Asian Women, organized a Mid-term Review Technical Meeting of the EDGE Initiative held on 3 to 5 December 2014 in Kitakyushu-city, Japan. Standing at the midpoint of the project, the meeting took stock of progress made by the EDGE initiative to date since its inception in 2013.

household. This facilitated collecting self-reported data on individual respondent's assets as well as proxy data provided by the respondent about assets owned and controlled by other adult members.

2.2.2 Identifying Eligible Respondents

Within each sampled household in the primary sampling unit (PSU), at least one respondent—and at most, three—were selected for individual interviews. The respondent should be an adult member of the household—defined as an individual who is at least 18 years of age[13] on the date of the survey.

Primary Respondent. This refers to a male or female adult household member who is most informed or knowledgeable with respect to the assets of the members of the household. The primary respondent need not be the household head and may or may not be married or cohabiting.

Spouse. Once the primary respondent has been identified in consultation with the household members, the spouse or partner of the primary respondent will be included as the second respondent, provided the primary respondent is married or has a co-habiting partner.

Principal Couple. The primary respondent and the spouse together were referred to as the principal couple in the survey. The principal couple may be married under any of the forms of marriage acceptable in the country or may be cohabiting (living together as spouses would but were not married).

Randomly selected adult member of the household. The third respondent would be an adult member of the household who will be chosen randomly from the remaining adults if there were more than three adults in the household. In those households where the primary respondent does not have a spouse, a second adult member will be randomly selected.

For the random selection of non-principal couple respondent, the three pilot countries employed the nearest birthday method.[14]

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[13] The age requirement is lifted in cases where the household with adult members clearly identifies a person below 18 years of age as the most knowledgeable or when a household does not have any adult members.

[14] In this method, the adult member of the household (among all eligible adult members) who had the nearest day of birth, not including the month, to the date of the survey (counting forward) is selected. For example, suppose the date of the survey is 15 September, there are three eligible adult members other than the principal couple. Their birthdays are 31 September, 18 July, and 22 February. Counting forward, the nearest day of birth is the adult member whose birthday is 18 July. In such cases where two adult members of the household have the same day of birth, the month nearest to the date of the survey is then considered.

2.2.3 Selection of Respondents

As previously mentioned, the number of respondents to be interviewed per household depended on the expected number of adult members in a household. In the three pilot countries, this figure was approximately equal to three. The number of adult household members became the basis of dividing the population into second-stage strata. Households with three or more adult members were classified under Second-Stage Stratum 1 (SSS-1), while the rest (households with two or less adult members) were classified under Second-Stage Stratum 2 (SSS-2).

The target number of households at the level of the PSU, which were the enumeration areas, were equally allocated between the two strata. For example, if the target per PSU is 20 households, 10 would come from SSS-1 and 10 would be from SSS-2. In the pilot survey, this resulted in the selection of 3,160 households in Georgia; 3,008 households in Mongolia; and 1,536, households in the province of Cavite in the Philippines.

For households where there were three or more adult members, a maximum of three adults were interviewed, whereas for households with two or less adult members, at least one was interviewed.

SSS-1: Households with three or more adults. Whenever a household had exactly three adult members, all of them were interviewed. For households with four or more adult members, the third respondent was selected randomly. In addition to this, considerations were made for cases where a principal couple is present.

(i)   In households with a principal couple, both members of the principal couple were interviewed, as well as a third adult member of the household who was randomly selected from the household roster. These interviews were conducted separately and, to the extent possible, simultaneously.

(ii)   In households with no principal couple, the primary respondent was interviewed. Additionally, two adult members were randomly selected from the household roster for interview.

SSS-2: Households with fewer than three adults. In this case, all the available adult members (whether there are two adults or only one adult) were interviewed.[15]

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[15] Even in the case where there was no adult member, the person who was the most knowledgeable about household assets was still interviewed.

2.3 Questionnaire Design and Measurement Approaches

2.3.1 The Survey Instrument

The questionnaire was divided into two parts: the Household Questionnaire and the Individual Questionnaire. The Household Questionnaire gathered information on the household's identification, its members, relevant demographic and economic information, and the dwelling's characteristics. It covers the following modules (Table 2.2a):

Table 2.2a: Modules of Household Questionnaire

1a	Household Identification	Gathered information on items that help identify a surveyed household such as the stratum name, district, and enumeration area.
1b	Staff Details	Recorded information on enumerator and supervisor assigned, as well as interview particulars, such as starting time and date of interview.
2a	Roster	Listed household members. This included detailed information on each member such as their age, ethnicity, relationship to household head, religion, and sex.
2b	Dwelling Characteristics	Gathered information on physical characteristics of household such as the materials used. Also, included some indicators for sanitation and water supply.

The Individual Questionnaire gathered detailed information on the assets as reported by the selected individual adult on the assets owned by the respondent, either exclusively or jointly with other household or non-household members, as well as on assets owned by other adult household members. The information that was obtained through this questionnaire includes who owns an asset; who has rights to sell and/or bequeath an asset; how much an asset is worth; how it was acquired; and, if applicable, if any assets are hidden. Each asset was classified as one module, as follows (Table 2.2b):

Table 2.2b: Asset Modules of Individual Questionnaire

3	Dwelling	Included questions on the plot of land and dwelling in which this household lives. Only included the *primary dwelling unit.*
4	Agricultural Land	Determined whether any household member owns agricultural parcels, either exclusively or jointly with someone else. Questions also included parcel area, primary use of parcel, and tenure status.
5	Livestock	Determined whether any member of the household owns any livestock, either exclusively or jointly with someone else. List of livestock was tailored to the country's context.
6	Agricultural Equipment (Large and Small)	Asked whether any household member owns any large or small agricultural equipment, either exclusively or jointly with someone else. Options for both were listed and individually inquired.
7	Non-agricultural Enterprises and Enterprise Assets	Collected detailed information on all non-agricultural enterprises owned by any member of the household at the time of survey. These must be currently operating, closed temporarily, or operating seasonally.
8	Other Real Estate	Determined if any member of the household owns any other real estate, either exclusively or jointly with someone else. Categories of other real estate were provided.
9	Consumer Durables	Collected information on consumer durables owned by the household. Items that were neither working nor functional, and which the owner has no intention of having repaired for consumption should not be listed.
10	Financial Assets	Included questions on financial assets owned, either exclusively or jointly with someone else. Apart from financial assets in financial institutions, money loaned by the respondent or any adult household member to someone else were also considered a financial asset.
11	Liabilities	Identified loans incurred by the respondent or any adult household member, either from private individuals or financial institutions.
12	Valuables	Determined if household members owned valuables. List of valuables included in the questionnaire was tailored to the country context.
13	End of Questionnaire	Collected information on completion status, ending time, and date of interview, and other relevant comments.

The customizations done on the survey questionnaire and the instructions manual were based on the ADB-EDGE survey instruments and mainly done in-house by the officials of NSOs of the three countries. The ADB-EDGE Team assisted the countries in customizing survey instruments. Whenever needed, the UNSD was also consulted. The translation of the customized survey instruments was mainly done by the staff of the NSOs. In certain cases, they sought advice from ADB and relevant entities of their respective countries.

Before their use in the pilot survey, the questionnaires had been pre-tested to determine how questions must be phrased, which concepts would be difficult to understand, and what is needed to facilitate understanding. Not only did this help refine the questionnaire, it also aided in the formulation of the survey manual. For example, it was discovered through the pre-tests that not all respondents or enumerators can easily grasp what large agricultural equipment are, even with a definition provided. Thus, photos of some large agricultural equipment were included in the manual to serve as a reference for both respondents and enumerators.

It was also important to make the questionnaires relevant to the country, and this involved contextualizing the questionnaires. The questionnaires were translated into the local language and some questions were edited to fit the country context. This included revising, deleting the question altogether, or changing the responses available in multiple-choice questions. For instance, Georgia dropped the module on small agricultural equipment and questions on tenure status of dwelling and agricultural parcel.

2.3.2 Operationalization of Key Concepts

The quality of information obtained in the survey was dependent on the quality of the measurement instrument used. In this case, it was necessary to ensure that the key concepts in the study were properly translated into easily understood questions. Table 2.3 provides a summary of how important concepts were operationalized in the questionnaire, as well as the corresponding assets on which these were applicable.

<div align="center">Table 2.3: Key Concepts Operationalized</div>

Bundle of Ownership Rights	Relevant Assets	Questions
Reported Ownership	All assets	Who owns this [asset]?
Documented Ownership	Dwelling, agricultural land, other real estate	Is there an *ownership document* for this [asset]? (If yes), whose name(s) are *listed as owners* on the ownership document for this [asset]?
Right to Sell Assets	Dwelling, agricultural land, large agricultural equipment, non-agricultural enterprises, and other real estate	If this [asset] were to be sold, which member(s) of this household would be involved in the decision to sell?
Right to Bequeath Assets	Dwelling, agricultural land, large agricultural equipment, non-agricultural enterprises, and other real estate	Which member(s) of this household would be involved in the decision to bequeath this [asset]?
Mode of Acquisition	Dwelling, agricultural land, large agricultural equipment, non-agricultural enterprises, and other real estate	How did the owner(s) acquire this [asset]? (If inherited or allocated by family member or gifted by non-family member), from whom did the owners receive the [asset]?
Asset Value	Dwelling, agricultural land, large agricultural equipment, non-agricultural enterprises, other real estate, and financial asset	If this [asset] were to be sold today, how much could be received for it?
Hidden Assets	Agricultural land, large agricultural equipment, non-agricultural enterprise and enterprise assets, other real estate, financial assets and liabilities	Are there any household members above the age of 18 that do not know about your ownership of this [asset]? Which household member above the age of 18 does not know about your ownership of this [asset]?

Source: Asian Development Bank. Forthcoming. Measuring Asset Ownership and Entrepreneurship from a Gender Perspective: Methodology and Results of Pilot Surveys in Georgia, Mongolia, and the Philippines (Cavite).

Apart from the bundle of ownership rights discussed in Table 2.3, information on economic ownership and economic rights were obtained in the pilot survey. Box 2.2 discusses the details of the data collection on economic ownership and rights in the EDGE pilot survey.

<div align="center">

Box 2.2: Economic Ownership and Rights in the
Evidence and Data for Gender Equality Pilot Survey

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Economic owners are defined as those who are entitled to claim or use the economic benefits—whether in cash or in kind—following the use or sale of an asset, while also accepting any associated risks. Within the Evidence and Data for Gender Equality (EDGE) pilot survey, economic ownership is viewed as a right—the right to the economic benefits from the asset—and involves having the ability to decide how to use or where to allocate the proceeds garnered, whether in cash or in kind, from the sale or rent of an asset.

Just as information on the rights to sell and to bequeath were gathered in the EDGE pilot surveys, data on the rights to economic benefits were also collected. In the questionnaire, the following question was provided for right to economic benefits:

If this [asset] were to be sold today, which household member(s) would decide how the money is used?

This question was supplied for the modules on dwelling, agricultural equipment, non-agricultural enterprises, and other real estate.

While the question does gather data on who can decide on the proceeds from the sale of an asset, the information it provides is still limited. For one, it only considers one economic transaction (the sale of an asset). Economic benefits earned from the rent of some real estate or the profits generated by an enterprise are excluded. The question only provides information on who makes the decision on how the economic benefits, specifically the money earned from the sale of an asset, is used. Household members who are actually able to use or claim these benefits were not identified.

Source: Asian Development Bank. Forthcoming. Measuring Asset Ownership and Entrepreneurship from a Gender Perspective: Methodology and Results of Pilot Surveys in Georgia, Mongolia, and the Philippines (Cavite).

2.3.3 Methods of Data Analysis

2.3.3.1 Measurement Approaches: Ownership Assigned by Any Respondent and Self-Assigned Ownership

Each selected respondent was asked to provide information about assets they own, either exclusively or jointly with others as well as assets held by other members of the household. This section discusses two approaches for examining the data collected from the survey: ownership assigned by any respondent (OAAR) and self-assigned ownership (SAO).

Ownership Assigned by Any Respondent. The OAAR approach consolidates the information provided by all respondents to form a single set of information for a household on parameters such as the incidence of ownership for various assets. Statistically, it is the union of two or three sets of

information. Notionally, it considers that the respondents have, to the best of their knowledge, provided honest information and that the gap among different sets of information arises out of recall lapse. The OAAR approach aims to maximize information. The OAAR approach can also be considered as the "most inclusive" approach in the sense that it considers all information provided by all eligible respondents in the household regarding assets owned by all adult household members. "Inclusive" here refers to the broadest definition of ownership, i.e., as long as a person is identified as an owner by one eligible respondent in the household, they are considered an owner, irrespective of what the other household members report.

Self-assigned Ownership. The SAO approach considers only the information on ownership of assets for which respondents identified themselves as the owner, exclusively or jointly with others. This approach thus ignores the information provided (as a proxy reporting) by the other respondents about the ownership of assets, unless the ownership is joint with the respondent. This approach is based on the premise that each respondent is in the best position to provide accurate information about the assets they own whether owned exclusively or jointly.

The two approaches might not provide the same estimate of a parameter due to their distinctive features. The OAAR approach, as explained above, refers to the procedure of integrating proxy information on indicators collected from multiple respondents. This approach thus suffers from the respondent's lack of knowledge about ownership of assets of other members of household, including ownership of hidden assets. Meanwhile, the SAO approach, being based on self-reported data, is theoretically presumed to be more accurate than proxy data. Few studies have systematically assessed the effects of using proxy data in lieu of self-reported data; most of the empirical evidence is concentrated on labor force statistics.[16]

To illustrate the differences between the two approaches, consider the tabulation of hypothetical responses for reported ownership of an asset in Table 2.4. In this example, the household has five adult household members (columns numbered 1 through 5, with their sex in parentheses), three of which were selected as respondents (rows numbered 1 through 3, with their sex in parentheses).

Under the OAAR approach, as long as one of the respondents identifies an adult member as an owner, then that member will be counted as an owner. Hence, the fourth and fifth adult household members are considered as owners, even though they were not interviewed, since the second respondent identified them as such. Meanwhile, under the SAO approach, only those who identified themselves

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[16] Proxy responses are accepted for household members unavailable for interview in Labour Force Surveys, but the International Labour Organization (ILO) guidelines caution that proxy respondents may provide inaccurate information, which can bias labor force statistics (Hussmanns et al. 2011).

as owners are counted. Therefore, in the example in Table 2.4, only the first two adult members were counted as owners. What are the implications of these methods for the gap measures? OAAR will show a higher individual level incidence for both men and women, thus reducing population level inequality in asset ownership. Nothing conclusive can be said about how it might impact the gender gap measures.

Table 2.4: Example on Tabulation of Responses

Which household member(s) own this <ASSET>?

Respondent	Adult Household Members				
	1 (Male)	2 (Female)	3 (Female)	4 (Female)	5 (Male)
1 (Male)	Owner				
2 (Female)	Owner	Owner		Owner	Owner
3 (Female)	Owner	Owner			
OAAR	Owner	Owner		Owner	Owner
SAO	Owner	Owner			

OAAR = ownership assigned by any respondent, SAO = self-assigned ownership.

2.3.3.2 Gender Gap Measures

Three sets of measures were adopted to capture discrepancies in asset ownership between males and females: (i) incidence of ownership, (ii) distribution of ownership, and (iii) gender wealth gap. These measures were calculated for the population aged 18 and above and for all assets covered in the pilot surveys, except for the wealth gap, which only considers the dwelling. This is due to the limitations posed by the data on responses from different household members for other assets, which also needs further analysis. Further, estimates were obtained for the types (reported and documented) and forms (joint and exclusive) of ownership, as well as for the right to sell and the right to bequeath.

The measures on incidence were used to estimate the percentage of adult male owners among all male adults and female owners among all female adults for each asset class, while the measures on distribution looks at the distribution of asset owners by sex for each asset class. The gender wealth gap was calculated to examine whether there are any disparities in the value of assets owned by males and females. The measures are described in Box 2.3.

Both incidence and distribution were computed and may be applied to both the OAAR and SAO approaches. While the main results presented in Chapter 3 are based on the SAO approach, the chapter also presents a comparison of the estimates from the two approaches for selected indicators.

Calculations on wealth for dwellings were based on the SAO approach. For instances where an asset is jointly owned, the value of the asset is equally split among owners. Note that owners who are not members of the household were counted as 1, since the survey did not collect data on number and sex of non-household owners. Respondents who had missing values under dwelling price (i.e., "don't know," "refuse to answer," or blank) were excluded.

Box 2.3: Measuring Gender Differences in Asset Ownership

To examine patterns in ownership and detect any gender disparity, three measures were used in the Evidence and Data for Gender Equality (EDGE) pilot surveys. These were incidence of asset ownership, distribution of asset ownership, and the gender wealth gap. All three measures were calculated for the population, 18 years and older, and by sex.

Incidence of Asset Ownership by Sex

Incidence of asset ownership measures what percentage of adult female are owners as well as what percentage of adult male are owners. This may be computed for both the ownership assigned by any respondent and self-assigned ownership approaches, as follows.

$$Incidence = \frac{Adult\ Men\ (Women) < asset > owners}{Total\ number\ of\ adult\ Men\ (Women)}$$

The incidence of ownership was computed for all assets covered in the survey, by type (reported or documented) and form (joint or exclusive) of ownership, by right to sell or to bequeath, and for mode of acquisition.

Distribution of Asset Owners by Sex

This measure looks at the distribution of asset owners by sex, enabling us to compare the proportion of male asset owners to the proportion of female asset owners. The distribution is calculated for the population, 18 years and above.

The distribution of owners may be examined not only by sex, but also by form of ownership and form of right (exclusive or joint right to either sell or bequeath an asset), to name a few. A sample formula is as follows.

$$Distribution = \frac{Adult\ Men\ (Women)\ asset\ owners}{Total\ number\ of\ Men\ and\ Women\ asset\ owners}$$

Gender Wealth Gap

The value of dwellings is derived from the current market price of dwellings owned by individuals in the sample. The share of the asset value owned by men and by women is then computed using the formula below.

$$\frac{Value\ of\ dwellings\ accruing\ to\ Men\ (Women)}{Total\ value\ of\ dwellings}$$

2.4 Data Issues

Part of the effort in implementing new guidelines in data collection is monitoring any data issues that come up during the preparatory and implementing phase of the survey.

