



# MEASURING ASSET OWNERSHIP AND ENTREPRENEURSHIP FROM A GENDER PERSPECTIVE

Methodology and Results of Pilot Surveys in Georgia, Mongolia, and the Philippines

APRIL 2018

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##### *Top, left to right*

Herders cultivating fodder or animal feed that is more resilient to extreme weather changes, using plants that adapt to droughts. The Strengthening Carbon Financing for Regional Grassland Management is promoting climate smart agricultural activities (photo by Eric Sales, ADB); Produce and meat stalls do brisk business at the Kalibo Town Market. Traditional open markets remain part of everyday life throughout the Philippines (photo by Lester Ledesma, ADB); Mestia water supply and road rehabilitation project (funded by the ADB) beneficiary (Ms. Lela Shervashidze, owns a market) during the interview. 8 September 2013. Mestia, Samegrelo-Zemo Svaneti Region, Georgia (photo by Gia Chkhatarashvili)

##### *Bottom, left to right*

A seamstress working on one of her projects at her home in Mongolia (photo by Eric Sales, ADB); Street vendor prepares fruit juice by the roadside in Tbilisi, Georgia (photo by Eric Sales, ADB); Scenes from Barangay Katipunan, Pilar, Surigao Del Norte. Many families from the barangay are recipients of the Conditional Cash Transfer (4Ps) program of the Philippines. Several small infrastructure in the barangay were also funded by the Kalahi-CIDSS program (photo by Ariel Javellana, ADB).

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## Foreword

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The importance of women's ownership and control of assets in achieving gender equality and female empowerment is well-recognized. However, data on women's ownership of assets are sparse, with no comparable data or official statistics on individual-level asset ownership. Conventional household surveys only collect data on asset ownership at the household level and do not identify which household members own a specific asset and/or have economic rights over an asset. Thus, the range of sex-disaggregated analysis that can be done using data from such surveys are often limited to households headed by women versus households headed by men. Such data present barriers in better understanding intra-household dynamics of asset ownership rights and preferences.

While there has been increasing demand for statistics on asset ownership and control at the individual level, collection and production of the relevant data is not straightforward. Among other things, operationalizing the concepts of ownership and control is complex, and national statistical agencies have been partly constrained by the absence of standard guidelines and methods for collecting the required information on asset ownership and control.

To fill this methodological gap, the Asian Development Bank (ADB) collaborated with the United Nations Statistics Division (UNSD), United Nations Entity for Gender Equality and the Empowerment of Women (UN WOMEN), and other development partners to support the efforts of the global initiative Evidence and Data for Gender Equality (EDGE), which aims to standardize methods of data collection for comparable sex-disaggregated data, and advocate for mainstreaming gender statistics on asset ownership and entrepreneurship. This collaborative methodological work was realized through the ADB regional technical assistance project, Statistical Capacity Development for Social Inclusion and Gender Equality, in which ADB partnered with the national statistics offices of Georgia, Mongolia, and the Philippines.

Under the ADB project, the participating countries implemented stand-alone surveys to test the methodology and instruments developed under the EDGE initiative and collected individual-level data on a range of physical and financial assets using common methods and survey questionnaires contextualized to respective country situations. The successful implementation of the project was a result of a strong partnership between the three national statistics offices and the ADB project team.

Consultations on technical issues with the EDGE team of UNSD were frequently undertaken during project implementation. From the three pilot surveys, a variety of country experiences and lessons were drawn and analyzed. This report documents the collective experience and results of the surveys from the three countries. Overall, the report describes the data collection strategy, survey design and operations, data processing, estimation of survey results, and draws lessons from the experience in implementing the survey methodology and instruments from the three countries.

The pilot surveys under the project were implemented for the first time by the national statistics offices of the three countries and demonstrated the value of the stand-alone new survey approach. Apart from providing methodological lessons, they have for the first time quantified what is owned by women and men in Georgia, Mongolia, and in Cavite, Philippines. Finally, consolidated results and findings of these efforts have provided



substantial inputs for the establishment of a conceptual framework and refinement for finalization of standard UN guidelines for generating sex-disaggregated data on asset ownership for the national statistics offices to use in the future. Draft guidelines on the subject were presented by the UNSD to the UN Statistical Commission in March 2017 and are currently being finalized.