Data issues can arise due to a number of reasons related to the application of methodological concepts, with country specifics to be taken into account. The timely identification of data issues is extremely important as unclear wording, sensitive questions, or unrealistic expectations may not only affect the quality of the respective data, but also produce a negative impact on the whole survey (for example, by provoking a negative attitude of respondents).

In Georgia, some possible data issues were identified at the preparatory stage and were paid attention to during the pre-tests. Such issues included questions that (i) could not possibly be answered by respondents (e.g., types of land soil); or (ii) were not relevant to the country context and could potentially annoy respondents (e.g., questions on the ownership of small agricultural equipment). As pre-tests showed validity of such expectations, these questions were removed or modified in the questionnaire.

However, it is obviously not always possible to identify all data issues in advance, and a number of challenges were encountered during the data collection. The most difficult issue turned out to be the part of the questionnaire on financial assets and valuables. Respondents were reluctant to respond to the questions on the existence and exact amount of money of bank accounts, cash held at home, or the list of jewelry owned. The pilot survey thus showed a significant underestimation of these assets implying that certain modification of questions (e.g., asking about ranges vs. exact money amounts) is needed.

The second aspect of data issues was related to complexity of concepts underlying the survey questions. Respondents struggled with the notions of reported ownership, enterprise (for the widespread cases of non-registered enterprises or own-account workers), enterprise-related concepts of revenues, costs, etc.

Further, some questions—and this, at least, could partly be attributed to the local context—caused displeasure on the part of respondents or were not regarded seriously (e.g., ownership of domestic animals or household durables). In one of the regions, ethnic minorities were particularly annoyed by questions related to asset ownership as well as asset sale value.

Households simply could not provide answers to certain questions: apart from the most remarkable example of real estate and land valuation (where the number of missing values constituted the

absolute majority of responses), such questions also included dates of acquisition of immovable assets (especially if such assets, mostly land, were not formally registered) or splitting of neighboring land parcels.

Thus, data issues along with local factors may produce a significant influence on the survey quality. Close monitoring of such issues is very important to ensure successful data collection and analysis.

CHAPTER 3: ANALYSIS OF RESULTS

This chapter describes the findings from the Evidence and Data for Gender Equality (EDGE) survey in Georgia for the following types of assets: dwelling, agricultural land, livestock, large agricultural equipment, non-agricultural enterprises, other real estate, and consumer durables. In addition to presenting gender-disaggregated data, this chapter also summarizes the results by categories of key socio-demographic characteristics of each member of the target population. The results presented in this chapter are based on estimates from the self-assigned ownership (SAO) approach as against the ownership assigned by any respondents (OAAR) approach. A comparison of the estimates derived from the two approaches for selected indicators is presented in Section 3.6.

3.1. Profile of Respondents

All information was collected from a maximum of three adults (including the principal respondent) per household. The quality of information collected in the survey is expected to depend on the respondents' knowledge, which depends largely on their age, educational level, marital status, employment status, among other factors, as well as the time taken to accomplish the questionnaire.

In total, 2,783 households (1,495 in urban and 1,288 in rural areas) were surveyed and 5,937 individual respondents (3,182 from urban and 2,755 from rural areas) were interviewed in the pilot EDGE survey in 2015. The average time of the household questionnaire interview was about 13 minutes and the average time taken to collect data was a little higher in rural households (14 minutes) than in urban households (12 minutes). Of the total, 59% of the households in rural and 53% of households in urban areas had at least one member of principal couple and in both rural and urban areas, there were nearly a quarter of households with only one single adult.

Table 3.1: Distribution of Surveyed Households by Type of Respondent

Households with respondent type	Residence (%)	
	Urban	Rural
Principal couple only	22.1	25.2
Three adults including principal couple	25.6	30.4
Three adults including either member of the principal couple	2.2	1.5
Three adults without principal couple	9.8	6.4
Any two respondents other than Principal couple	12.4	10.0
Any two respondents with either member of the principal couple	3.1	2.3
Single respondents	24.7	24.3
Total	100.0	100.0
Total number of households	1,495	1,288
Total number of respondents	3,182	2,755
Average time of household questionnaire interview per household (minutes)	11.8	14.0

Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

As seen in Table 3.2 the number of female primary respondents outstrips the number of male primary respondents in urban areas but slightly lags behind in rural areas. The number of female spouse of primary respondents and other female respondents exceeds that of men in both rural and urban areas. On the other hand, the average age of respondents turned out to be higher in rural areas (52 years for women and 51 years for men) compared to urban areas (49 years for women and 47 for men). The average age of primary respondents is higher than of the spouse of primary respondent and other respondents. This may suggest that the primary respondent in most cases was also the head of the household.[17]

Table 3.2: Number of Respondents by Characteristics

Respondents/ Characteristics	Primary Respondent				Spouse of Primary Respondent				Other Respondents			
	Urban		Rural		Urban		Rural		Urban		Rural	
	M	W	M	W	M	W	M	W	M	W	M	W
Number of Respondents	544	948	656	629	342	372	222	496	393	583	342	410
Average Age	53	53	56	57	51	49	55	51	34	42	36	45

M = men, W = women.

Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

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[17] As an additional information—considering the change in methodology to target primary respondent instead of head of the household.

Table 3.3: Percentage Distribution of Respondents by Key Socio-demographic Characteristics

Characteristic	Men	Women	Total
Average Age	48	50	49
Marital status (%)			
Married	72.3	61.5	66.1
Widowed, Separated, or Divorced	7.6	27.8	19.3
Never married	20.0	10.7	14.6
Educational Level (%)			
Primary or lower	2.8	3.4	3.2
Secondary	46.3	41.3	43.4
Post -secondary non-tertiary	22.9	25.6	24.5
Tertiary or above	27.9	29.7	29.0
Status in Employment (%)			
Employed	66.8	49.9	57.0
Not engaged in economic activity	33.2	50.1	43.0

Note: Not engaged in economic activity refers to those who have NOT worked at all or who have worked for less than one hour during the last 7 days.

Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

Table 3.3 presents the distribution of respondents by socio-demographic characteristics. Results show that the majority of the respondents are married (72% of the men and 62% of the women interviewed). More than a quarter of the women respondents are widowed, separated, or divorced. 20% of men while only 11% of women respondents are never married.

The percentage distribution of respondents by achieved level of education as presented in Table 3.3 shows that the share of respondents with primary or lower education is as low as 3.0% (2.8% for men and 3.4% for women). About 43% of the respondents attained secondary[18] educational level (46% for men and 41% for women), while 25% of the respondents have post-secondary non-tertiary education (23% for men and 26% for women). Of the total, 29% of the respondents attained tertiary or above educational level (28% for men and 30% for women).

Information on employment status was collected for all household members aged 18 years or above. Table 3.3 shows aggregated results where respondents are grouped into two categories: employed and not engaged in economic activity. Employed includes all those who are either hired employees, employers (farmer with hired workers or entrepreneur in non-agriculture with hired workers), own account workers who own a peasant farm, own account workers (except those employed in their

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[18] Lower or upper secondary education

own peasant farm), members of producers' cooperative, or contributing family workers. Those not engaged in economic activity includes those who are unemployed or outside the labor force. The results show that 57% of respondents were engaged in economic activity (67% of the men and 50% of the women) and 43% of respondents are not engaged (33% of the men and 50% of the women).

3.2. Incidence of Ownership

Two distinct features were evident from the incidence of ownership based on self-assigned or self-reported ownership. First, a clear gender gap, in general, exists—incidence of ownership among men is higher than among women for almost all assets. Second, incidence rates are significantly higher for reported ownership than documented ownership.

The following sub-sections analyze and compare the incidence of ownership with respect to a specific asset. The incidence rates are also observed in relation to the socio-demographic characteristics, such as age, marital status, educational level, and employment status of the owners.
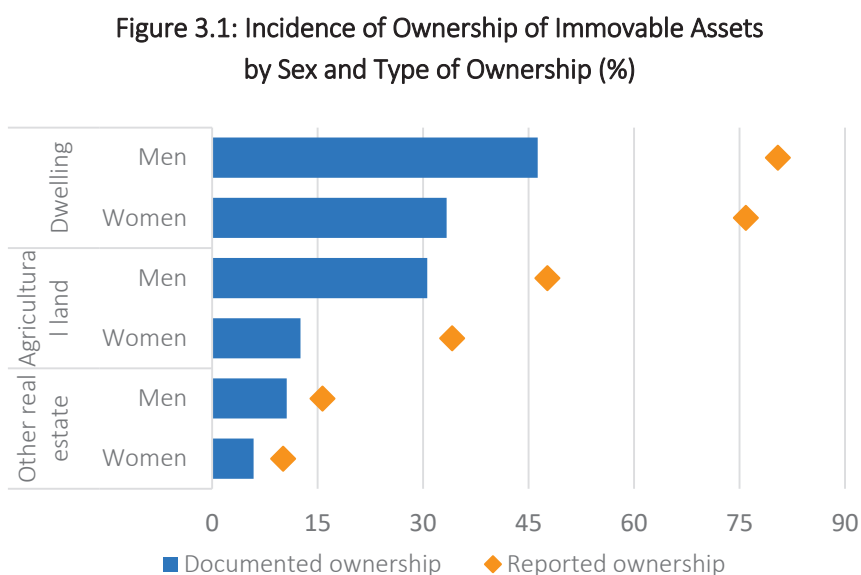
Figure 3.1: Incidence of Ownership of Immovable Assets
by Sex and Type of Ownership (%)

Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

Figure 3.1 presents the reported and documented incidence of ownership for immoveable assets by sex. Immoveable assets are high-valued and are also likely to be income-generating assets. The incidence of ownership tells us what percentage of adult men, or women, population are owners of an asset. As shown in Figure 3.1, incidence of reported ownership is higher compared to documented ownership. The difference is particularly evident for dwelling ownership where the incidence of documented ownership are about half of the incidence of reported ownership.

Among immovable assets, dwelling has the highest incidence of ownership. Around 80% of men and 76% of women are reported to own a dwelling while 46% of men and 33% of women are documented owners. The incidence of both reported and documented ownership shows that men are more likely to own their principal dwelling than women, although the disparity is more vivid in documented ownership—almost 13 percentage points (5 percentage points in the case of reported ownership). The gender gap is most evident in the ownership of agricultural land where men are more than twice as likely be documented owners than women. A 14-percentage point gap is observed for reported ownership.

Other real estate refers to residential and nonresidential buildings other than dwelling and nonagricultural land. Ownership of other real estate is quite low as compared to dwelling and agricultural land. Incidence of reported ownership is only 16% for men and 10% for women. A much lower documented ownership is observed at 11% for men and 6% for women. Similar to other immovable assets, the gender gap is biased towards men.

Table 3.4: Incidence of Ownership of Immovable Assets
by Sex, Location, and Type of Ownership (%)

Sex	Documented			Reported		
	Rural	Urban	Total	Rural	Urban	Total
Dwelling						
Men	48.5	44.4	46.3	83.0	78.2	80.4
Women	29.0	36.6	33.4	77.7	74.6	75.9
Agricultural Land						
Men	45.2	18.2	30.6	72.4	26.8	47.7
Women	20.3	6.9	12.6	57.0	17.2	34.1
Other Real Estate						
Men	8.3	12.6	10.6	11.3	19.5	15.7
Women	3.7	7.5	5.9	6.5	12.7	10.1

Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

Comparing the incidence of immoveable assets ownership by rural-urban residence, Table 3.4 reveals that there is no significant difference in dwelling ownership between rural and urban areas. Nearly the same could be stated with other real estate ownership. As expected, ownership of agricultural land is higher in rural areas since agriculture is one of the main sources of livelihood in the area. Overall, gender disparity is more pronounced in the rural areas.

Table 3.5: Distribution of Reported Owners of Immovable Assets
by Sex, and Socio-demographic Characteristics (%)

Socio-demographic characteristics	Dwelling			Agricultural Land			Other Real Estate		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Marital status									
Married	71.8	63.0	67.1	75.5	64.6	70.5	72.9	72.6	72.8
Widowed, Separated, or Divorced	7.6	27.8	18.3	8.0	27.4	16.9	6.3	17.0	10.9
Never married	20.7	9.2	14.6	16.5	8.1	12.6	20.8	10.4	16.3
Education level									
Primary or lower	2.2	3.4	2.8	3.2	4.0	3.6	0.7	0.4	0.6
Secondary	42.8	38.4	40.5	44.1	42.8	43.5	26.2	22.9	24.8
Post-secondary non-tertiary	23.0	25.4	24.3	24.6	26.0	25.2	18.8	19.3	19.1
Tertiary or above	32.0	32.8	32.4	28.1	27.2	27.7	54.2	57.3	55.6
Employment status									
Employed	66.2	47.9	56.5	76.8	61.7	69.9	71.1	51.1	62.5
Not engaged in economic activity	33.8	52.1	43.5	23.2	38.3	30.1	28.9	48.9	37.5
Age Group									
18–29	17.4	13.6	15.4	13.4	9.8	11.8	19.2	16.3	18.0
30–49	31.7	32.9	32.3	30.8	31.3	31.0	36.1	36.1	36.1
50–59	20.9	19.3	20.1	23.4	21.7	22.6	19.5	22.3	20.7
60 and above	29.9	34.2	32.2	32.4	37.2	34.6	25.2	25.3	25.2

Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

The distribution of socio-demographic characteristics of reported owners shows almost 70% of the owners of immovable assets are married. Results also show a large proportion of women (17%–28%) who are owners of different types of assets being widowed, separated, or divorced. Almost 20% of men owners have never been married. This implies a correlation between asset ownership for women and marriage but not for men. The majority of the reported owners are currently employed. Around half of the women owners of dwelling and other real estate are reported as not engaged in economic activity. In terms of educational level, most owners of dwelling and agricultural land attained "secondary school" level while the majority of other real estate owners attained "tertiary or above" education level. There is no significant disparity between men and women at any education level. Most reported owners of immovable assets are around 30–49 years old or 60 years old and older (Table 3.5).

<p style="text-align:center">Table 3.6: Incidence of Reported Owners of Immovable Assets
by Sex and Socio-demographic Characteristics (%)</p>

Socio-demographic characteristics	Dwelling		Agricultural Land		Other Real Estate	
	Men	Women	Men	Women	Men	Women
Marital status						
Married	82.9	75.5	51.7	34.8	16.5	11.6
Widowed, Separated, or Divorced	81.8	82.3	50.9	36.4	13.2	6.7
Never married	72.6	63.3	34.4	25.0	14.3	9.5
Education level						
Primary or lower	72.2	83	63	43.9	4.8	1.4
Secondary	76.6	73.1	46.8	36.6	9.2	5.8
Post-secondary non-tertiary	87.6	79.1	55.5	36.4	14	8
Tertiary or above	81.7	76.2	42.5	28.4	27.1	17.7
Employment status						
Employed	81.1	78.2	55.8	45.2	16.9	11.1
Not engaged in economic activity	79.3	73.9	32.2	24.5	13.2	9.2

Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

While Table 3.5 illustrates the distribution of reported self-assigned owners of immovable assets within each group of the socio-demographic characteristics Table 3.6 provides the information about incidence of self-assigned reported ownership of immovable assets for each item of socio-demographic characteristics. Disparity in asset ownership, in favor toward men, is observed for all assets and is highly pronounced for agricultural land ownership. Men and women with the same educational level appear to have unequal (and inequitable) status of ownership. Table 3.6 presents reported ownership and in general, the disparity is even more pronounced in documented ownership.

Figure 3.2: Incidence of Reported Ownership of Other Assets (%)
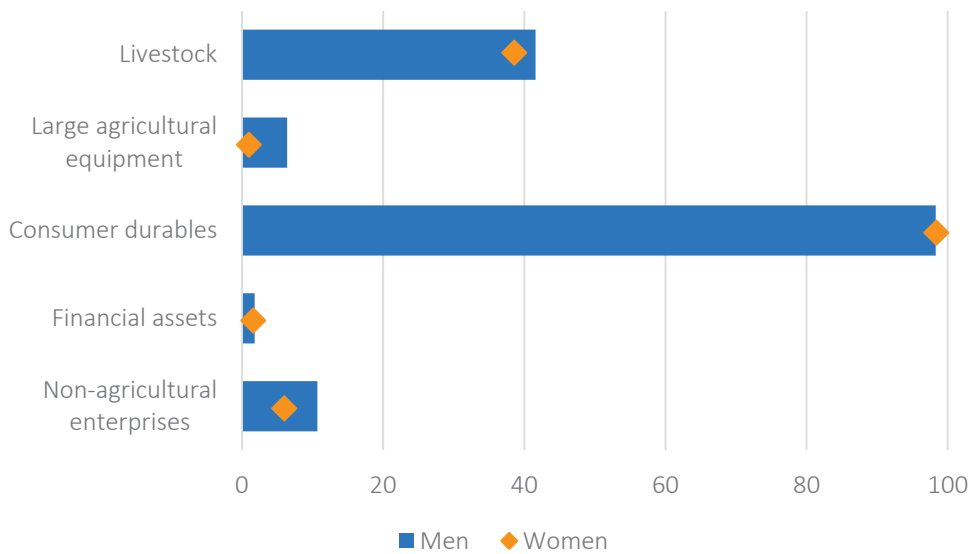
Note: The small agricultural equipment module was not included in the questionnaire as was considered not relevant in the Georgia context.

Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

The incidence of ownership of livestock among men are 41.6% and 38.6% for women. The gender gap is relatively moderate, since livestock in the households is not owned personally but mostly belongs to the household.

Incidence of ownership of large agricultural equipment in Georgia is quite low, at 6% for men and 1% for women. Clearly there is a gender difference in favor of men.

Consumer durables represent the highest incidence of ownership among all other assets. There is almost equal incidence of ownership among men and women (98.3% men versus 98.4% women). The main consumer durables owned are TV sets, mobile phones, and refrigerators. A greater proportion of men own vehicles (motorcycles, cars, trucks), while women were reported to own more consumer durables such as refrigerator, electric or gas stove, and washing machine.

Among all assets, the incidence of financial asset is the lowest. This is because respondents were not comfortable in discussing their financial assets and the survey could not adequately capture the ownership of financial assets, as was being suspected at the planning stage of the survey. Only 2% of the adult population were reported to have financial assets. Incidence of ownership of non-agricultural enterprises is at 11% for men and 6% for women.