Simultaneously, with this report, the individual country reports of Georgia, Mongolia, and the Philippines were also prepared on similar lines by the three countries with the support of ADB project team. All project activities—since its inception for planning of pilot surveys until the production of country reports and this report—were synchronized. The country reports follow a similar structure as this consolidated report and describe the survey methodology, results, experience, and lessons learnt from the pilot survey implementation.

The project has demonstrated the feasibility of collecting data on asset ownership and control at the individual level in household surveys. The guidelines will help national statistics offices implement these complex surveys to meet the data gaps and provide evidence for policies that can empower women by encouraging their ownership and use of productive assets. The undertaking of these surveys should be supported by the coordinated efforts of development agencies not only by raising awareness about the guidelines but also helping countries implement them.

We hope that this report becomes 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.



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The project design and implementation immensely benefitted from a series of technical discussions for preparing survey instruments and instructions manual with Francesca Grum, Gulab Singh, Haoyi Chen, and Lauren Pandolfelli of the UN Statistics Division's EDGE team. They also provided valuable inputs during pilot survey implementation and joined the ADB team to train the project staff of the national statistics offices of the three pilot countries.

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**Rana Hasan**

Director

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## Abbreviations

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ADB	Asian Development Bank
CEDAW	UN Convention on the Elimination of All Forms of Discrimination against Women
CSS	circular systematic sampling
EDGE	Evidence and Data for Gender Equality
ENH	National Household Survey
FAO	Food and Agriculture Organization of the United Nations
GAGP	Gender Asset Gap Project
GDP	gross domestic product
Geostat	National Statistics Office of Georgia
HIES	Household Income and Expenditure Survey
HSES	Household Socio-Economic Survey
IAEG-SDGs	UN Interagency Expert Group on Sustainable Development Goals
LFS	Labor Force Survey
LSMS	Living Standards Measurement Survey
MCW	Magna Carta of Women
MDG	Millennium Development Goal
MEXA	Methodological Experiment on Measuring Asset Ownership from a Gender Perspective
NSO	national statistics office
NSOM	National Statistics Office of Mongolia
OAAR	ownership assigned by any respondent
OAE	own-account enterprise
OECD	Organisation for Economic Co-operation and Development
PPP	purchasing power parity
PPS	probability proportional to size
PSA	Philippine Statistics Authority
PSU	primary sampling unit
SAO	self-assigned ownership
SDG	Sustainable Development Goal
SNA	System of National Accounts
SSS	second-stage stratum
SSU	second stage sampling unit
TOT	training of trainers
UN Women	United Nations Entity for Gender Equality and the Empowerment of Women
UNSD	United Nations Statistics Division
USU	ultimate stage unit
WEAI	Women's Empowerment in Agriculture Index

## Executive Summary

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### Introduction

- A growing literature confirms that women’s ownership and control of assets is integral to addressing gender inequality and thereby contributing to the achievement of the sustainable development agenda. However, comparable sex-disaggregated data that are required for monitoring progress on gender equality, including data related to many Sustainable Development Goals (SDGs), are limited.
- The Evidence and Data for Gender Equality (EDGE) initiative of the United Nations Statistics Division (UNSD) and United Nations Entity for Gender Equality and the Empowerment of Women (UN Women) aims to fill the data and methodological gaps that hinder production of gender statistics needed for monitoring progress on gender equality.

### ADB-supported Pilot Surveys on Measuring Asset Ownership and Entrepreneurship from a Gender Perspective

- In support of the global EDGE initiative, the Asian Development Bank (ADB), in partnership with the national statistics offices of Georgia, Mongolia, and the Philippines, conducted pilot household surveys to inform the development of methods and guidelines for collecting data on asset ownership and entrepreneurship from a gender perspective. The study covered the following types of assets: dwelling, agricultural land, livestock, small and large agricultural equipment, nonagricultural enterprise owned by household members and enterprise assets, other real estate, consumer durables, financial assets, and valuables. The study also gathered information on liabilities.
- The surveys in Georgia and Mongolia were nationally representative covering 2,783 and 2,962 households, respectively, while the Philippines survey was representative for the province of Cavite with 1,536 households surveyed. A total of 5,937 individual respondents in Georgia, 5,592 in Mongolia, and 3,456 in Cavite, Philippines were interviewed to collect individual-level data on asset ownership. For each sampled household, the interview protocol of the survey required interviewing a maximum of three adults separately and simultaneously, to report assets that they or other members of the household own, either exclusively or jointly.
- In general, asset ownership as operationalized in the pilot surveys is associated with a bundle of rights, which, in turn, defines different types of ownership. A person may be classified as a *reported owner* if at least one respondent within the household reports that person as an owner of a specific asset, 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 approaches were adopted for assigning ownership in this study—*ownership assigned by any respondent (OAAR)* and *self-assigned ownership (SAO)*. Under the OAAR 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 SAO

approach, which is more restrictive, considers someone as an owner only when he or she identifies himself or herself as an owner.

### **Incidence of Asset Ownership**

- The incidence of ownership measures what percentage of the total adult population, male population, or female population, were asset owners. The data reveal that men, in general, are more likely to be asset owners than women, though the extent of gender disparities varies according to type of assets considered and across countries. For instance, men are twice as likely as women to be documented or reported dwelling owners in Mongolia. On the other hand, the difference in incidence of documented or reported ownership of dwelling between men and women is less pronounced in Cavite, Philippines. The incidence of ownership of agricultural land, whether documented or reported, is significantly higher among adult men and women in Georgia compared to Mongolia and Cavite, Philippines. Further, compared to women, men are also more likely to be owners of agricultural land.
- In Georgia and Mongolia, men are more likely than women to be reported owners of nonagricultural enterprises. In Georgia, men are 1.8 times as likely as women to own a nonagricultural enterprise. In Mongolia it is slightly lower, at 1.3 times. In contrast, women in Cavite are 1.3 times more likely as men to own nonagricultural enterprises.
- For assets where having a document of ownership is relevant, incidence rates for reported ownership are relatively higher than documented ownership, implying that not all who reported owning asset(s) also have their names documented in the registration documents.

### **Forms of Asset Ownership**

- Analysis of the forms of ownership reveals whether an asset is owned *exclusively* or *jointly*. The results of the pilot surveys suggest that majority of the reported owners of assets considered in the study are either men with exclusive ownership or couples with joint ownership. For instance, in Mongolia and Cavite, Philippines, more than half of the adults owning agricultural land, dwellings, and other real estate are either men with exclusive ownership or couples owning the assets jointly. For Georgia, however, agricultural land, dwelling, and other real estate ownership by all household members is more common than exclusive ownership or joint ownership among couples.
- In Georgia, Mongolia, and Cavite, Philippines, more than 50% of adults owning nonagricultural enterprises are either men with exclusive ownership or couples with joint ownership.

### **Alienation Rights of Asset Owners**

- Alienation rights of owners include the right to sell or bequeath an asset. The right to sell an asset means that a person can permanently give an asset away to others in exchange for cash or payment in kind. The right to bequeath an asset means that a person can give an asset away to another person, usually through a will. Survey data on reported ownership of assets show that male owners are more likely than women to

have alienation rights to sell or bequeath core assets, such as dwellings and agricultural land. For instance, the estimates for the right of sale of dwelling units for men are 90% versus 80% for women in Georgia, 97% for men versus 90% for women in Mongolia, and 93% for men versus 88% for women in Cavite, Philippines.

- About 20% of female owners in Georgia report that they do not have the right to sell their owned dwelling units or agricultural land. Around 10% of female owners in Mongolia and 12% in Cavite, Philippines reported that they do not have the right to sell their owned dwelling units. These numbers are much lower for male owners. This implies that while women may be reported as owners, they may have limited bargaining power when it comes to selling these two types of assets.

## Other Analytical Findings

- The survey also reveals that men and women acquire assets by different modes, which might have important implications for policy action for addressing gender inequalities. For the dwelling unit, the market is the dominant means of asset acquisition for about half of the women dwelling owners in Mongolia and Cavite, Philippines; in Georgia, however, women are most likely to acquire their dwelling through marriage or custom. On the other hand, men in Mongolia and Cavite, Philippines who are most likely to purchase their dwelling; but for male owners in Georgia, a gift from a household member is the dominant mode of acquisition. Inheritance, whether natal or marital, while not totally unimportant, is also not a typical means of acquiring a dwelling. As for agricultural land, the dominant means of acquisition is through purchase in Georgia, via government program in Mongolia, and through natal family inheritance in Cavite, Philippines. On the other hand, nonagricultural enterprises were mostly founded directly by the owners and no substantial difference is observed between men and women.
- The estimated proportion of people owning assets is generally higher using the OAAR approach than the SAO approach. However, the extent of difference between the incidence of ownership of assets under the two approaches varies across different types of assets. For instance, the estimates of incidence of asset ownership from the SAO approach are slightly higher for dwelling in Mongolia compared to estimates from the OAAR approach. Significantly, as ownership assigned by any respondent is influenced due to proxy reporting, SAO is considered more reliable and operationally the more feasible approach for data collection and analysis.