Table 3.7 shows the disaggregation of other assets by urban-rural residence. As in the case of agricultural land, incidence of ownership of large agricultural equipment and livestock is expectedly higher in rural areas. On the other hand, ownership of non-agricultural enterprises and financial asset are encountered more often in urban areas. Similar with immovable assets, gender gap is more evident in the rural area.

Table 3.7: Incidence of Reported Ownership of Other Assets
by Sex, and Location (%)

Sex	Reported Ownership		
	Rural	Urban	Total
Livestock			
Men	73.5	14.5	41.6
Women	71.1	14.5	38.6
Large Agricultural Equipment			
Men	11.1	2.4	6.4
Women	1.9	0.4	1.0
Consumer Durables			
Men	99.1	97.7	98.3
Women	98.5	98.3	98.4
Financial Asset			
Men	1.0	2.5	1.8
Women	1.0	2.0	1.6
Non-agricultural Enterprises			
Men	9.6	11.6	10.7
Women	6.5	5.6	6.0

Note: The number of reported owners of financial asset in rural area is less than 25. Thus, estimates should be interpreted with caution.

Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

Table 3.8: Distribution of Reported Owners of Other Assets
by Sex and Socio-demographic Characteristics (%)

Socio-demographic characteristics	Livestock			Large Agricultural equipment			Consumer durables		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Marital status									
Married	75.6	69.5	72.4	79.9	60.3	76.7	70.1	63.2	66.4
Widowed, Separated, or Divorced	6.4	23.1	15.2	4.6	32.9	9.1	7.3	25.6	17.2
Never married	18.0	7.4	12.4	15.5	6.8	14.1	22.6	11.1	16.4
Education level									
Primary or lower	4.5	5.4	5.0	1.5	0.0	1.3	2.4	3.0	2.7
Secondary	51.5	49.2	50.3	39.5	32.9	38.4	44.9	39.9	42.2
Post-secondary non-tertiary	23.7	26.0	24.9	19.1	34.5	21.6	20.9	24.2	22.7
Tertiary or above	20.3	19.3	19.8	39.9	32.5	38.7	31.8	32.9	32.4
Employment status									
Employed	78.1	62.6	70.0	90.0	83.6	88.9	66.0	46.9	55.6
Not engaged in economic activity	21.9	37.4	30.0	10.0	16.4	11.1	34.0	53.1	44.4
Age Group									
18–29	16.5	12.1	14.2	15.4	9.3	14.4	20.7	18.5	19.5
30–49	31.3	33.5	32.4	33.3	33.8	33.4	34.0	33.0	33.5
50–59	21.8	20.1	20.9	24.9	25.9	25.1	18.7	18.8	18.8
60 and above	30.4	34.3	32.5	26.4	31.0	27.2	26.5	29.7	28.2

Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

Table 3.9: Distribution of Reported Owners of Financial Assets and Non-agricultural Enterprises by Sex and Socio-demographic Characteristics (%)

Socio-demographic characteristics	Financial Asset			Non-Agricultural Enterprises		
	Men	Women	Total	Men	Women	Total
Marital status						
Married	61.5	52.7	57.0	82.8	68.2	77.0
Widowed, Separated, or Divorced	6.0	20.7	13.5	3.0	24.7	11.7
Never married	32.4	26.6	29.5	14.1	7.1	11.3
Education level						
Primary or lower	0.0	0.0	0.0	0.0	0.0	0.0
Secondary	19.3	10.1	14.6	36.0	34.7	35.5
Post-secondary non-tertiary	12.0	14.5	13.3	21.0	34.8	26.5
Tertiary or above	68.7	75.3	72.1	43.0	30.5	38.0
Employment status						
Employed	85.4	62.7	87.7	92.9	80.6	87.7
Not engaged in economic activity	14.6	37.3	12.3	7.1	19.4	12.3
Age Group						
18–29	9.9	26.1	18.1	9.9	9.0	9.6
30–49	46.9	37.9	42.3	47.0	35.9	42.5
50–59	17.1	5.3	11.1	27.6	29.7	28.5
60 and above	26.2	30.7	28.5	15.5	25.4	19.4

Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

The distribution of socio-demographic characteristics of self-assigned reported owners of other assets as presented in Table 3.8 and Table 3.9 show that the majority of the owners are married. However, ownership incidence among married men is higher compared to that among married women for all such assets. In addition, there are more women owners than men owners who are widowed, separated, divorced. A similar pattern is observed for the employment status. Even though the majority of the owners are employed, there are more employed men owners than women owners. In terms of educational level, most asset owners have attained at least secondary level education, although a high proportion of owners also have tertiary or above education. Most reported owners of other assets full under 30–49 age range or are 60 years old and older.

3.3 Forms of Ownership

An asset can be owned exclusively by men or women, or jointly. Joint ownership of an asset can be between members of the principal couple, other household members, or household and non-household members. This section discusses the distribution of owners by type of ownership of a particular asset.

Taking into account the importance as well as frequency of responses for immovable assets, the analysis of the forms of ownership is focused on principal dwellings, agricultural land, and other real estate. Figure 3.3 summarizes the forms of ownership in percentage among different members of the household. Joint ownership by all members of the household is the most common form among reported owners (reaching 55% in the case of dwellings) but this shifts to exclusive men owners for documented ownership, suggesting that the perception of ownership is more inclusive than the documented reality. A high gender gap biased toward men, particularly for documented ownership, is observed.

Figure 3.3: Distribution of Forms of Asset Ownership – Immovable Assets, By Type of Ownership (%)
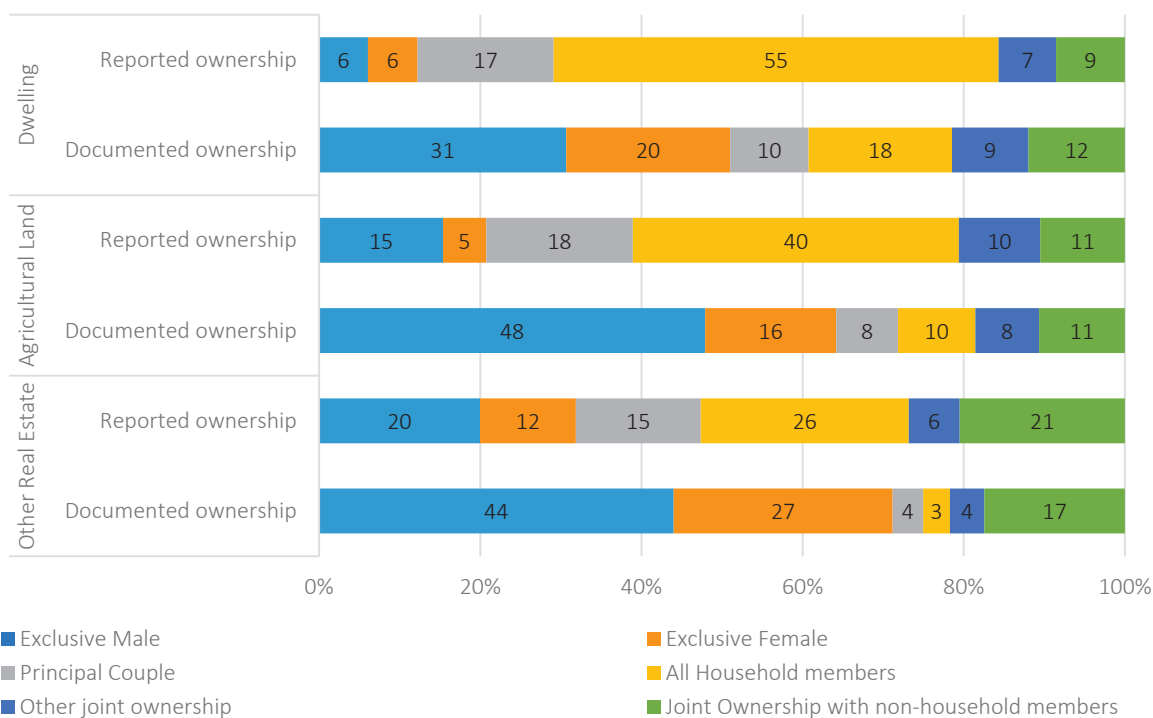
Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

Figure 3.4 shows the distribution of the forms of ownership for all other assets – large agricultural equipment, livestock, non-agricultural enterprises and consumer durables. As seen from the numbers, livestock and consumer durables are perceived as property of all members of the

household while men are most likely to be exclusive owners of large agricultural equipment and non-agricultural enterprises.

Figure 3.4: Distribution of Forms of Asset Ownership – Other Assets (%)
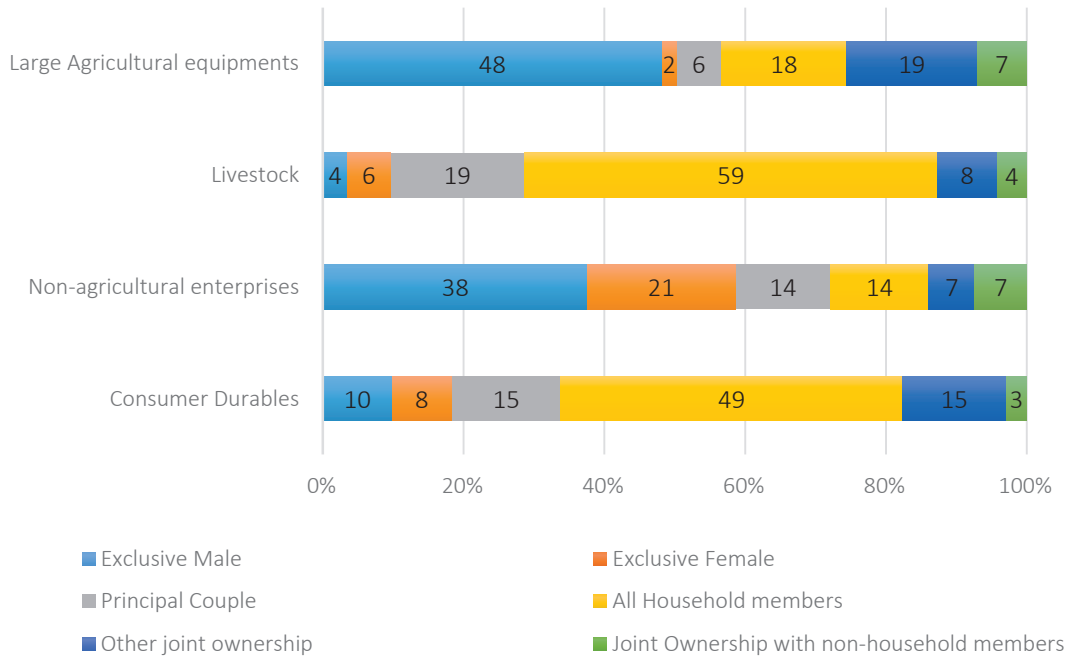
Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

3.4 Alienation Rights

This section examines the owners' right to sell or bequeath the key productive assets: main dwelling unit, agricultural land, large agricultural equipment, and other real estate. Alienation rights have been categorized into exclusive right, joint with others (consultative rights), and no right.

Figures 3.5 and 3.6 reveals that the decision to sell or bequeath the asset is in general more consultative in nature. This reflects the forms of ownership discussed in the previous section where joint ownership is more common. However, the exclusive right to sell or bequeath the asset is higher among men than among women owners for all asset categories. The gender gap in favor toward men is particularly evident for agricultural land, large agricultural equipment and other real estate where the differences exceed 10 percentage points. Furthermore, there are more women as compared to men reported not having the right to sell or bequeath the assets that they owned. This suggests that even though women are considered as owners, the still have limited influence on the decision to sell or bequeath the asset.

Figure 3.5: Distribution of Rights to Sell Select Assets, by Sex (%)
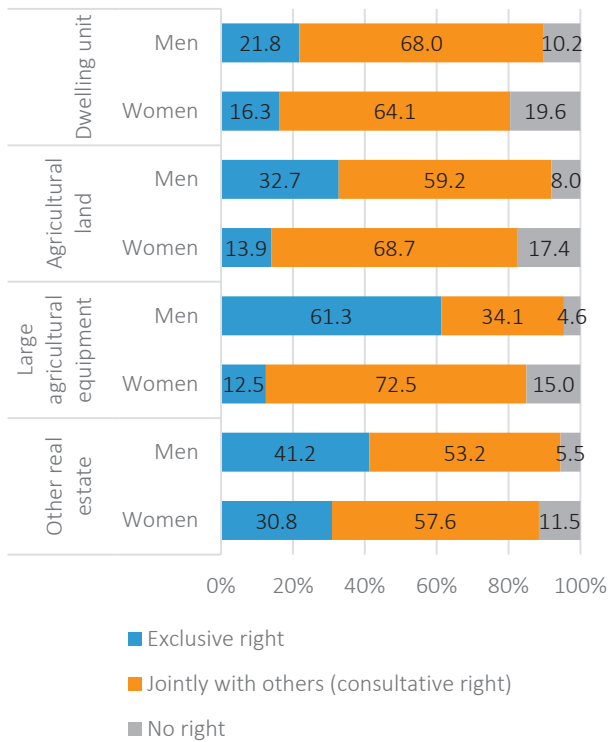
Figure 3.6: Distribution of Rights to Bequeath Select Assets, by Sex (%)
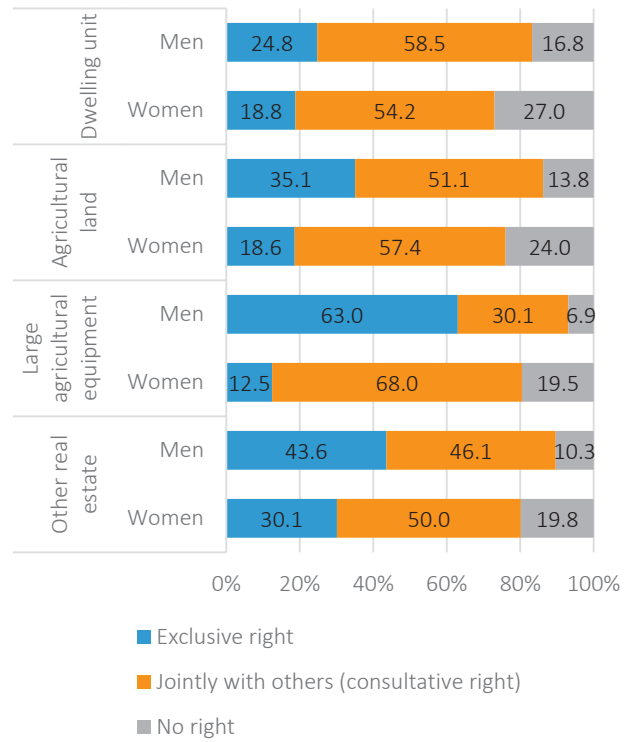
Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

3.5 Modes of Acquisition

This sub-section deals with different modes of asset acquisition that was collected in the EDGE survey. In particular, asset acquisition is split into the following categories: through purchase in the asset market, inheritance after the death of a natal family member or after the death of marital family member, acquired due to marital law or custom, gifts, and government programs. Even though the data was collected for all assets, only dwelling unit, agricultural land, non-agricultural enterprises, and other real estate are used for the analysis presented in this section.

Figure 3.7: Distribution of Mode of Acquisition – Select Assets (%)

		Founded or purchased	Inherited	Acquired due to marital law/custom	Allocated/gift	Government program	Others
Dwelling unit	Men	33.9	15.4	2.9	46.1		
	Women	32.3	9.4	39.4	17.0		
Agricultural land	Men	42.9	15.6	1.8	38.2		
	Women	36.2	10.4	33.0	18.9		
Non-Agricultural Enterprises	Men	93.0	2.0		4.4		
	Women	80.9	1.4	9.7	7.6		
Other Real Estate	Men	42.8	13.9	3.2	38.5		
	Women	40.5	11.6	20.8	26.3		

Legend:
- Founded or purchased
- Inherited
- Acquired due to marital law/custom
- Allocated/gift
- Government program
- Others

Note: Inherited combines natal and non-natal family members; allocated combines household and non-household members; and others combines encroachment, don't know, and other responses.

Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

The result in Figure 3.7 shows that the main sources by which men and women owners acquired the assets are through purchase, except for non-agricultural enterprises that are mainly founded.[19] The number of owners who acquired assets through government programs in Georgia is quite insignificant. A significant amount of men owners received their assets through allocation or gift from household and non-household members while women mostly acquired assets through marital law or custom. The result shows a considerable degree of gender disparity. Acquisition through inheritance and allocation or gift are biased towards men. This is particularly stark for acquiring dwelling unit where men are more than twice as likely to receive the asset as a gift or inheritance than women. This can be partially explained by traditional perceptions that men are privileged in inheritance. On the other hand, more than 20% of women owners acquired the immovable assets (dwelling, agricultural land, and other real estate) through marriage as compared to only 3% of men owners.