## Conclusion

- The EDGE pilot surveys conducted in Georgia, Mongolia, and Cavite, Philippines and implemented under ADB's technical support produced rich inputs for the finalization of the United Nations *Guidelines for Producing Statistics on Asset Ownership from a Gender Perspective*. In particular, the experience of the pilot surveys have proved that while such an initiative is challenging, it is possible to collect high quality data on ownership of assets at the individual level with a carefully designed household survey around a standardized framework.
- These stand-alone surveys were implemented for the first time in pilot countries and thus also quantified for the first time the incidence and related indicators of asset ownership by men and women and related indicators. The estimated values of indicators indicate the gaps in the ownership of assets between men



and women. The extent of gender gaps varies by country and by asset type in each country, but generally, inequalities are higher in respect of the core assets such as dwelling, agricultural land, and other real estate. The surveys also provide evidence on how men and women acquire assets, on whether these assets are owned exclusively or jointly with a spouse or partner or other household members, and how social norms and customs and marital regimes interact in determining the mode of acquisition differently for men and women.

- Valuable lessons were learned on improving survey methods, questionnaire and survey design, interview protocols, field operations, and processing of data in the implementation of the field surveys. As such, the most significant contribution of the pilot surveys has been in informing the development of the United Nations *Guidelines for Producing Statistics on Asset Ownership from a Gender Perspective*, which will enable collection of comparable statistics on the subject by the national statistics offices using a standardized framework, thus creating evidence to support policies and programs aimed at increasing the ownership of productive assets by women.

## Chapter 1: Introduction

Research shows that there is a strong positive correlation between ownership of productive assets and the long-term well-being of individuals. Asset-based indicators are a better yardstick of long-term well-being than income because income flows may significantly fluctuate from one period to another, while stocks of assets are accumulated over time. In large measure, access to opportunities is conditioned by the assets that individuals own, be they human, financial, natural, physical, or social capital assets (Deere et al. 2012). In general, assets help generate income and may also be considered as a store of value. Asset ownership empowers individuals economically, allowing them to benefit from their productive use. Assets also serve as cushion during shocks, as well as collateral should their owner decide to apply for credit.

Although patterns of asset ownership are good proxy measures of the long-term well-being of households, a simple examination of the range of assets owned by a household does not provide adequate information on the well-being of individual members of the household. This is because individual well-being and household well-being do not necessarily move together, with gender being one of the main differentiating factors (Doss et al. 2011). For a variety of reasons, women are generally less likely to own assets, thereby rendering them more vulnerable than men. Ownership and control of assets by a woman improves her own welfare as well as that of her household and community. It can enhance a woman's bargaining power within the household as well as her involvement in decision-making processes. Ownership of assets also expands women's range of choices and abilities to respond to opportunities (Deere et al. 2012, Klugman et al. 2014, Swaminathan et al. 2012). These benefits lead to improved schooling statuses and better nutrition for children, as well as improved self-esteem and decreased chances of spousal violence.

There is evidence suggesting that women tend to have less access to a range of productive assets or inputs, including land and financial capital, which allow them to increase their output and productivity (Alkire et al. 2012 and World Bank 2012). Barriers to women's ownership, access, and control over productive assets are major factors that contribute to gender inequality. Striving toward gender equality in ownership and control of assets not only covers a person's right to property, but also provides an assurance that both men and women are able to own resources that would invariably improve their situation in life in many ways.

The importance of women's ownership and control of assets in achieving gender equality and female empowerment has been recognized in several high profile meetings such as the Convention on the Elimination of All Forms of Violence against Women (CEDAW) in 1979 and the Beijing Platform for Action in 1995. The significance of ownership and control of land and other resources is also recognized in the fifth goal of the 2030 Sustainable Development Agenda (Box 1.1). Despite this long recognition, data on women's ownership of assets are sparse. In particular, there is no comparable data or official statistics on individual-level asset ownership.

The Evidence and Data for Gender Equality (EDGE)<sup>1</sup> initiative aims to facilitate regular compilation of sex-disaggregated statistics to promote evidence-based policymaking. It is a multi-stakeholder initiative led by the United Nations Statistics Division (UNSD) and the United Nations Entity for Gender Equality and the Empowerment of Women (UN WOMEN) in collaboration with national statistics offices (NSOs), the Asian Development Bank (ADB), the Food and Agriculture Organization of the United Nations (FAO),

<sup>1</sup> United Nations, Department of Economics and Social Affairs, Statistics Division. Evidence and Data for Gender Equality (EDGE). <https://unstats.un.org/edge/>.

**Box 1.1: Asset Ownership in the 2030 Sustainable Development 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. Sustainable Development Goal (SDG) 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.<sup>a</sup> The three indicators agreed for monitoring this target are:

- 5.a.1 (a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex;
- 5.a.1 (b) Share of women among owners or rights-bearers of agricultural land, by type of tenure; and
- 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<sup>b</sup> 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.

<sup>a</sup> United Nations. Sustainable Development Goals. Global Indicator Framework for the Sustainable Development Goals and Targets of the 2030 Agenda for Sustainable Development. <https://unstats.un.org/sdgs/indicators/indicators-list/>.

<sup>b</sup> 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. Tier I indicators are “conceptually clear, have 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/>.

the Organisation for Economic Co-operation and Development (OECD), and the World Bank.

As key partners in the EDGE initiative, ADB and the NSOs of Georgia, Mongolia, and the Philippines conducted pilot household surveys designed to measure asset ownership and entrepreneurship from a gender perspective with the objective of contributing to the development of methodological guidelines<sup>2</sup> on the subject. The surveys conducted in Georgia and Mongolia are nationally representative while the survey conducted in the Philippines covers only the province

of Cavite. This report documents the methodological and substantive findings from the pilot surveys.

**1.1 The Need for Data on Asset Ownership**

Developing standard measures and indicators for monitoring the extent of gender equality in terms of asset ownership and control based on comparable data is not easy. Sex-disaggregated data may be limited or unavailable since most national surveys only collect information on assets that are collectively owned by households. Further, in conventional household surveys, the number of respondents is usually limited to one per household, oftentimes the head or the “most knowledgeable” member (Deere and Doss 2006a).

<sup>2</sup> The draft UN Guidelines for Producing Statistics on Asset Ownership from a Gender Perspective were prepared by the United Nations Statistics Division and presented at the 48th Session of the UN Statistical Commission on 7 – 10 March 2017. The final Guidelines are forthcoming and shall be released on the UNSD website at <https://unstats.un.org/home/>.

Due to constraints on data availability, most researchers conduct gender analysis by simply disaggregating data by the sex of the household head. This type of analysis is inadequate since assets are owned by individuals either as sole owners or jointly with one or more individuals. It may also introduce biases for several reasons. It is more likely for female adults to be living in households headed by men than it is for male adults to be living in households headed by women (Deere and Doss 2006b). For surveys that are specifically designed to collect data on ownership and control of assets, collecting information from just one person may be problematic as the chosen respondent may not have complete knowledge about all the assets held by each household member. Proxy reporting by the head of the household, which is commonly practiced in many household surveys, is likely to result in response bias or inaccuracies due to imperfect sharing of information among the household members. Lastly, the concept of household head is subjective and may differ across households and countries, leading to challenges with respect to international comparisons (Deere et al. 2012). A household head may be identified as the person who has the highest educational attainment, the member who is the primary decision-maker, the breadwinner, or, in the case of more traditional households, simply the eldest male (Deere and Doss 2006a, Kilic and Moylan 2016). Feminists also argue that the notion of having a single head proves to be problematic due to the implicit assumption of a patriarchal system in the household.

As owners of assets, men and women may have different perceptions of ownership related to property rights, knowledge of the value of assets, and ideas on how assets are used and disposed. Additionally, it is important to obtain self-reported individual-level data from the target respondents. Doing so would bring into clearer focus any existing gender disparities in asset ownership. Such data would also shed light on how the attitude of men and women differs regarding assets—acquisition, use, and disposal. Ultimately, the availability of individual

-level data on asset ownership would enable a more complete understanding of women’s economic well-being.

## 1.2 Existing Data and Data Sources

Recent years have seen numerous initiatives toward collecting individual-level data. Projects such as the Demographic and Health Surveys; the FAO World Programme for the Census of Agriculture; the Gender Asset Gap Project in Ghana, Ecuador, and Karnataka, India;<sup>3</sup> the Women’s Empowerment in Agriculture Index (WEAI); and the World Bank’s Living Standards Measurement Study-Integrated Surveys on Agriculture collect individual-level data and include questions regarding asset ownership. While the coverage of these initiatives may be limited, their existence paves the way toward a more comprehensive and complete data collection methodology and standard (UNSD 2017).