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[19] The category "Founded" has been added to non-agricultural enterprises

3.6 Comparison of Self-Assigned Approach and Ownership Assigned by Any Respondent Approach

Figure 3.8: Comparison of Estimates of Incidence of Ownership of Select Assets using Self-Assigned Ownership and Ownership Assigned by Any Respondent Approaches (%)
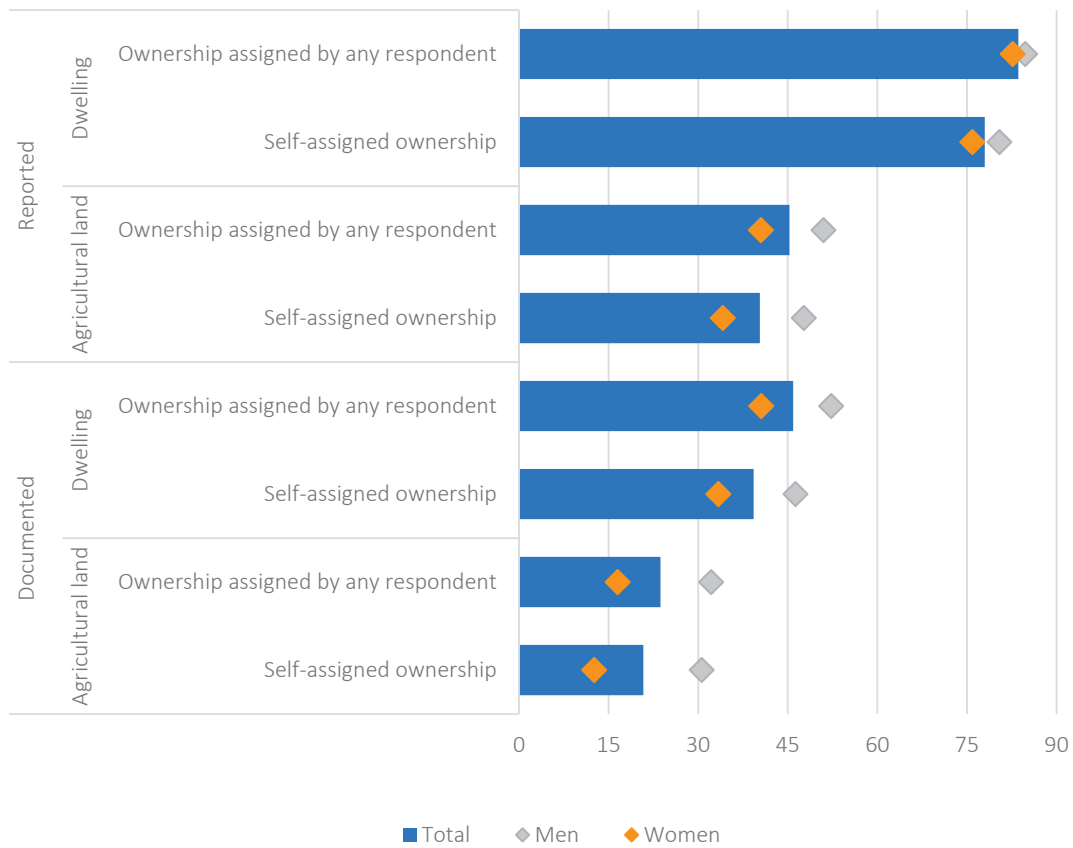
Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

Figure 3.8 presents the comparison of estimates of incidence of ownership of dwelling and agricultural land between self-assigned approach (SAO) and ownership assigned by any respondent (OAAR). The results suggest that the estimates of the incidence of reported and documented ownership are generally higher using the OAAR approach than using the self-assigned approach. The trend in gender gap is similar for both self-assigned approach and OAAR approach where men are more likely to own both dwelling and agricultural land compared to women.

3.7 Distribution of Wealth: Dwelling Units

Incidence of ownership or a simple count of assets held by men and women is not adequate to understand the full extent of gender disparities in asset ownership. It is also important to consider the distribution of wealth by men and women to shed light on the relative asset positions of men and women within the household. The pilot EDGE survey provided data of the ownership of dwellings and its market value. This section presents the gender disaggregated analysis of wealth of the principal dwelling.

Figure 3.9: Distribution of Wealth: Dwelling
Self-Assigned Ownership, by Location, Sex and Type of Ownership (%)

Location	Type	Men	Women
Urban	Reported	49.5	50.5
Urban	Documented	62.5	37.5
Rural	Reported	59.1	40.9
Rural	Documented	73.9	26.1
Total	Reported	51.5	48.5
Total	Documented	65.0	35.0
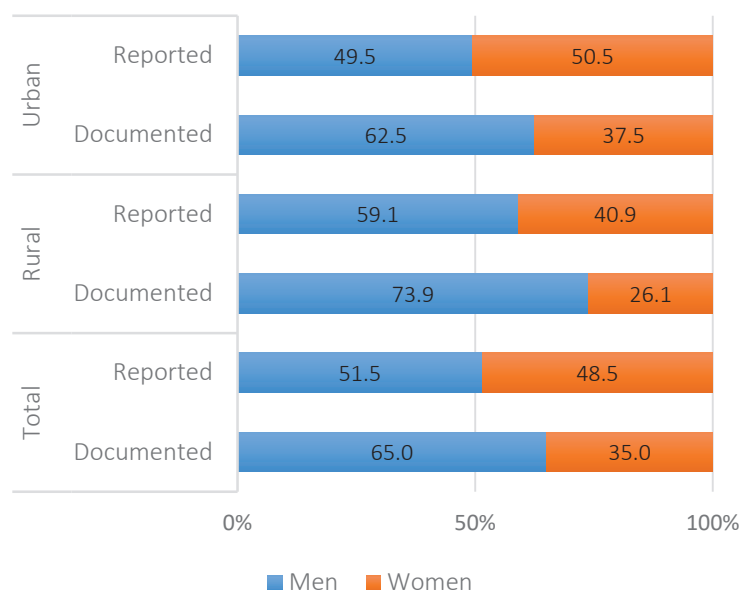
Note: The share of men and women owners in the population corresponds to owners who have reported and documented values of dwellings and excludes owners who are non-household members.

Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

Seeking answers to the question on sale value of assets from the respondents was challenging due unwillingness to provide the information, lack of knowledge about the valuation, or absence of sales in the area, and as such were subject to high proportions of nonresponse. The estimates presented here are developed without any imputations for missing values. Men's wealth in terms of dwellings turned out to be larger compared to women, with the difference being more pronounced for documented ownership. In case of reported ownership, 51.5% of the wealth was attributed to men (vs. 48.5% to women), while men as documented owners hold 65.0% of wealth. The gender disparity is even more distinct in rural areas: 59.1% of wealth belonged to men as reported owners, while the wealth gap for documented owners is more profound and men's share constitutes 73.9%.

3.8 Non-Agricultural Enterprises

The previous sections already discussed incidence of ownership and mode of acquisition of non-agricultural enterprises. This section presents information on the administration and structure of enterprises through assessment of enterprise as main or subsidiary activity, size of enterprise, source of funding, and source of managerial advice for men and women owners. The estimates provided are also based on the self-assigned ownership (SAO) approach.

Main versus subsidiary activity. Entrepreneurship was the main activity for 6.5% of men and 2.6% of women owners and subsidiary activity for 1.2% of men and 0.7% of women owners. More adults in urban areas than in rural areas reported that the enterprises they owned were their main activity (9.3% of men and 3.8% of women in urban areas versus 3.4% of men and 0.9% of women in rural areas). Meanwhile, more adults in rural areas than in urban areas declared that their enterprises represented secondary activity (1.6% of men and 1.2% women in rural areas versus 0.8% of men and 0.4% of women in urban areas) (Figure 3.10).

Figure 3.10: Incidence of Ownership of Enterprise as Main or Subsidiary Activity by Location and Sex (%)
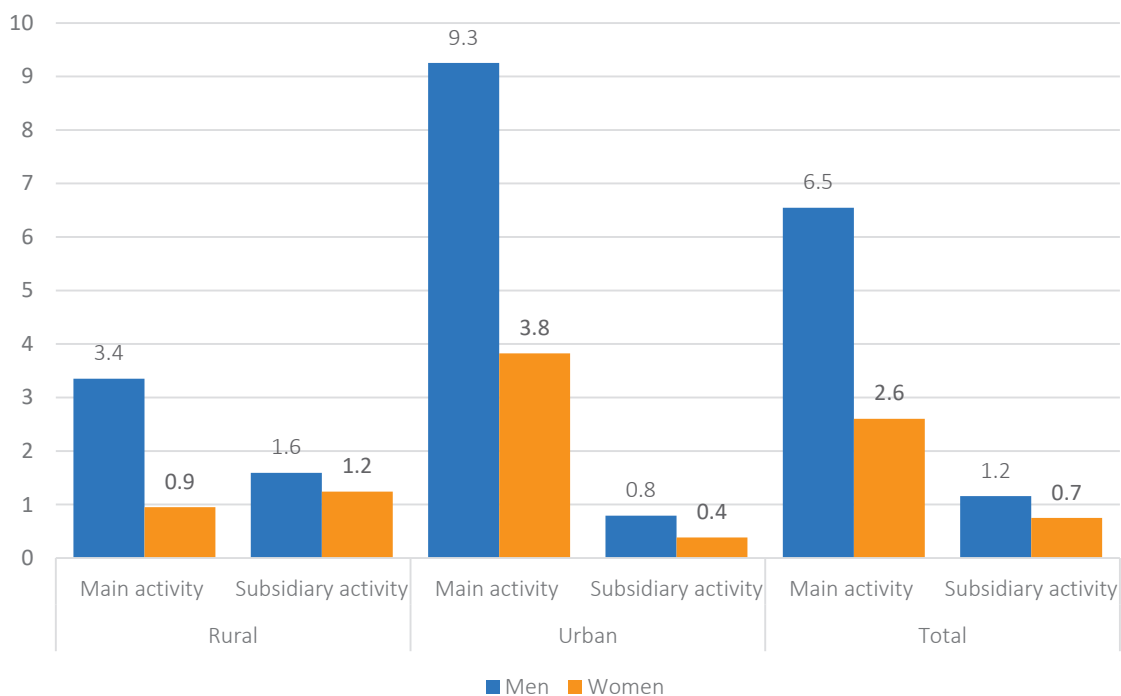
Note: The incidence of ownership of enterprise as main or subsidiary activity represents proportion of adult male (or female) population who own enterprises as either their main or subsidiary activities.

Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

Size of firm. Most enterprises operated without hired employees. These firms were more commonly managed by women (89.5%) than men (82.9%). Enterprises with one or more workers were likely to be managed by men than women. A similar pattern on own account enterprise was observed in urban areas, where 86.2% of women and 73.5% of men owners worked as solo entrepreneurs. Meanwhile, nearly all enterprise owners, i.e., 96.2% of men and 93.2% of women, in rural areas operate on their own (Figure 3.11).

Figure 3.11: Incidence of Ownership of Enterprises of Various Sizes by Sex and Location (%)
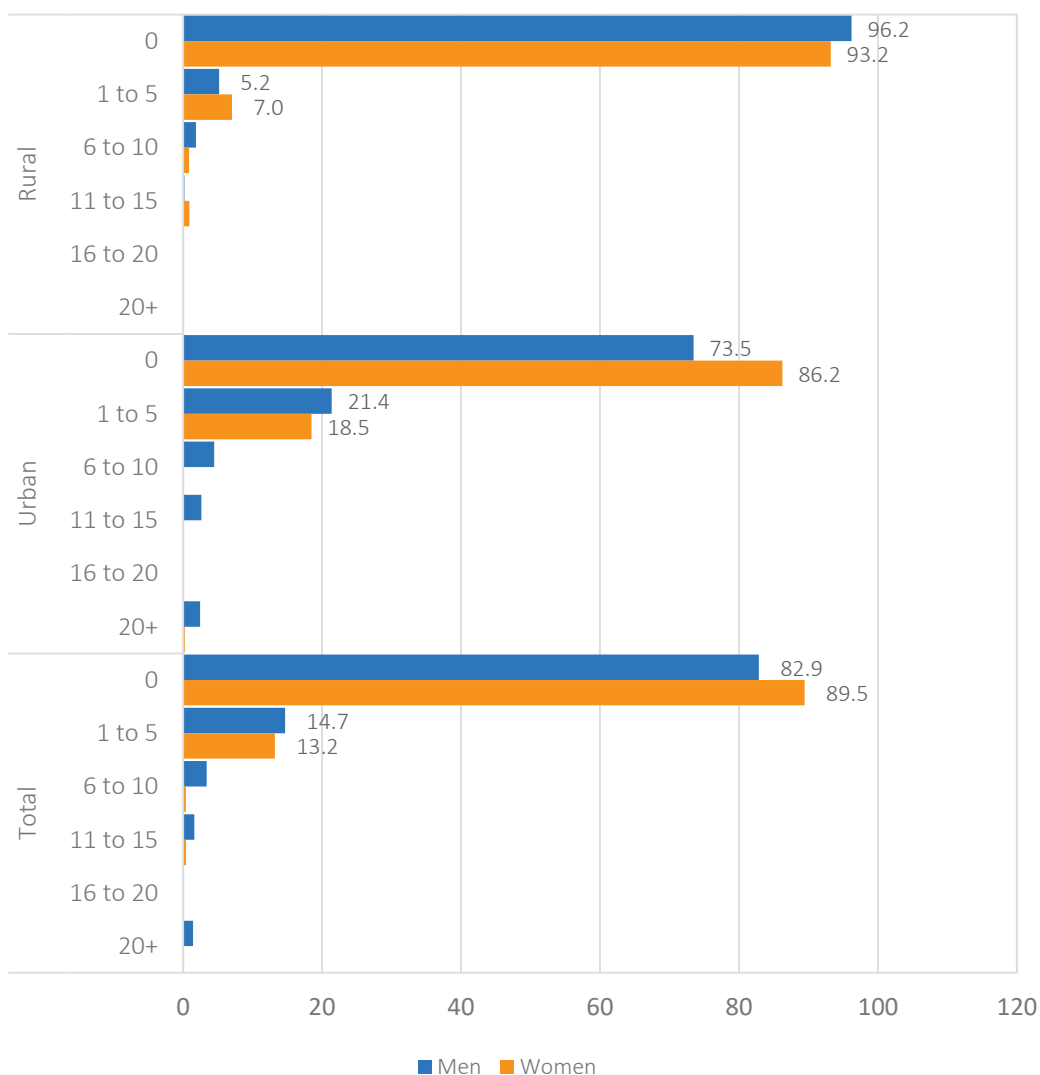
Notes: The incidence of ownership of enterprise in a particular size class represents the proportion of enterprise owners who have at least one enterprise that employs number of workers in the concerned size class. Since an owner can have multiple enterprises of different sizes, the numbers across size classes could add up to more than 100%.

Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

Joint ownership with spouse or partner. On the average, about 3.4% of owners jointly owned the enterprise with their spouse or partner. The gender differences were deemed not significant because of insufficient number of observations.

Figure 3.12: Incidence of Enterprise Owners with Joint Ownership with Spouse or Partner by Location and Sex (%)
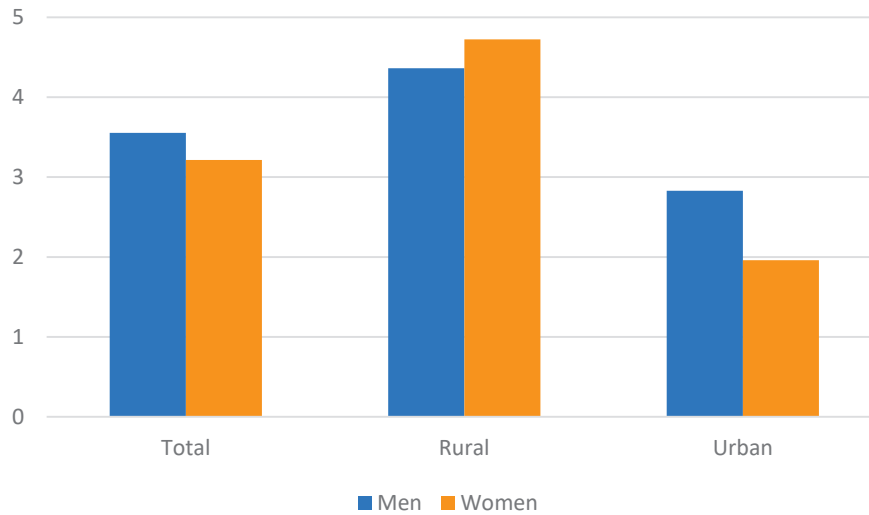
Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

Source of funding. Enterprise owners were asked to disclose the sources of funding for expenses incurred during firm expansion and/or capital improvements during the last one year. Most firm owners, however, declared not expanding their enterprise nor introducing capital improvements, which was more common among women enterprise owners (86.3%) than men enterprise owners (79.3%). For those who opt to improve the enterprise, the main source of funding was personal or household's savings, which were reported by 12.9% men and 8.7% women owners (Figure 3.13).

**Figure 3.13: Incidence of Enterprise Owners
by Sex, and Source of Funding (%)**
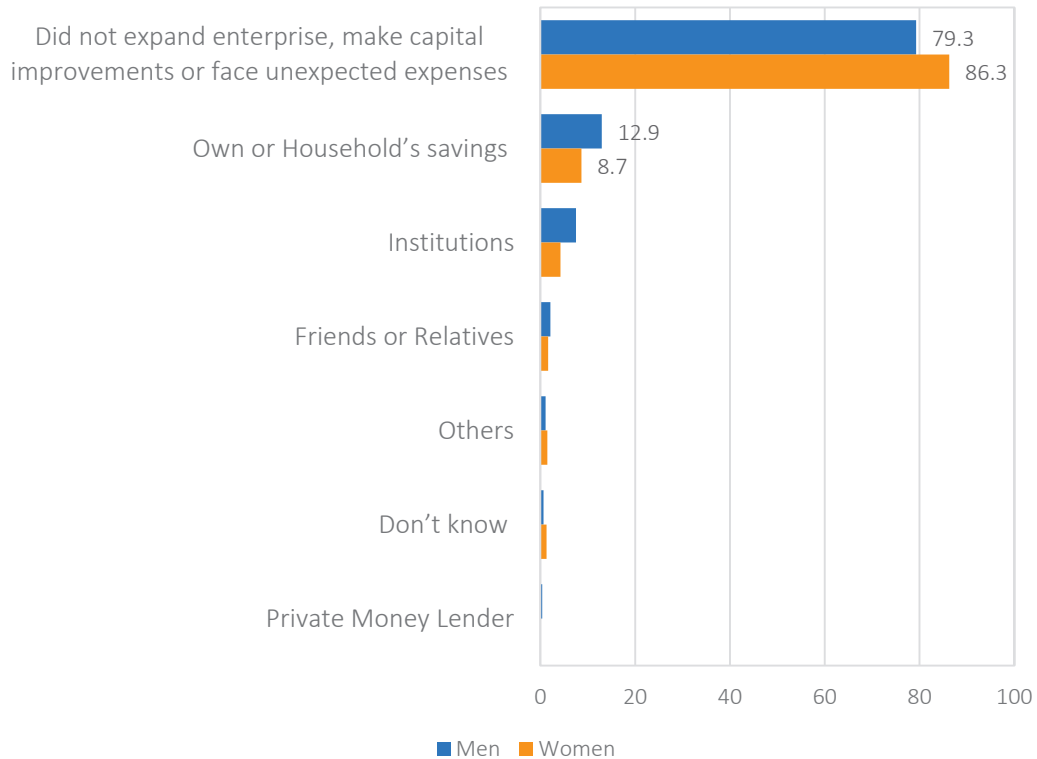
Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

Loan for enterprise. About 21.8% of men and 18.6% of women enterprise owners filed loan applications to finance enterprise improvement. The majority of men and women owners stated that their loan applications were approved. In terms of location, 16.1% of men and 16.5% of women enterprise owners in rural areas and 25.9% of men and 20.3% of women enterprise owners in urban areas requested loans for their respective enterprises (Figure 3.14).