Each of these initiatives explores different ways of collecting individual-level data on asset ownership, ranging from using separate household and individual questionnaires to testing alternative fieldwork and interviewing techniques. The Demographic and Health Surveys funded by the United States Agency for International Development, for instance, focus on women aged 15–49 and utilize two questionnaires: one for the household and another for the individual respondent. Although the survey’s main goal is to gather data regarding reproductive health, fertility, and family planning, recent iterations of these surveys in some countries include questions on the ownership of agricultural land by individual female respondents. Responses such as “no ownership,” “sole ownership,” “joint ownership,” or “both sole and joint ownership” to the question “Do you own

<sup>3</sup> 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>.

any land either alone or jointly with someone?” would provide self-reported data on ownership from the respondent (ICF 2017).<sup>4</sup>

The Gender Asset Gap Project used a two-phased data collection approach: qualitative fieldwork followed by a quantitative assets survey. The qualitative fieldwork phase used focus group discussions to collect data, where each discussion had four main themes: (i) the accumulation of assets over the individual life cycle, (ii) the importance of assets, (iii) the market for assets, and (iv) household decision-making over asset acquisition and use. Key informant interviews and literature reviews, which gathered information on inheritance, legal, and marital regimes, were also conducted to complement the focus group discussions. The quantitative assets survey utilized separate questionnaires for interviewing two individual respondents, typically a male and a female. The questionnaires were used to collect data on an inventory of a wide range of physical and financial assets and their ownership and valuation details. Among other topics, the individual questionnaire collected detailed data corresponding to the decisions and claims on these assets, as well as their awareness of laws on property and inheritance (Doss et al. 2013).

The Living Standards Measurement Study-Integrated Surveys on Agriculture is a multi-topic panel household survey program, supporting seven countries in Sub-Saharan Africa. The panel component of the survey makes it possible to track the activities and migration patterns within each household which may have implications for

ownership and control of assets. While there is no separate module for assets, questions in the different modules include those for housing characteristics, agricultural land and equipment, livestock, and consumer durables, to name a few. In addition, the bulk of the data gathered may be disaggregated at the individual and the plot level, thereby providing information on individual-level ownership of and decisions over assets (Himelein 2012).

Apart from collecting data on asset ownership, the WEAI, which was developed by the International Food and Policy Research Institute, also monitored the extent of women’s power or control over a range of assets. The methodology of the WEAI involves interviewing two respondents for each household—one male and one female. Rather than asking about the individual-level ownership of each asset, inquiries aim to determine who controls an asset in terms of decision-making for its sale, mortgage, or rent. Data collected for the WEAI reveal discrepancies in the perception of control over assets in each household (Alkire et al. 2012).

The FAO World Programme for the Census of Agriculture is somewhat different from the other studies mentioned, as it focuses on the agricultural holding<sup>5</sup> instead of the household. Within each holding, data on the holder—defined as the person in charge of making major decisions regarding the management, operation, and use of the holding—are collected. The protocol makes a provision for cases where multiple persons are responsible for decision-making concerning a holding. In addition, FAO also gathers data on subholdings to take into account

<sup>4</sup> Within the Demographic and Health Surveys, sole ownership is exhibited when a respondent owns an asset, say land, and that respondent is the only owner of the land. When the respondent owns land together with someone else, the respondent is said to have joint ownership. If the respondent owns land on their own and another land together with someone else, that respondent is said to have both sole and joint ownership. The respondent is said to have no ownership when he/she does own land either jointly or solely (ICF 2017).

<sup>5</sup> As defined by FAO, “an agricultural holding is an economic unit of agricultural production under single management and comprises all the livestock kept and all the land used, wholly or partly, for agricultural production purposes, without regard to title, legal form or size. Management may be exercised in the following ways: singly, by an individual or household; jointly, by two or more individuals or households; by a clan or tribe; or by a juridical person such as a corporation, cooperative or government agency. The holding’s land may consist of one or more parcels, located in one or more separate areas or in one or more territorial or administrative divisions, providing that they all share such means of production as labor, farm buildings, machinery, or draught animals.” (FAO 2017).

the role of other household members. This becomes useful for holdings that are divided into smaller parcels or plots and managed by other individual household members (FAO 2017).

These initiatives provide a solid base for data collection and analysis on individual-level asset ownership. However, the scope of their coverage is limited and no standardized set of definitions and methodology exist for collecting and analyzing data on individual-level asset ownership. It is imperative to have common guidelines on how to collect such data.

### 1.3 ADB Regional Capacity Development Technical Assistance: Statistical Capacity Development for Social Inclusion and Gender Equality

#### 1.3.1 Background and Rationale of the Technical Assistance

One of the key objectives of ADB's regional capacity development technical assistance (TA) on Statistical Capacity Development on Social Inclusion and Gender Equality was to help fill the need for timely sex-disaggregated data on asset ownership and entrepreneurship using standard methodological guidelines and compiling related indicators. It also aimed to improve the capacity of NSOs in producing such data using standard methods.

ADB, together with development partners AfDB, FAO, ILO, OECD, and the World Bank, joined the global EDGE project—a joint initiative of the UNSD and UN Women geared toward fast-tracking the progress and the existing efforts in the generation of comparable and timely sex-disaggregated indicators on asset ownership and entrepreneurship. In this regard, one of the important objectives of the EDGE initiative is the establishment of

methodological guidelines and standard definitions on measuring asset ownership and entrepreneurship from a gender perspective (UNSD Evidence and Data for Gender Equality).

In partnership with the global EDGE initiative, the TA project aimed to:

- (a) Contribute to the development of methods for data collection on asset ownership and entrepreneurship from a gender perspective under the global EDGE initiative.
- (b) Assist participating countries Georgia, Mongolia, and the Philippines in adapting the standard methodology for conducting pilot surveys mentioned in (a).
- (c) Use the pilot surveys experience and results to inform the development of EDGE guidelines on collecting data on ownership of assets and entrepreneurship from a gender perspective and present the same before the UN Statistical Commission.

ADB partnered with the NSOs of Georgia, Mongolia, and the Philippines for the conduct of the pilot surveys. The project was implemented with technical and financial assistance from ADB and in close collaboration with the global EDGE team at the UNSD and the participating countries. The surveys were country-driven with the direct involvement of NSO representatives from the pilot countries from the development of questionnaires and guidelines to the release of survey results.

The pilot survey data collection was organized in such a way that the data could not only be disaggregated by sex, but also by other social and demographic characteristics such as age, employment status, ethnicity, location, or religion of individuals.



### 1.3.2 Survey Implementation

#### Selection of Pilot Countries

One of the crucial steps in conducting the pilot surveys was the selection of the participating countries. The participating countries under the ADB project were determined (i) based on their willingness to be involved in and commitment to the project, (ii) through a review of the regular survey program, and (iii) based on the capacity of the executing agencies to implement this complex survey. A tentative list of countries was drawn up, from which three countries were selected after consultations with their NSOs. In addition to these three countries supported under ADB's technical assistance project, pilot surveys were also conducted by other partners in Maldives, Mexico, South Africa, and Uganda under the global EDGE initiative.

**Country context.** The three countries that participated in the EDGE pilot survey differed in terms of geography, demographic features, administrative structure, and economy. Social and legal factors that govern asset ownership and corresponding actions such as acquisition, bequeathing, and sale also differed among the pilot countries. These factors include constitutional provisions and existing laws on inheritance and marital regimes, as well as social customs and practices. Knowledge of these factors is especially important when talking about asset ownership, as understanding the country's social and legal context contributes to designing appropriate survey instruments and field protocols for collecting reliable sex-disaggregated data. Examining country-specific laws, customs, and values facilitate a better understanding of the differences in gender roles, activities, and opportunities. Apart from these, contextual information help in qualifying the evidence to context-specific issues of the country.

- (i) **Georgia.** Georgia is located at the crossroads of Europe and Asia in the Caucasus and its total population is

estimated at 3.72 million<sup>6</sup> in 2016. The urban population (57.2%) is slightly greater than the rural population (42.8%) of the country. Georgians constitute the largest ethnic group in the country, accounting for 86.8% of the population. The next two largest ethnic groups are Azeris (6.3%) and Armenians (4.5%). The gross domestic product (GDP) per capita was estimated at \$3,852.5 in nominal terms and \$9,267.3 in purchasing power parity (PPP) terms (2016). The male–female population ratio is 1.11:1 in 2015. Gender equality is an important area of discourse in Georgia. The government recognized the need to address issues on gender equality as early as 1994 during the Parliament's ratification of the United Nations (UN) Convention on the Elimination of All Forms of Discrimination against Women (CEDAW).<sup>7</sup> Other related pieces of legislation with provisions on gender equality followed, including the enactment of The Constitution of Georgia in 1995 and the 2010 Law on Gender Equality.<sup>8</sup> Article 38 of The Constitution of Georgia<sup>9</sup> states that “Citizens of Georgia shall be equal in social, economic, cultural and political life irrespective of their national, ethnic, religious or linguistic belonging.” Article 10 of the Law on Gender Equality stipulated gender equality in family relations and stated that “spouses shall have equal rights to own, acquire, manage, enjoy, and administer property.”