**Figure 3.14: Incidence of Enterprise Owners
by Location, Loan Application Status, and Sex (%)**
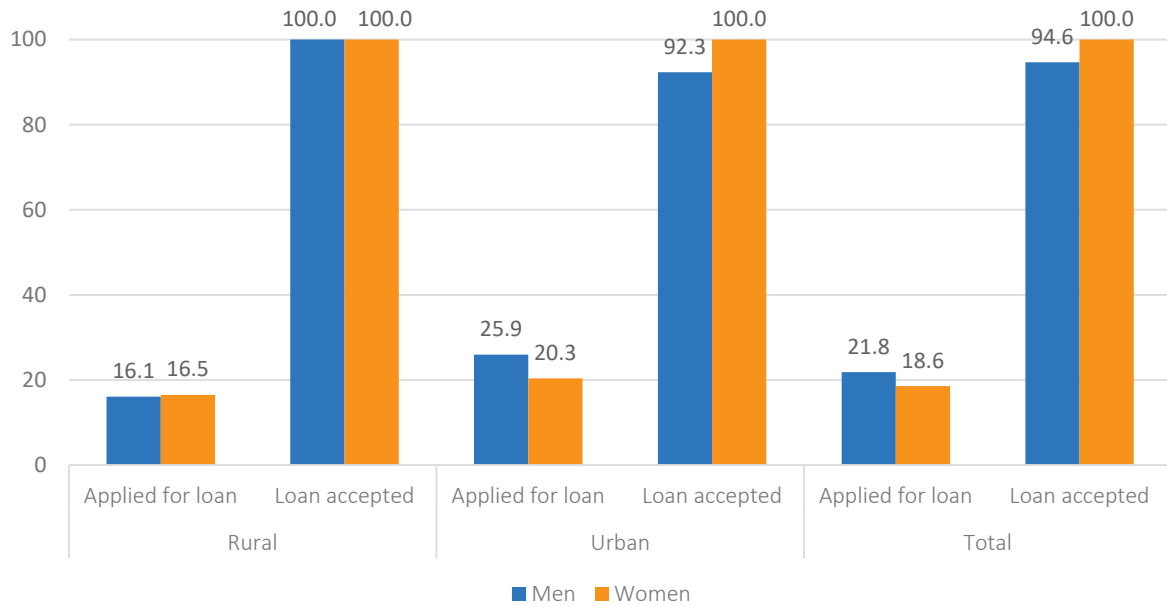
Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

Sought managerial advice. When enterprise owners were asked if they regularly, i.e., once or more per month, sought advice for managing the firm, a sizeable number disclosed not receiving managerial advice at all, and this was more observed for men (46.5%) than women owners (35.2%). The incidence of owners not seeking any managerial advice was especially high in urban areas, with 52.0% for men and 42.0% for women, than in rural areas, with 38.7% for men and 27.3% for women. Enterprise owners who sought managerial advice may choose to obtain advice from multiple sources. The usual sources of advice were family members or other relatives (24.9% for men owners and 34.9% for women owners) and spouses or partners (24.4% for men owners and 34.1% for women owners) (Figure 3.15).

**Figure 3.15: Incidence of Enterprise Owners
by Location, Sex of Owner, and Source of Managerial Advice (%)**
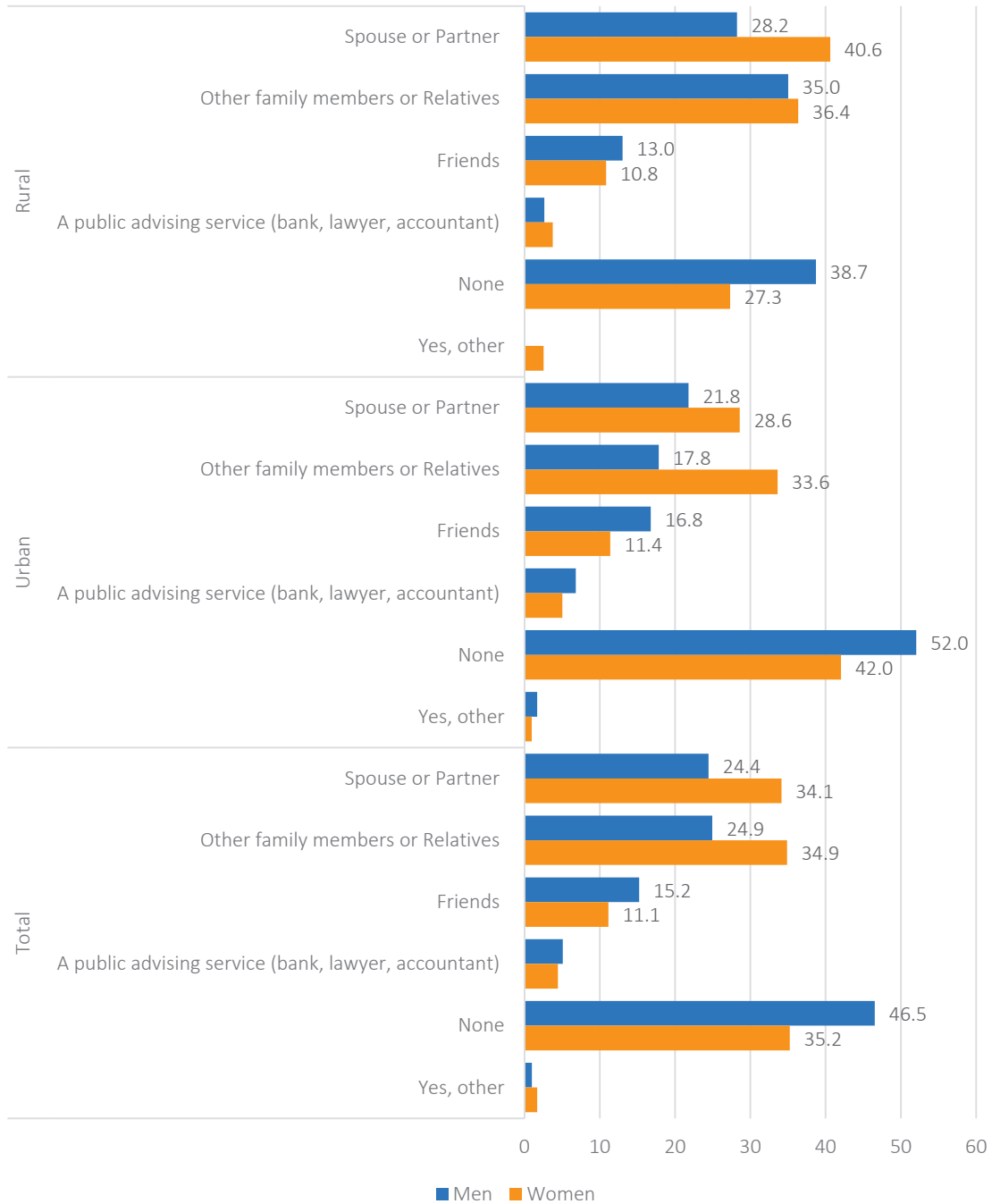
Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

CHAPTER 4: EXAMINING QUALITY OF DATA FROM THE PILOT SURVEY

Chapter 3 discussed the patterns of asset ownership based on the data collected from the pilot survey. To examine the validity of the data collected from the pilot survey, this chapter discusses the steps undertaken before, during, and after survey field operations to ensure the high quality of data. The second part of this chapter provides a quantitative assessment of the accuracy and precision of the survey estimates. As metrics of accuracy and precision, the difference between the weighted distribution of select characteristics of the survey respondents were calculated relative to the distribution based on other external data sources to assess the representativeness of the survey, and confidence intervals of the survey estimates.

The data show that 80% of men and 76% of women reported ownership of household dwellings. The incidence of ownership of agricultural land amounts to 48% among men and 34% among women. While these estimates have an acceptable range of sampling error, it is still instructive to provide a more detailed assessment of the quality of the survey operations that produced these numbers.

4.1 Quality control pre-survey field operations

4.1.1 Questionnaire Design

The customization of the country survey questionnaire and the instructions manual was based on standard survey instruments of the Asian Development Bank (ADB) and the Evidence and Data for Gender Equality (EDGE) pilot study. The Geostat undertook the customization of survey instruments in close consultation with ADB and the United Nations Statistics Division (UNSD). No additional questions or modules were added. Some questions and modules not considered relevant to country context were deleted. For instance, the module on small agricultural equipment and questions on tenure status of dwelling and parcel were dropped.

The questionnaires were translated into the Georgian language. The translation process did not identify any essential problems which could lead to misunderstanding during fieldwork.

The reliability of the survey depends on the quality (contents) of the questionnaire and interviewing accuracy. During the conduct of the EDGE survey, data collection was implemented in line with the standardized survey documents. The draft questionnaire and instruction manual for field staff were prepared following the recommendations of UNSD with the modifications proposed by ADB. The questionnaires and the instruction manual (for enumerators, field supervisors, and data managers) were reviewed and consolidated based on the results of pre-test exercises (and experience of Geostat

analysts). The manual for field staff was supplemented with a set of possible data validation checks to be carried out during the data entry phase and the data cleaning and validation process.

Demographic information of household members, as well as ownership of various assets by the adult members of the household, exclusively or jointly, was collected from the household and individual questionnaires. The household questionnaire included the roster of all household members collecting demographic and economic information on each member of the household. The individual questionnaire was designed to collect information about the assets, both physical and financial, owned by any member of the household, including the respondent. These assets might be owned exclusively or jointly with someone else. The modules embedded within the individual questionnaire collected information on assets such as principal dwelling, agricultural land, livestock, large agricultural equipment, non-agricultural enterprises and enterprise assets, other real estate, consumer durables, financial assets, liabilities, and valuables.

Pre-testing questionnaire and instructions manual was done in one round in August 2015. The pre-testing team consisted of officials or staff from the Geostat and field supervisors, with participation of ADB and UNSD representatives. Based on the results of the pre-tests, several amendments to the questionnaire were made to fit with the country's context.

The module on small agricultural equipment and questions on tenure status of dwelling and parcel was not considered relevant because of low consistence with Georgian reality, enlisting large-scale agricultural equipment was amended considerably. In several questions the skip patterns were amended and added and an optional answer "I don't know" was added, mostly in the cases, for which the respondent should have referred the year of purchase or acquisition of a certain asset. The code "employer" and "independent/individual employee" were split into agricultural and non-agricultural sectors. The question on soil types was removed, as it proved to be difficult for respondents and would not produce clear responses. The list of potential financial assets was more clearly defined and adapted according to Georgian reality. The question on the type of agricultural land ownership was also removed, since only individual and joint ownership was to be filled (rented land did not apply), and apart from proper land ownership other types of land ownership (e.g., leasehold) do not exist in Georgia.

4.1.2 Training and Organization of Field Work

The training was organized in two phases. The first phase of the orientation was for the trainers, while the second phase was for the enumerators and supervisors. ADB and UNSD experts helped Geostat prepare the training programs.

ADB and UNSD resource persons carried out the training of trainers for Geostat staff who subsequently conducted the second phase of training. The training was comprised of lectures, mock interviews, and field practice interviews. A resource person from ADB was present to observe the conduct of training and clarify matters whenever needed during the training proper. Role-playing sessions were conducted for some modules, during which the interviewers interviewed each other. In the course of the session, a discussion of errors found from the filled-out questionnaires proved to be effective.

The 5-day training of trainers and pilot survey was held in August 2015 in a carefully selected location close to Tbilisi. A total of 30 individuals participated in the trainings.

The trainings for the EDGE project supervisors and enumerators were organized in eight regional centers for selected enumerators and supervisors from each region. One team consisted of two trainers who conducted 4-day trainings.

Table 4.1: Venue, Date, and Number of Trainees on the Trainings
of Supervisors and Interviewers

Region	City/Town	Date	Number of Supervisors	Number of Interviewers
Mtskheta-Mtianeti	Dusheti	26–29 September 2015	2	13
Kakheti	Telavi	26–29 September 2015	3	18
Imereti, Racha-Lechkhumi and Kvemo Svaneti	Kutaisi	26–29 September 2015	2	22
Samegrelo-Zemo Svaneti	Zugdidi	26–29 September 2015	3	16
Tbilisi	Tbilisi	26–29 September 2015	4	31
Adjara A.R and Guria	Batumi	30 September–3 October 2015	5	28
Shida Kartli and Samtskhe-Javakheti	Gori	30 September–3 October 2015	5	27
Kvemo Kartli	Rustavi	30 September–3 October 2015	3	18

Source: Geostat estimates using Evidence and Data for Gender Equality pilot survey.

4.2 Quality Control During Field Operations

4.2.1 Organization of Field Operations

The accuracy of the final output of the EDGE survey depended on the quality of the data collection from the household surveyed. To enhance the quality of interviewers' work and provide immediate guidance, within a week after commencement of the EDGE field work, the trainers visited every region and checked completed questionnaires for all the interviewers. They discussed detected errors with the interviewers and regional supervisors by groups and provided further instructions to follow.

Geostat prepared a separate comprehensive checklist for the EDGE survey supervisors. The checklist highlighted different activities and quality control procedures with the view to monitor the progress of listing and enumeration of EDGE survey properly and detect the problems of data collection at an early stage.

After the fieldwork was completed, the monitoring team from the Geostat's central office checked each interviewer. The monitoring team members traveled across the country and checked at least two interviewed households for each interviewer by means of completing a mini-questionnaire. Cross-verification of fieldwork data using such mini-questionnaires revealed no significant issues.

The pilot survey revealed several additional issues to be considered in relation to practical aspects of the survey, as well as questionnaire design. Conducting an interview at a time when all the key interviewees would be home, proved difficult. However, in most cases only one adult member of the household was home during the interview. This is partially because late summer and autumn is a particularly busy period in rural areas.

The respondents, as it usually happens with statistical surveys, in some cases regarded the interviewers as social agents. Given this, the interviewers had to briefly explain the objectives of the survey to avoid any undue expectations.

4.2.2 General Sampling Design

The primary sampling units (PSUs) represented enumeration areas of the 2014 Population Census and the second stage units (SSU) were the household addresses within the selected PSUs in both the rural and urban areas.

Considering the parameters of interest to be derived from the survey and other relevant indicators for determination of sample size as well as resources available for the survey, the sample size equaled 2,528 household addresses selected from 158 PSUs with 16 households surveyed in each selected PSU.

The entire country is geographically and administratively divided into 10 regions. Each of the 10 regions was further divided into three groups by settlement types (large city, medium and small town, and village). The region–settlement type was considered a stratum, with the number of strata equaling 25. Large cities and medium and small towns represent urban areas while villages constitute rural areas of the country.

Urban areas account for 56.8% of the total population in the country. Almost one-third of the population lives in the capital Tbilisi.

Two important points may be mentioned here:
(i) It has been empirically observed and demonstrated that the variability of the most parameters of socio-economic interest is generally higher in urban areas than in rural areas. It is true for most quantitative variables, say, consumption expenditure, value added or income of the establishment, capital formation, etc. Keeping this in mind, in allocating the sample PSUs to the rural and urban within each region, the number of households in urban areas (large city, medium and small town) was increased by an additional 1.25 factor. Ultimately, 86 urban and 72 rural PSUs were selected for the survey.

Table 4.2: Selection of Primary Sampling Units by Regions (units)

Regions	Large city	Medium and small town	Village	Total
Tbilisi (capital city)	28	0	2	30
Adjara A.R.	8	2	8	18
Guria	0	2	6	8
Imereti, Racha-Lechkhumi and Kvemo Svaneti	6	6	10	22
Kakheti	0	6	10	16
Mtskheta-Mtianeti	0	2	6	8
Samegrelo-Zemo Svaneti	4	4	8	16
Samtskhe-Javakheti	0	4	6	10
Kvemo Kartli	6	2	8	16
Shida Kartli	4	2	8	14
Georgia, Total	**56**	**30**	**72**	**158**

(ii) There was another issue related to the number of households to be selected from each PSU for this survey. The analysis in deciding the optimum number of households to be surveyed per PSU is significantly conditioned by the average cost of surveying a PSU and the cost of surveying a single household along with the information on intra-class correlation, design effect, and precision of the estimates desired. Due to many reasons, data for all of these aspects are not always available and in such cases, the experiences of other surveys in the country or similar surveys in the neighboring countries are used. The experience showed that in most surveys, 8 to 16 households per PSU were optimal. Considering this and balancing this with the non-response and the availability of resources for the survey, 20 households per PSU were sampled. For each PSU, 10 households were randomly selected from the Second Stage Stratum 1 (SSS-1) and another 10 households from Second Stage Stratum 2 (SSS-2). [20]

Based on the experience from other household surveys, the anticipated nonresponse rate was 20%. Consequently, to ensure 16 interviews per PSU, an additional 20% or 10 households were selected from each SSS.

In the first stage, the selection of PSUs (enumeration areas) from each stratum (region–settlement type) is performed using probability proportional to size (PPS), the size being the number of households of the PSU. The required number of households is selected systematically with a random start from each of the two strata (SSS-1 and SSS-2).

4.3 Quality Control of Post-Survey Field Operations

4.3.1 Data Processing

Once the enumerators collected the survey data using paper questionnaires, these were examined by respective supervisors for scrutiny checks and further sent to the Geostat's central office for further processing.

There were 27 regional supervisors in the 10 regions including Tbilisi: 4 supervisors were in Tbilisi, 3 supervisors in 5 regions, and 2 supervisors in 4 regions.[21]

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[20] SSS-1 comprised households with three and more adults, while SSS-2 included the remaining households with two and less adults.

[21] Imereti, Racha-Lechkhumi, and Kvemo Svaneti was considered as one region.

The regional supervisors performed scrutiny and primary checks to ensure the questionnaire identification part, number of interviews, codes for interviewers and respondents, dates, etc. are correct. The regional supervisors prepared documentation with the identification and number of interviews or respondents and sent them to the central office in Tbilisi with the filled questionnaires.

The four-person logical control group (LCG) performed logical checks and coding prior to data entry. After primary logical checks, the eight-person data entry operators group (DEOG) performed the first data entry. The data entry software included skip patterns, also ensuring consistency between different parts of the questionnaires. After the first data entry, the questionnaires were entered again into a different database and the software checked for differences between the two databases. When differences between the two are found, data entry operators checked the questionnaires and entered the correct value for the specific variable.

It should be mentioned that double entry corrections were made in "real time," meaning that the moment the program asks for correction, the operator is working with the same questionnaire. As a result, it was not necessary to search an appropriate questionnaire after checking the two databases. The double entry program checks for differences in the number of records (for example, a record for each member or asset) as well as for variable values (except textual fields, identification fields, and fields with times). After the double entry process, two identical databases were obtained including logs of errors and correction (the original data can be rebuilt). After successful cross-validation of each questionnaire by means of double entry, the relevant data were automatically copied into a separate database.

After the main data had been formed for a questionnaire (entered and verified with double entry procedures), LCG made logical checks using the pre-defined procedures, including final checks for skip patterns using the software. The logical errors were also logged with the information on error identification, variable identification, date, and time. The LCG person conducting the check must choose the error source to correct it. After logical control had been finished, a five-person data cleaners group (DCG) performed computer editing in line with pre-defined procedures.

Figure 4.1 illustrates the data processing steps conducted.

Figure 4.1: Data Processing Steps

```
┌─────────────────────────────────────────────────────────────────────────┐
│ Interviewer: Interviewing the sampled households and delivering to the     │
│ regional supervisor                                                        │
└─────────────────────────────────────────────────────────────────────────┘
                                    │
                                    ▼
┌─────────────────────────────────────────────────────────────────────────┐
│ Supervisor: scrutiny, primary checks and sending the questionnaires to the │
│ central office                                                             │
└─────────────────────────────────────────────────────────────────────────┘
                                    │
                                    ▼
┌─────────────────────────────────────────────────────────────────────────┐
│ Logical control group: verification of the questionnaires, prior to data   │
│ entry checks and coding                                                    │
└─────────────────────────────────────────────────────────────────────────┘
                                    │
                                    ▼
┌─────────────────────────────────────────────────────────────────────────┐
│ Data entry operators group: Main data entry, double data entry procedures  │
└─────────────────────────────────────────────────────────────────────────┘
                                    │
                                    ▼
┌─────────────────────────────────────────────────────────────────────────┐
│ Logical control group: Pre-defined logical controls and corrections        │
└─────────────────────────────────────────────────────────────────────────┘
                                    │
                                    ▼
┌─────────────────────────────────────────────────────────────────────────┐
│ Data cleaners group: Database computer editing                             │
└─────────────────────────────────────────────────────────────────────────┘
```

4.3.2 Calculation of Sampling Weights

The Population Census 2014 database was used as a sample frame consisting of non-institutional households of Georgia in territories controlled by the central government of Georgia.

There were no cases where identification particulars of PSU mismatched. Due to changes in the households' structure since the 2014 census, several mismatches in the number of adults appeared. As a result, there were 184 cases where a household in SSS-1 (Households with three or more adult members)was actually found to have less than three adult members, and 143 cases where households with less than three adult members (SSS-2) actually had three or more adult members.

A total of 88 PSUs were allocated for the urban areas and 70 PSUs for rural areas. The total number of sampled households within each PSU was 20. One half of the number of households (10) were from SSS-1 and the remaining half from SSS-2. All of the sub-strata have been surveyed.

A total of 1,760 SSUs were allocated for the urban area and 1,495 (84.9%) have been surveyed. A total of 1,400 SSUs were allocated for the rural area and 1,288 (92%) have been surveyed.

In statistical surveys, a survey weight refers to the total number of units in the target population that each sampled unit represents. In this context, the target population corresponds to all adult household members in a specific country or geographic area.

Sampling Weights for Ownership Assigned by Any Respondent Approach

Under the ownership assigned by any respondent (OAAR) approach, the combination of self-reported and proxy information provided by the respondents constitute a household-level information. More specifically, the OAAR approach follows the broadest definition of ownership wherein as long as a person has been identified as an owner by at least one respondent, that person is already considered as an owner.

Hence, survey weight calculation for estimation of population parameters based on the OAAR approach is akin to how survey weights are calculated in typical household surveys.

The following notation was used to calculate weights:

i: stands for stratum,
j: stands for PSU,
k: stands for second stage stratum (SSS),
H_{ij} = total number of HHs in the j-th PSU of the i-th stratum,
H_{ijk} = total number of HHs in the k-th second stage stratum (SSS) of the j-th PSU of i-th stratum,
h_{ijk} = number of households actually surveyed in the k-th SSS of the j-th PSU of i-th stratum,
n_i = number of PSUs selected from i-th stratum
$H_i = \sum_j H_{ij}$ = total number of households in the i-th stratum (available in Census database).

Then, weight was calculated as:

Equation 1: Two-Stage Probability Proportional to Size Design

Weights
$\dfrac{H_i}{n_i} \times \dfrac{1}{H_{ij}} \times \dfrac{H_{ijk}}{h_{ijk}}$

Sampling Weights for Self-Assigned Ownership Approach

Only the individual level data was considered in the self-assigned ownership (SAO) approach, where information about assets owned by the respondent was considered for analysis, ignoring the (proxy) information provided by the respondent for other members of the household. Thus, had the

sampling design allowed interviewing all adult members of the household (i.e., all selected with probability one) for collecting data on self-assigned ownership, the sampling weights would have been calculated in the usual manner as in household surveys and could have been applied for estimation of any parameter. However, in the EDGE survey, a maximum of three adults were selected for interview in each selected household. This necessitated one more stage of sample selection, i.e., selection of three individual adults in "households with more than 3 adults." Hence the estimation procedures and calculation of the weights would be different from the weights used in the OAAR approach. Additional weights would be assigned to each individual and multiplied by the usual household weights to obtain individual level weights.

Upon completion of the survey, various situations were observed regarding actual individual interviews whether the originally selected adult was interviewed or any alternative adult was interviewed if the originally selected adult was not available (or nonresponse). For all such cases, the estimation procedure intended to provide unbiased design-based estimates of the domain parameters, but there were slight departures from the design-based procedures to deal some non-response cases at the individual level in order to get rational estimate for the domain. The following section details the procedure for assigning additional individual level weights under various situations.

A. Households with Three or Less Adults

In case the household had three or less adults, then all adults were selected for interview (i.e., with probability one) and therefore the survey weight assigned was 1 for each adult.

B. Households with More than Three Adults

If there were four or more adults in the household (say, M), then a maximum of three adults were interviewed and these three adults served as a sample of three from M adults in the household. However, as the three respondents were selected following a procedure that required selecting both members of the principal couple or the primary respondent (in households without a principal couple) purposely with probability one, and selecting the third respondent randomly out of the remaining adult members (or selecting the second and the third respondent randomly if the household does not have a principal couple), by the following was defined the procedure of assigning weights at the individual level in different situations.

(i)　Households with a principal couple:

(a) If a principal couple was found in the household, then both the members of principal couple were selected for interview with selection probability one, and the third adult was selected randomly out of the remaining adults (i.e., from M-2 adults). Hence, a

weight of 1 was assigned to each member of the principal couple and a weight of M-2 was assigned to the third adult.

(b) In cases where one of the members of the principal couple was not interviewed and there was no additional adult interviewed to replace the member of the principal couple due to non-response/non-availability, then the surveyed member of the principal couple was treated as if she/he was randomly selected out of the two with probability 1/2 and was assigned a weight of 2. The third member interviewed was selected with probability 1/(M-2) and was assigned a weight of M-2. However, if the non-available member of the principal couple was replaced by an additional randomly selected adult thus completing 1 primary respondent and 2 randomly selected adults then procedure (a) was followed.

(c) If both member of the principal couple were not interviewed and only the third selected adult was interviewed, then the selected adult was treated as if she was representing all the adult members in the household. Thus, his/her selection probability was 1/M and was assigned a weight of M. However, if an additional adult was selected randomly from the remaining adults to make up for the nonresponse, then all the interviewed adult household members (maximum of 3) were treated as a random sample out of M adults in the household. Hence, a weight of "M/number of interviewed adult member" was assigned to the interviewed members.

(d) If both members of the principal couple were surveyed but the third adult selected respondent was surveyed (despite efforts to replace him/her with randomly selected another adult in the household) due to nonresponse/non-availability, then the members of the principal couple was treated as 2 randomly selected members representing M adults with selection probability of 2/M each and both were assigned a weight of M/2.

(e) If only one of the member of the principal couple was surveyed while the second member of the principal couple and the third adult respondent could not be surveyed (despite efforts to replace the latter two with randomly selected adults from remaining household adults) then the only surveyed member of the principal couple was assigned a weight of M.

Table 4.3: Survey Weights for Households with Principal Couple

Interviewed			Selection Probability			Weight		
Principal Couple		Third Respondent	Principal Couple		Third Respondent	Principal Couple		Third Respondent
Primary Respondent	Spouse		Primary Respondent	Spouse		Primary Respondent	Spouse	
Yes	Yes	Yes	1	1	1/(M-2)	1	1	(M-2)
Yes	No	Yes	1/2	0	1/(M-2)	2	0	(M-2)
No	Yes	Yes	0	1/2	1/(M-2)	0	2	(M-2)
Yes	Yes	No	2/M	2/M	0	M/2	M/2	0
No	No	Yes	0	0	1/M	0	0	M
No	Yes	No	0	1/M	0	0	M/2	0
Yes	No	No	1/M	0	0	M	0	0

Notes: 1. "Yes" indicates that the selected respondent was surveyed/ interviewed.

2. "No" indicates that the selected respondent was not surveyed/interviewed due to non-response.

3. "M" denotes the total number of adults in the household

Source: Asian Development Bank-Evidence and Data for Gender Equality survey. Forthcoming. Measuring Asset Ownership and Entrepreneurship from a Gender Perspective: Methodology and Results of Pilot Surveys in Georgia, Mongolia, and the Philippines (Cavite).

(b) Households without a "principal couple" (i.e., a primary respondent exists but no spouse/partner living in the household):

(i) If there was no principal couple found in the household but a primary respondent existed, then the primary respondent was selected purposely with probability 1 and the remaining 2 adults were selected randomly from M-1 adults. Thus, the weight assigned to the primary respondent was 1 and to each of the two randomly selected adults was (M-1)/2.

(ii) If the primary respondent was not interviewed due to non-response/non-availability then the 2 randomly selected adults were treated as randomly selected out of all M adults and was assigned a selection probability of 2/M and corresponding a weight of M/2 for both. However, if an additional adult member of the household was selected randomly to replace the primary respondent, then the 3 randomly selected adults were assigned equal weights of M/3.

(iii) If the primary respondent was interviewed but the other two randomly selected adult members were not surveyed (despite efforts to replace them with randomly selected other available household adults) due to non-response/non-availability, then the primary respondent was treated as selected with probability 1/M and assigned a weight of M.

Table 4.4: Survey Weights for Households without Principal Couple

Interviewed			Selection Probability			Weight		
Primary Respondent	Second Respondent	Third Respondent	Primary Respondent	Second Respondent	Third Respondent	Primary Respondent	Second Respondent	Third Respondent
Yes	Yes	Yes	1	2/(M-1)	2/(M-1)	1	(M-1)/2	(M-1)/2
Yes	Yes	No	1	1/(M-1)	0	1	(M-1)	0
No	Yes	Yes	0	2/M	2/M	0	M/2	M/2
Yes	No	Yes	1	0	1/(M-1)	1	0	(M-1)
No	No	Yes	0	0	1/M	0	0	M
No	Yes	No	0	1/M	0	0	M	0
Yes	No	No	1/M	0	0	M	0	0

Notes: 1. "Yes" indicates that the selected respondent was surveyed/ interviewed.
2. "No" indicates that the selected respondent was not surveyed/interviewed due to non-response.
3. "M" denotes the total number of adults in the household

Source: Asian Development Bank-Evidence and Data for Gender Equality survey. Forthcoming. Measuring Asset Ownership and Entrepreneurship from a Gender Perspective: Methodology and Results of Pilot Surveys in Georgia, Mongolia, and the Philippines (Cavite).

The weights so obtained at the individual level were combined with the weights calculated in the OAAR approach to obtain the weights for estimating the survey parameters using the SAO approach. The above procedure took care of the non-responses at the individual level, and is operationally convenient and practiced in large scale surveys. Regardless whether one uses OAAR or SAO approach, specific care should be taken for distinguishing the non-response cases from the surveyed cases before calculation of weights (Box 4.1).

In dealing with the nonresponse case, the EDGE pilot survey only studied the gender bias caused by nonresponding adults. Hence, post-stratification weight adjustments were implemented using only the distribution over sex of adults. Analysis across age group, marital status and educational level may also be considered for post-stratification weight adjustments if feasible. However, it should be pointed out that adding too many post-stratification variables could potentially inflate the sampling error.

Box 4.1: Distinguishing Non-Response Cases from Surveyed Cases

For counting the actual number of surveyed households in the target population and in the calculation of sampling weights, the following points may be noted:

(i) Include households that cease to exist due to: (a) death of all members, or (b) entire household migrated outside the country or population domain,

(ii) Exclude households from the count which: (a) refused to give information, (b) are found temporarily locked on the date of survey, or (c) moved or migrated to other PSUs or permanently locked household but known to be living in the country (survey's geographical coverage).

(iii) The number of adult members in a selected household as indicated in the sample list might be different from the number of adults actually listed at the time of field survey. This is possible because of the deficiency in the sampling frame and is expected to happen. If a difference in the number of adults between the sample list and actual survey is found for a particular household that violates the criteria for classification of the household into a particular second stage stratum, the household should continue to be treated as sampled from the original stratum. That is, the second stage stratum of a selected household is decided once and for all with its selection and its selection probability will not be changed even if the number of adults is different from originally available information.

Source: Asian Development Bank. Forthcoming. Measuring Asset Ownership and Entrepreneurship from a Gender Perspective: Methodology and Results of Pilot Surveys in Georgia, Mongolia, and the Philippines (Cavite).

Post Stratification Weight Adjustment

Recall that if nonresponse rate is nil and random, the sum of the survey weights calculated based on the formula presented in the previous section should be very close to the actual number of adults in the population. Furthermore, even if the survey weights were summed up for a specific population group, (e.g., by gender or by geographic area), the total should still be close to the actual headcount in the population.

However, the actual pattern of nonresponse usually observed in many survey operations is not random. In the case of the EDGE pilot surveys conducted, nonresponse rates among men were significantly higher than among women. This may be attributed to the fact that during survey operations, men were more likely to be working, and thus, were not available for interview. As a result, the distribution of adults calculated based on the sum of the survey weights is biased toward women. Such bias warrants a post-stratification adjustment to be introduced for the individual-level weights.

In order to illustrate how post-stratification works, consider the table below which shows hypothetical data depicting the weighted distribution of the total number of men and women based from the survey and administratively collected data.

Column A in the Table 4.5 shows the total number of men and women represented in the survey after applying the survey weights while Column B shows the total number of men and women from census records, summarized by geographic area. Apparent from the table there are significant differences between survey and census distributions.

Table 4.5: Sample Post-stratification Adjustment

Gender	Survey (A)	Administrative Data (e.g., census) (B)	Post-stratification Adjustment Factor (B/A)
Men	895,672	1,032,451	1.15
Women	1,049,530	987,956	0.94

The EDGE estimate of number of adults and sex ratio based on household weights at the national level were found to be very close to that of the Population Census 2014. Hence, there was no post-stratification weight adjustment implemented on the household level weights. However, even though the estimated number of adults from the EDGE survey based on the individual level weights was found to be close to the Population Census 2014, the sex ratio came out to be different. Thus, post-stratification weight adjustment was applied on the individual level weights.

Since the EDGE survey was carried out in 2015 while the Geostat conducted population census in 2014, it was deemed more appropriate to utilize the data on adult males (females) by stratum based on the household weights from the EDGE survey to serve as auxiliary data for post-stratification. The adjustment factors were calculated as the ratio of adult males (females) based on the household weights from the EDGE survey to the adult males (females) from the unadjusted individual weights by stratum. The post-stratified individual weights were then calculated by multiplying the adjustment factors to the corresponding unadjusted individual weights, with respect to the gender and stratum of the individual. Given the new set of adjusted weights, the estimated number of adults and sex ratio are now equal to those based on the household weights.

4.4 Accuracy and Precision

There are two aspects of validation to measure the accuracy of the data. One is internal validation, which takes stock of the inter- and intra-module consistency of the data collected in the survey and the other is the validation of collected data with external available sources. The discussion of internal data validation included in this section focuses specifically on non-sampling error and non-response. Secondly, external data validation was also examined. The objective of the external data validation was to cross validate the accuracy of the survey data collected with data from alternative sources. Here, the assumption is that if the data collected are accurate and representative of the target

population, then the data should coincide with other auxiliary information that were collected through external data sources.

Non-sampling Errors

Errors incurred from factors other than sample selection are assessed through the examination of a number of aspects, including quality of data sources used, types of non-response and imputation.

Quality of Data Used

Primary data. The frequency of editing data on various items of information due to inconsistent entries, item non-response, or imputation may be obtained by mapping the item-level information between the two sets of data: raw data (before editing) and edited data (final data).

Figure 4.2 provides a summary of deleted or corrected entries. As can be seen, in approximately 40% of records the number of edits was minimal, and the overall level of deleted and corrected errors was within acceptable limits.

Figure 4.2: Percentage of Deleted or Corrected Records
by Number of Corrected Entries per Asset (%)
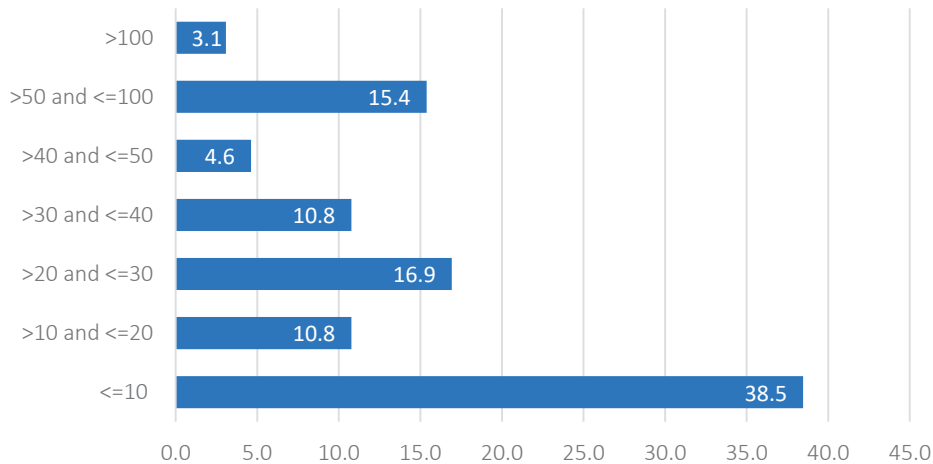
Non-Response Errors
Unit Non-Response

There are two types of nonresponse. One is that the sampled PSU or the household could not be surveyed at all, while the other is that the informants could provide large part of information except few. As a result, some of the data items remain unreported for such households. These are also

treated as nonresponse, and the cases of nonresponse of sampled PSU or household are, in most cases, dealt with by adjusting the number of PSUs or households actually surveyed and, consequently, the corresponding weights. Table 4.6 (and Figure 4.3) gives the structure of unit non-response according to the stratum, number of PSUs, households, and respondents. A reasonably low level (11.9%) of average nonresponse rate of households should be noted: the average non-response rate in the household surveys in Georgia ranges between 15% to 20%.

Table 4.6: Stratum-wise Selection of PSUs, Households, and Respondents and
Number Actually Surveyed or Interviewed

Stratum ID	Number allotted / selected					Number surveyed (without changing the SSS)			
	PSUs	Households		Respondents		Households		Respondents	
		SSS-1	SSS-2	SSS-1	SSS-2	SSS-1	SSS-2	SSS-1	SSS-2
2	6	60	60	180	99	59	52	153	82
3	10	100	100	300	155	96	94	262	148
11	28	280	280	840	469	226	225	568	386
13	2	20	20	60	36	20	20	55	38
21	4	40	40	120	64	33	32	79	57
22	4	40	40	120	65	39	38	101	62
23	6	60	60	180	98	58	56	151	94
31	8	80	80	240	137	70	60	179	103
32	2	20	20	60	33	19	18	55	31
33	8	80	80	240	138	78	66	210	114
52	4	40	40	120	67	39	34	109	56
53	6	60	60	180	105	57	56	166	91
71	8	80	80	240	134	70	58	173	111
72	2	20	20	60	32	19	17	54	30
73	6	60	60	180	104	57	52	143	91
82	2	20	20	60	33	19	18	50	28
83	8	80	80	240	120	72	73	192	109
91	4	40	40	120	63	36	23	87	31
92	4	40	40	120	69	39	33	92	52
93	8	80	80	240	131	76	69	187	107
101	6	60	60	180	90	57	51	133	89
102	4	40	40	120	59	36	36	93	48
103	8	80	80	240	122	73	73	191	118
112	2	20	20	60	34	20	19	57	33
113	8	80	80	240	128	72	70	185	103
Total	158	1,580	1,580	4,740	2,585	1,440	1,343	3,725	2,212

Figure 4.3: Stratum-wise Selection of Households
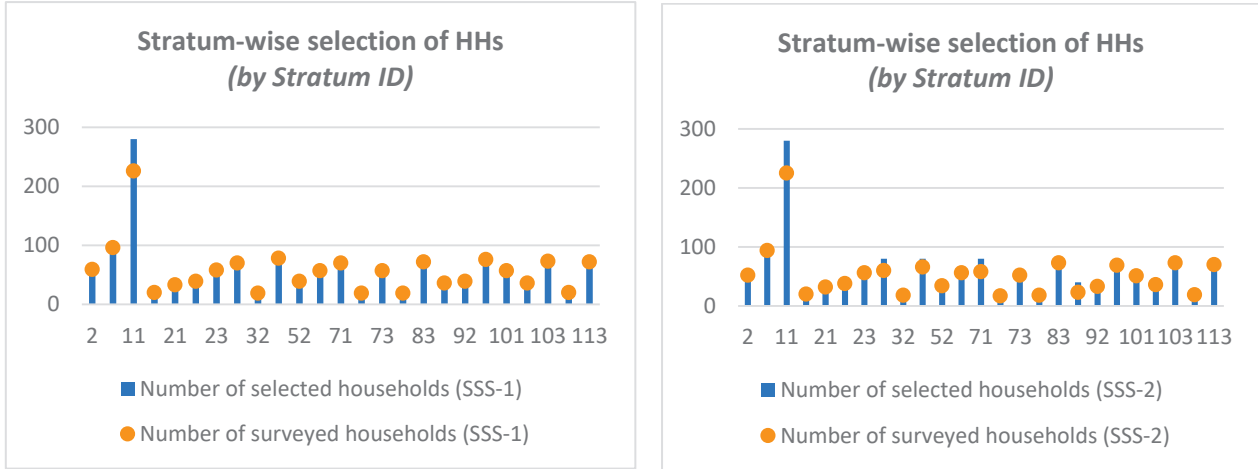
HH = household, SSS-1 = Second-Stage Stratum 1, SSS-2 = Second-Stage Stratum 2.

Item Non-Response and Imputation

The second type of nonresponse is generally imputed using various strategies applicable for the case. A common practice is to estimate the missing value with local level imputation using the average value of similar dwellings, say, belonging to the same SSS or to the adjacent SSS surveyed within the PSU. In certain cases, the domain of imputation is extended to the stratum level considering the homogeneity of the variable. Even though a high nonresponse rate is observed for the valuation of asset, the EDGE pilots did not use imputation. The reporting of asset value was vague; it was difficult to tell if the respondents report the same assets. For the presented situation, data correction was performed in the process of data cleaning. Table 4.7 presents abnormally low and high values that were corrected from consistency checks and edited during the data cleaning process. It should be noted that in most cases the frequency of edited records is below 5%.

Table 4.7: Frequency of Records with Very Low or High Values Found and Edited

MODULE No	Asset Reference (Questionnaire/item/code)		Valuation QUESTION No	Final Database (after consistency check is done)		Number of records read	Number of records with very low values or high values found and edited
	QUESTION No	ITEM No		Lower limit of data	Upper limit of data		
3	301	1	312	1,000.0	2,500,000	1,008	2
3	301	2	312	1,000.0	800,000	668	2
3	301	1	313	2,000.0	500,000	327	5
4	...	...	418	100.0	800,000	1,238	21
6	602	1	610	200.0	9,000	72	4
6	602	2	610	500.0	8,000	22	1
6	602	96	610	100.0	15,000	50	5
10	1,009	2	1,011	50.0	65,000	183	1
11	1,102	5	1,106	18.0	325,000	1,935	1
11	1,102	6	1,106	10.4	45,000	440	1

External Data Validation

There are two aspects of data validation: (i) internal validation that takes care of inter- and intra-module consistency of data collected in the survey, and (ii) validation of collected data with external available sources. Some part of internal validation processes was already described in the previous sections. Internal validation is a routine process, starting from survey documentation and finishing with final tabulations.

Under external validation, the following aspects of each data set are compared:
- coverage,
- concepts and definitions used,
- method of data acquisition or collection including instruments instructions (questionnaires, supervision or scrutiny of data, flow of filled-in questionnaire, processing of data, etc.),
- sampling errors, and
- non-sampling errors.

If similar data sets are available from other sources, then such comparison needs to be done between the two sources on the above aspects.

External validation indicators. The information on indicators such as population, households, household size, percentage of adults in the population, sex ratio, worker population ratio, household level access to drinking water, toilets, electricity, household level ownership/renting of dwelling, household ownership of agricultural land, etc. that were collected in the EDGE pilot surveys and other independent data sources may be compared.

In Table 4.8 external validation of the key EDGE variables is presented. As we can see, no significant discrepancies are observed which may also be because the last general population census—the main external source of validation—was conducted less than a year before the EDGE fieldwork.

Table 4.8: Comparative Estimates Obtained from the Pilot Evidence and Data for Gender Equality Survey and Other Sources

| Variable Category	Estimate from Pilot EDGE Survey (2015) (a)	External Data Source		% Difference $\left(\frac{a-b}{b}\right) \times 100$	Remarks[2]
		Name of Source (Period)	Estimate (b)		
1. Number of Household	1,097,890.00 (31,651.29)	2014 General Population Census	1,109,130	-1	Private Households
1.1 Household: Rural	473,786.00 (35,858.30)	2014 General Population Census	461,740	3	Private Households
1.2 Household: Urban	624,104.00 (39,916.67)	2014 General Population Census	647,390	-4	Private Households
2. Population	3,734,787.00 (116,847.50)	2014 General Population Census	3,702,130	1	Population living in private households
2.1 Population: Rural	1,607,752.00 (129,217.70)	2014 General Population Census	1,586,881	1	Population living in private households
2.2 Adult population: Rural	1,283,972.00 (102,249.60)	2014 General Population Census	1,247,177	3	Population living in private households: 18 years and over
2.3 Population: Urban	2,127,034.00 (142,944.10)	2014 General Population Census	2,115,249	1	Population living in private households
2.4 Adult population: Urban	1,631,096.00 (110,155.50)	2014 General Population Census	1,629,873	0	Population living in private households: 18 years and over
3. Average household size	3.40 (0.05)	2014 General Population Census	3.3	3	private households
3.1 Average household size: Rural	3.40 (0.11)	2014 General Population Census	3.4	0	private households
3.2 Average household size: Urban	3.40 (0.08)	2014 General Population Census	3.3	3	private households
4. Sex Ratio	111.00 (0.02)	2014 General Population Census	110.0	0.9	private households (Women/Men*100)
4.1 Sex Ratio: Rural	104.70 (0.02)	2014 General Population Census	101.3	3.4	private households (Women/Men*100)

| Variable Category | Estimate from Pilot EDGE Survey (2015) (a) | External Data Source | | % Difference $\left(\frac{a-b}{b}\right) \times 100$ | Remarks[2] |
		Name of Source (Period)	Estimate (b)		
4.2 Sex Ratio: Urban	116.00 (0.02)	2014 General Population Census	117.0	-0.8	private households (Women/Men*100)
5. Percentage of currently married men	66.70 (1.15)	2014 General Population Census	65.8	0	15 years and over
6. Percentage of currently married women	57.80 (0.95)	2014 General Population Census	58.6	-2	15 years and over
7. Percentage of people below primary level of education	2.30 (0.23)	2014 General Population Census	3.6	-36	10 years and over
8. Worker population ratio (WPR) (%)	53.60 (1.15)	2015 Integrated Household Survey	59.7	-10	15 years and over
8.1 WPR, Men	62.70 (1.27)	2015 Integrated Household Survey	67.6	-7	15 years and over
8.2 WPR, Women	45.90 (1.31)	2015 Integrated Household Survey	52.9	-13	15 years and over
8.3 Percentage of self-employed to total workers	47.10	2015 Integrated Household Survey	57.2	-18	15 years and over
8.4 Percentage of wage employees to total workers	52.90	2015 Integrated Household Survey	42.3	25	15 years and over
11. Percentage of households having electricity	100.00	2014 General Population Census	98.5	2	
12. Percentage of households owning dwelling unit	90.30	2014 General Population Census	86.4	5	
13. Percentage of households owning agricultural land	53.40	Census of Agriculture 2014	51.8	3	

( ) = standard error of the EDGE estimate.

Precision of Evidence and Data for Gender Equality Data

The precision of the survey estimates could be gauged using measures of sampling error. In practice, some important variables are generally considered for deciding the sampling strategy and sample size and in getting robust estimates at the national or regional level. For assessing the magnitude of sampling error, some key variables were identified. Estimates for standard errors, coefficients of variation, and confidence intervals were obtained for the household characteristics, demographic, profile of the respondents and self-assigned ownership of the assets using the survey data.

Figure 4.4: Coefficient of Variation of Reported Ownership by Asset
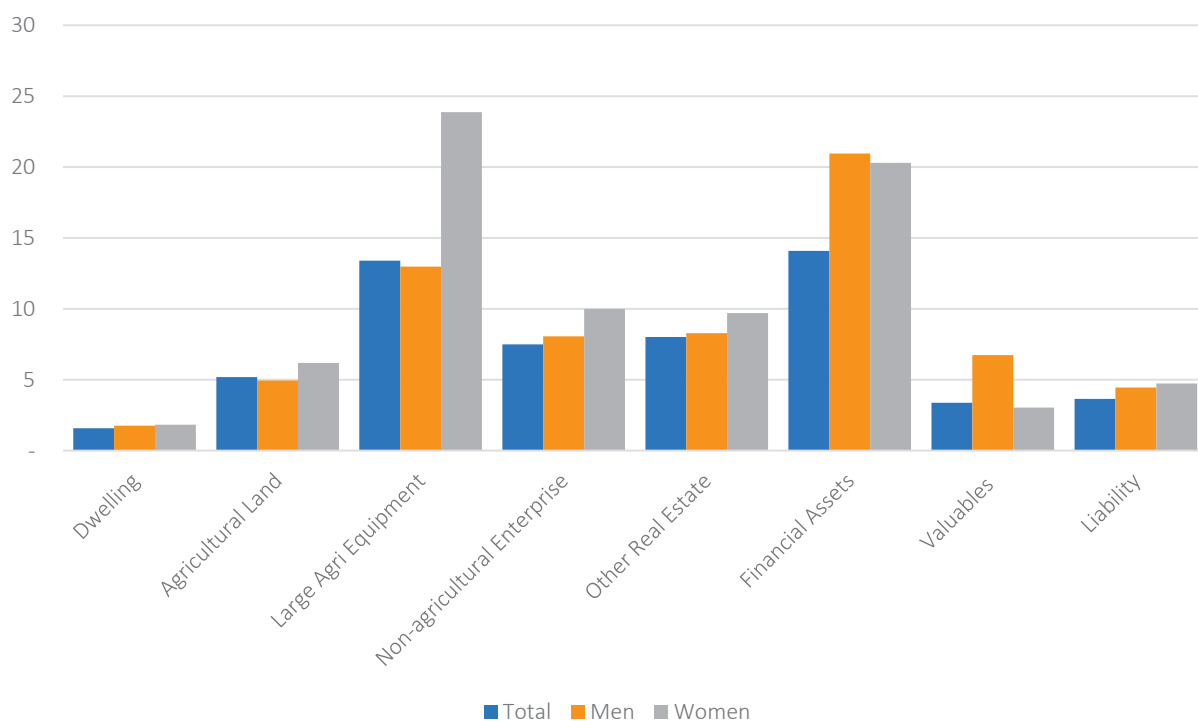
In general, coefficient of variation is found to be low for the majority of the assets presented in Figure 4.4. It has been observed that on the average the degree of variability for the ownership of the selected asset is 10%. Indicators of financial asset have the largest coefficient of variation (greater than 20%) in case of women and men. A large degree of variability is evident in women for large agricultural equipment as on the contrary ownership of large agricultural equipment is relatively low.

Overall Assessment of Evidence and Data for Gender Equality Data

It can be concluded from foregoing analysis and evidences that the overall quality of data of pilot EDGE survey is consistent to its coverage, consistent and perceptible with external data sets, internally consistent and highly reliable at the national level in statistical sense. It also establishes the efficiency in controlling the non-sampling error at various stages and particularly, data collection mechanism in the field.

From the foregoing analysis the preparations for the EDGE survey and its actual implementation went on without major difficulties at every stage. The sampling design was representative at the national level, while the response rates in both urban and rural areas turned out higher than in the majority of Georgian household surveys.

The questionnaire design, enhanced by strong expert assistance and pre-testing results, was adapted to the Georgian context and the actual fieldwork did not show essential difficulties related to unclear concepts or wording in the questionnaire. Cross-validation of the survey results with the available external data showed relative consistency, statistically significant at the national level. Sampling and non-sampling error analysis also showed data robustness, since for example, the coefficients of variation for almost 75% of the survey indicators did not exceed 10%.

CHAPTER 5: SURVEY ASSESSMENT, LESSONS LEARNED AND WAYS FORWARD

As presented in the previous chapters, the main objectives of the pilot Evidence and Data for Gender Equality (EDGE) surveys in undertaking methodological work were to inform the development of United Nations (UN) guidelines on producing statistics on asset ownership and entrepreneurship from a gender perspective. The implementation of EDGE pilot surveys also helped build the capacity within the Geostat to routinely collect respective data.

This chapter discusses the experiences from the implementation of the pilot survey, problems encountered, and valuable lessons learned from various phases of the administration of EDGE survey, other related survey assessments, and ways forward.

5.1 Issues and Lessons Learned from Survey Implementation

This section documents the challenges and concerns raised in survey field operation's stages. Some of the important issues reported were the non-availability of key interviewees during field enumeration, refusal of some respondents to be interviewed independently and simultaneously, and reluctance to share information especially those deemed sensitive like financial assets and valuation of assets.

5.1.1 Key Findings and Lessons from Pre-field Operations

Questionnaire Design

One of the rationale for the conduct of the EDGE survey was to test the design of the questionnaire, including core questions on asset ownership, prepared for the stand-alone survey conducted. The questionnaire and manual were customized and translated from English into Georgian. The most important aspect of this process was to identify appropriate local language words for technical terms while translating the survey instruments.

Pre-testing of Survey Instruments

The next step after customization of survey instruments was pre-testing, which aimed to evaluate the entire questionnaire in different settings, assess implementation of interview protocols, and test survey questions at the same time. Pre-testing was very important since most survey questions were new. Among main challenges one should note were the non-availability of key interviewees at the time of pre-testing, as well as reluctance and resistance of some respondents

on the protocol of interviewing separately, especially when female respondents were interviewed independently.

There were cases when the respondents hesitated and were reluctant to share sensitive information. In view of these concerns, it was recommended that field teams produce extra efforts in interviewing all selected individuals by making appointments with the respondents according to their availability, while explaining the purpose of the survey and providing assurance that the information collected would remain confidential and solely be used for the purpose of the study. The support of local community representatives was seen to be important in getting cooperation of the respondents.

Based on the results of the pre-tests, the questionnaires were amended according to the Georgian context.

Training of Enumerators and Supervisors

Trainings of enumerators and supervisors played a key role in obtaining good quality data in the household surveys. Issues raised during the training were mainly around new concepts and procedures such as primary respondents and principal couple, selection method for second and third respondents, planning of simultaneous interviews for a principal couple, etc., which were more difficult for trainees to understand. Other specific issues that needed attention during the training were following the skipping patterns in the questionnaires where it required skipping questions not relevant, such as when a particular asset type is not owned and asking sensitive questions including the questions on hidden assets.

The training methodology was designed for classroom training and field training. Trainings were mainly carried out in the classrooms. The survey goals, questionnaire design, and main concepts of the questionnaire were presented. Initially, the questionnaire modules were discussed in detail followed by role playing sessions for all modules where interviewers conducted mock interviews with each other. Interviewers were also requested to interview household members and/or neighbors and to bring the completed questionnaires the following day. Discussions on errors proved to be effective.

The following are some survey concepts and questions that were found to be relatively more difficult:

(i)   During fieldwork practice interviewers often incorrectly included those family members in the household roster who left the household and should not have been considered household members (e.g., students living in another location);

(ii)   Status in employment during last 12 months or 7 days was discussed with many examples to determine the status for certain types of employment.

(iii)   It was explained that the primary source of potable water for the household is to be recorded irrespective of whether the water supply system was installed in the dwelling or not. For example: household might have installed the water supply system in the dwelling itself, but the source of the water was a natural spring located nearby.

(iv)   The interviewers often failed to report on the same type of equipment separately. They were clarified to indicate more than one item of the same equipment separately (first, for the newly purchased, and then for the old equipment).

(v)   The word "enterprise" was confusing for most interviewers. The field personnel were explained the concept of enterprise that any activity for income generation was regarded as an "enterprise." An enterprise pursuing multiple activities might occur several times, for example, both a technician and a tailor working in the household.

(vi)   It was explained that renting out of dwelling for income generation must be indicated only when it was a major or important source of the household income.

Holding the training in 4 days was found to be sufficient. In most cases, the "homework" method[22] proved to be more effective than role playing sessions. It should be noted that the role-playing method is less efficient when one or two trainers oversee more than 20 trainees.

5.1.2 Key Findings and Lessons Learned from Field and Post-field Operations

Fieldwork took approximately 1.5 months to complete. During the period, the following issues were revealed:

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[22] In "homework" method, interviewers were requested to interview household members and/or neighbors and to bring the completed questionnaires the following day.

(i)   **Identification of households**. In general, there were no significant issues with household identification. Most cases were solved easily, as Geostat's census division provided overall guidance on the use of geographical information system (GIS) maps and identification of households. In the cases when sampled households moved to another location, the interviews were conducted with households currently living at the given address.

(ii)   **Communication with households**. Relatively high response rates in the EDGE survey represented the primary proof of good communication with households. However, it did not mean that the process went without challenges.

Reluctant households frequently asked for a Geostat badge and/or ID. Some respondents mixed the interviewers with social agents assessing households' well-being for a state means-tested social assistance program. Sometimes regional supervisors had to step in to appease the respondents and receive their consent for an interview.

Often, sampled household members did not understand why someone needed information on their assets and asked if they would benefit from participating in the survey in any way. The enumerators were trained to explain the objectives of data collection and convince the respondents to provide the information.

In most regions, there was a problem of simultaneous interviewing of respondents, as working members of the household were available only late in the evening. As a result, interviewers had to make several visits to the household to interview up to three eligible household members (depending on the number of adult household members). Some respondents objected to simultaneous and separate interviewing, saying that they "had nothing to hide from each other" or simply because they did not have enough space in the dwelling.

In certain cases, interviewing female respondents alone turned out to be problematic: female respondents, especially among ethnic minorities, were afraid that their husbands would hear the answers.

Most respondents were annoyed by the questions related to the value of different assets. In particular, in one of the regions with ethnic minorities people assumed that such data is needed to estimate the value of their assets so that they would leave the country. In such cases, interviewers tried to reassure the respondents and additionally explained the survey goals and objectives.

(iii) **Selection of eligible respondents**. In most regions, many interviewers were confused with the concepts of household head and most knowledgeable member of the household, showing the necessity of additional training and explanations from supervisors. Some interviewers struggled with the procedure of random selection of a second (in households with no principal couple) or a third respondent for individual questionnaire. If interviews of an ineligible respondent were identified by supervisors, interviewers were sent back to the household to conduct an interview with the eligible household member.

(iv) **Team approach**. Interviewing household members separately was very useful in improving quality and reliability of information given by the respondent. The experience showed that the team of two interviewers was sufficient to conduct successful interviews for this survey.

As the pilot survey is about collecting gender-specific data, another desirable approach is gender matching of interviewer with that of the respondents. However, in Georgia the absolute majority of interviewers are traditionally females due to a number of reasons, including those of safety concerns on the part of respondents. The EDGE survey was no exception: most interviewers (87.1%) were females. Hence, the effects of gender-matching were not studied and no conclusions were drawn on gender-matching between enumerators and respondents.

To monitor field work progress, central office staff visited all regions after the first week of the fieldwork and checked the completed questionnaires. Short debriefing sessions with field staff were conducted to identify problems in the field and completion of questionnaires. After monitoring of all regions was finished, identified issues were compiled in one report and sent to all supervisors. The report included the number of filled-out questionnaires, refusals, as well as the number of households where the first visit had already been made, as of a particular date (usually end of a week).

The survey showed that (i) the non-response rate at the household level was higher in the urban areas than in rural areas; and (ii) individual level non-response cases were predominantly higher among males.

The nonresponse rate equaled 11.9%. Out of the 6,949 total number of individuals selected for the survey, 5,937 (85.4%) were actually interviewed. The nonresponse rate for males was 20.6% and females was 9.6%. Due to a high gender-based difference in non-response rate, the distribution of adults obtained from the sum of the survey weights turned out biased toward women. Consequently, in order to correct the bias, there arose the necessity of a post-stratification adjustment for the individual-level weights.

Table 5.1: Number of Adult Population based on Census, Unadjusted Weights,
and Post-Stratification

Sex	Number of Adult Population			
	Census	With Unadjusted individual weights	After post-stratification of household weights	After post-stratification of individual weights
Male	1,329,054	1,185,974	1,333,444	1,333,444
Female	1,547,996	1,729,094	1,581,624	1,581,624
Total	2,877,050	2,915,068	2,915,068	2,915,068

Source: 2014 General Population Census.

5.2 Other Survey Related Assessments

5.2.1 Qualitative Assessment of Survey Questionnaire

Assessment of the questionnaire design was one of the key objectives of pilot survey. For the purpose, a template was designed with the proper wording of questions and related instructions of the EDGE questionnaire. The information in the template was completed based on the qualitative remarks provided by the enumerators on completed questionnaires as well as the observations of enumerators and supervisors collected during debriefings.

As previously mentioned, the survey questionnaire included several modules and was divided into two parts. The first part is the household questionnaire containing the household roster with demographic, social, and economic questions on each household member. This part of the questionnaire also includes questions on the basic characteristics of the principal dwelling. These questions were designed according to the UN Statistics Division (UNSD) template modules and followed current practices used in comparable national household surveys. The second part is the individual questionnaire. Starting with Module 3, the information is solicited for each unique asset in each asset class, with the exception of Module 6B of "small agricultural equipment" which was removed from the survey.

The following are the main issues with regard to individual modules of the EDGE questionnaire:

Module 3B: Dwelling.

  (i) The rights to sell and bequeath assets were clear and easily understood by respondents in most cases (Q308, Q309).

(ii) It was difficult to estimate the value of construction of a dwelling, when a dwelling was built many years ago (Q312, Q313).

Module 4: Agricultural Land.

The major problem encountered was defining the difference between a backyard and an agricultural land plot. There was some uncertainty about receiving land plots via a state program, since after the collapse of the Soviet Union most households received land through a privatization process. Overall, questions were well understood. The only uncertainty was with the question about estimating the value of a parcel when there were no sale transactions in the neighborhood.

Module 5: Livestock.

The questions on individual livestock ownership were not often clear for respondents, as livestock in Georgian households is not owned personally but belongs to the household.

Module 6A: Large Agricultural Equipment.

(i) Interviewers sometimes failed to report on the same type of equipment separately (Q602).
(ii) Respondents found it difficult to estimate the value of agricultural equipment based on existing/recent sales value (Q608).

Module 7: Non-Agricultural Enterprises and Enterprise Assets.

(i) The word "enterprise" was confusing for most respondents (partly due to additional connotations in the Georgian language). It was explained that any activity for income generation is regarded as an "enterprise."
(ii) During training, some interviewers were confused about the difference between the number of activities in filter questions for Module 7 (QQ 701-708) and the number of enterprises that should be actually reported in the succeeding questions in this module.
(iii) Respondents also struggled to estimate the average number of hours per week the enterprise owner spent working on the enterprise (Q715).
(iv) The interviewers found it difficult to indicate sums in Questions 731 and 732. They were given an explanation that the amounts to be written in Q731 and Q732 could be equal in case if a person concerned did not expand/use material resources other than his/her own energy. For some own-account workers (such as processing of milk from own production into dairy products), it was difficult to recall all expenses for the last three months (Q732).

Module 8: Other Real Estate.

(i) The field personnel often neglected the connection between Module 7 and Module 8. They were given an explanation that if a household owned an enterprise located in separate premises, it must have been indicated by Code 3 in Question 805 of Module 8 (household commercial use). For example, shop premises owned by the household should be indicated in Module 8, while rented shop premises should be excluded from this module.

(ii) In Q818 respondents had difficulty estimating the value of construction of the real estate, especially if the dwelling was built many years ago.

Module 10: Financial Assets.

(i) Respondents were usually not pleased with discussing their financial assets, especially the value of the assets. Sensitivity of Module 10 resulted in extremely low incidence of financial assets.

(ii) Respondents mixed pension fund with the existing state pension allowances (Q1002).

Module 11: Liabilities.

The fieldwork showed that it was necessary to pay attention to the difference between taking a loan for a household use and for non-agriculture enterprise means.

Module 12: Valuables.

Similar to Module 10, respondents did not like to speak about their valuables. Detailed questions about valuables were often met with suspicion.

The asset-related modules were designed to (i) identify the owners of each asset including documented ownership for some assets such as the agricultural land, dwelling and other real estate; (ii) obtain values for agricultural land, dwellings, and other real estate by asking the current market price or hypothetical sale value; and (iii) identify hidden assets owned by respondents and those household members from whom the assets were hidden.

Major concerns raised by enumerators and supervisors during field work implementation of the questionnaire included the following:

(i) One of the points frequently raised by respondents was related to the difference of official (documented) ownership and economic ownership of dwelling, although the rights to sell and bequeath assets were clear and easily understood in most cases.

(ii) Some respondents were reluctant to answer questions on the sale value of assets, while others, despite their willingness to answer, struggled to provide such estimations due to the lack of knowledge of market prices or inexistence of markets for large assets, especially in rural areas. Respondents also had difficulties with estimating the construction cost of principal dwelling and other real estate. As a result, the shares of missing values related to valuing assets amounted to 60% to 70%.

(iii) Another major issue was the reporting of different values of assets for the same asset by multiple respondents in the same households. The results showed that obtaining consistent estimates of asset values across multiple respondents in households was difficult and resulted in inconsistent estimates.

(iv) Respondents deemed some questions sensitive and viewed them as breaching their privacy. Specifically, some old or ill respondents refused to answer hypothetical questions on bequeathing of assets while others were sensitive about responding to questions on financial assets.

5.2.2 Quantitative Assessment of Survey Questionnaire

Time needed to complete relisting of households was not recorded (as the exact time of completion of the respective modules in the questionnaire was not fixed). Table 5.2 provides a quantitative presentation of average time spent on interviewing a household by number of respondents while Table 5.3 presents distribution of primary respondents by gender, location, and their relationship to the head of the household.

Table 5.2: Average Time Spent on Interviewing (minutes)

Respondent category	Household questionnaire		Individual questionnaire	
	Urban	Rural	Urban	Rural
One male only	9.6	12.6	25.2	26.0
One female only	10.9	12.2	25.8	26.7
One male and one female only	11.6	13.4	29.1	30.3
Two respondents – both males	12.3	12.5	31.0	29.8
Two respondents – both females	12.3	13.3	28.3	29.6
Three respondents : 2 males & 1 female	13.0	16.0	30.1	32.1
Three respondents : 1 male & 2 females	12.3	15.5	29.0	30.9
Three males	12.0	17.5	34.0	22.5
Three females	13.7	16.0	27.3	31.2
All	11.8	14.0	28.3	29.7

The average time spent for interviewing using a household questionnaire was around 12 minutes. The average time for interviewing a household, in general, is slightly higher for rural than that for urban households. Due to its complexity, the individual questionnaire clearly required more time than the household questionnaire. The overall average time for administering the individual questionnaire is around 30 minutes.

The average time spent on interviewing per respondent in rural areas slightly exceeds that in urban households. Differences in time spent on interviewing individual males and females was not found to be significant. The profile of respondents shows (Table 5.3) that almost 90% of principal respondents were either a household head or the head's spouse.

Table 5.3: Distribution of Primary Respondents by Relationship with Household Head (%)

Relationship with head of household	Rural		Urban	
	Men	Women	Men	Women
Self	87.5	52.4	86.1	52.2
Spouse of head	0.2	36.5	0.2	37.1
Son/daughter	10.9	2.7	12.1	5.2
Parents	0.2	0.2	0.0	0.3
Grandchildren	0.6	0.0	0.7	0.4
Sibling (of head or spouse)	0.3	0.5	0.6	0.4
Other relatives	0.3	7.8	0.4	4.4
Non-relatives	0.0	0.0	0.0	0.0
Total	100	100	100	100

The results of the analysis related to response rates and missing data by gender and urban-rural location is given in Table 5.4 Using chi-square test the qualitative assessment of gender-based differences was performed with respect to such variables as sale value or construction cost of principal dwelling, agricultural land, enterprise assets, financial assets, etc.

Table 5.4: Summary of Results of Quantitative Assessment of Questionnaire Design

Attributes	Test for association[a] of responses with gender of respondents	Significant at 5% level[b] or not
Number of missing sale value for dwellings	(a) Sex of respondent	Significant
	(b) Sex of members of principal couple	Not significant for Urban only
Number of missing construction value for dwellings	(a) Sex of respondent	Significant
	(b) Sex of members of principal couple	Significant
Number of parcels located in areas where respondents were informed of land sales value	(a) Sex of respondent	Significant
	(b) Sex of members of principal couple	Not significant for Urban and Rural
Number of missing values for sale of agricultural land	(a) Sex of respondent	Significant
	(b) Sex of members of principal couple	Significant
Number of large agricultural equipment for which respondents were informed about recent sales transactions (rural only)	(a) Sex of respondent	Significant
	(b) Sex of members of principal couple	Significant
Number of missing values for sales valuation of large agricultural equipment (rural only)	(a) Sex of respondent	Significant
	(b) Sex of members of principal couple	Significant
Number of missing values of sale of enterprise assets (equipment/machinery/furniture):	(a) Sex of respondent	Significant
	(b) Sex of members of principal couple	Significant
	(c) Sex of enterprise owner of respondents	Not significant
Number of missing values for sales valuation of real estate	Sex of respondent	Not significant for Urban and Rural
Number of missing values for valuation of financial assets by type of financial asset	(a) Sex of respondent	Not significant
	(b) Sex of members of principal couple	Not significant

[a] Results are based on Chi-square test, unless otherwise mentioned.
[b] Test is significant means that the responses for the item provided by men and women respondents, or by men and women members of principal couple, or by men and women enterprise owners, as the case may be, is associated with the gender of respondents.

Source: Asian Development Bank estimates from the Evidence and Data for Gender Equality survey.

As we can see from the results, the sex of the respondent turned out to be statistically significant for the majority of assets. Non-significant results were obtained for the number of missing values on the valuation of financial assets. However, this could be the result of low frequencies.

5.2.3 Assessment of Hidden Assets

The analysis of the hidden assets, i.e., assets owned by a household member that no other household members are aware of, was done for six types of assets: agricultural land, agricultural equipment, non-agricultural enterprises, other real estate, financial assets, and liabilities.

Overall incidence of reported hidden assets turned out very small, constituting less than 2% for physical assets and around 12% for financial assets. A detailed assessment of reporting of hidden assets is provided in Table 5.5 and it can be seen that very few respondents reported hidden assets.

Table 5.5: Incidence of Self-reported Hidden Assets by Sex

Type of Asset	Number of respondents self-reporting ownership of asset		Number of respondent owners reporting ownership of hidden asset		Incidence of Self-reported Hidden Assets (%)	
	Men	Women	Men	Women	Men	Women
Agricultural land	1,309	1,331	2	2	0.2	0.2
Agricultural equipment	170	39	2	0	0.2	0.0
Non-agricultural enterprise	273	203	3	1	1.1	0.5
Other real estate	381	349	1	0	0.3	0.0
Financial assets	144	125	17	16	11.8	12.8
Financial liability	776	862	30	32	3.9	3.7

5.2.4 Assessment of Feasibility of Interviewing Household Members Selected for Interview

Some aspects of interviewing households such as distribution of households by status of interviewing households with principal couple, or households with three or more adults, etc. are discussed in this section.

Of the total number of households surveyed, 61% of the households had a principle couple and both members of the principal couple were interviewed in 84% of these households. Of the remaining households one member of the principal couple was interviewed. A much higher percentage of households with principal couple were interviewed in rural areas than in the urban areas. (Table 5.6).

Table 5.6: Distribution of Sample Households with Principal Couple

Sector	Total No of Interviewed HHs	HHs with principle couple (%)	HHs Interviewed (%)		
			Both Members of Principal Couple	One Member of Principal Couple	Neither Member of Principal Couple
Total	2,783	61.0	84.0	16.0	0
Rural	1,288	63.8	87.0	13.0	0
Urban	1,495	58.6	81.3	18.7	0

HH = household.

We see from Table 5.7 that in more than 80% of households, all eligible adult members were interviewed. On the other hand, in more than half of those eligible adult members were interviewed simultaneously.

Table 5.7: Distribution of Sample Households Interviewed by Strata

Strata	Number of sample HH interviewed	HH in which all eligible adult members were interviewed (%)	HH in which all eligible adult members were interviewed simultaneously (%)
HH with 3 or more adults	1,399	75.3	56.5
HH with 2 or fewer adults	1,384	89.5	47.8

5.3 Ways Forward

The pilot survey tested the methodology for standalone survey for collecting sex-disaggregated asset ownership data. The survey also filled the gaps existing in the collection of sex-disaggregated asset ownership data. The pilot survey implementation has demonstrated that it is feasible to collect individual level asset data through household surveys. The experience of the pilot survey has provided substantial inputs for the development of UN methodological guidelines on the subject of producing data on ownership of assets from a gender perspective.

The UN methodological guidelines address the gaps in the standard concepts, definitions, methods, and processes to collect sex-disaggregated data on ownership and control of assets and will be provide the needed guidance to the countries in implementing household surveys for producing sex-disaggregated data on ownership of asset.

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