- (ii) **Mongolia.** With an area covering 1,564,116 square kilometers and a population of around

<sup>6</sup> Government of Georgia, National Statistics Office. Population. [http://www.geostat.ge/index.php?action=page&p\\_id=152&lang=eng](http://www.geostat.ge/index.php?action=page&p_id=152&lang=eng).

<sup>7</sup> <http://www.un.org/womenwatch/daw/cedaw/cedaw21/georgia.htm>.

<sup>8</sup> The Law of Georgia on Gender Equality, 2010. <https://matsne.gov.ge/en/document/download/91624/3/en/pdf>.

<sup>9</sup> Government of Georgia. The Constitution of Georgia, 1995. [http://www.parliament.ge/files/68\\_1944\\_951190\\_CONSTIT\\_27\\_12.06.pdf](http://www.parliament.ge/files/68_1944_951190_CONSTIT_27_12.06.pdf).

3.22 million<sup>10</sup> in 2015, Mongolia is among the largest and most sparsely populated countries in the world. The male–female population ratio is 1:1.04 in 2015.

Ulaanbaatar is the capital and largest city, where an estimated 45% of the country’s population lives. About 30% of the country’s population is nomadic or seminomadic. The majority of Mongolia’s topography is grassy steppes, and thus have little arable land. Mountains dominate the northern part of the country while the Gobi Desert lies in the south. In Mongolia, there are several pieces of legislation with gender-related provisions on asset ownership such as the 1992 Constitution of Mongolia, the 2002 Civil Code, and the 2002 Law of Mongolia on Land. The Constitution of Mongolia states that “men and women have equal rights in the political, economic, social, cultural life and family relations.”<sup>11</sup> The Civil Code stipulates that “all properties accrued for the period of life together since marriage, except for personal property of family members, shall be joint property.” This law also states that “wife, husband, and other members of the family, who did not earn income since the marriage due to engagement in household works, child caring, sickness and other sound reasons, shall be entitled to joint ownership of family property.”<sup>12</sup> The 2002 Law of Mongolia on Land, on the other hand, states that “Mongolian citizens 18 years and over, companies, organizations and companies with foreign investment may possess or use land in compliance with this law.”<sup>13</sup>

(iii) **Cavite, Philippines.** Cavite is a province situated in the Philippines island of Luzon. It has 6 cities, 17 municipalities, and 829 barangays. Its total land area is 1,426.06 square kilometers, bounded by the Manila Bay at its northwest, Metro Manila at its northeast, Laguna at its west, and Batangas at its south. Cavite is the most heavily populated province with 3,678,301 residents per the 2015 Census of Population. Population grew by 3.37% every year between 2010 and 2015, making Cavite the fastest-growing province in the Calabarzon region. Male–female population ratio is 1:1.01 based on the 2010 Census of Population and Housing. The province’s topography ranges from lowest lowland area (coastal plain), lowland area (coastal and alluvial plains), central hilly (rolling tuffaceous plateau) to upland mountainous area (flat to rugged topography).

The province of Cavite in the Philippines was selected as the pilot province for the EDGE project for technical and practical reasons. Cavite is a mixture of both urban and rural areas. The PSA Central Office and Regional Office in CALABARZON are near the pilot area and thus, supervision and management of the project were deemed easier.

The Philippines’ efforts on addressing gender equality dated back to 1981 when the country ratified CEDAW.<sup>14</sup> The Philippines’ 1987 Constitution<sup>15</sup> included provisions recognizing women’s part in nation-building and the State’s responsibility to ensure gender equality. The Magna Carta of Women (MCW) is another important legislation providing equality in marriage and family matters. The MCW included provisions on equal rights of

<sup>10</sup> Government of Mongolia, Mongolian Statistical Information Service. Population of Mongolia, by single age and sex. [http://www.1212.mn/tables.aspx?TBL\\_ID=DT\\_NSO\\_0300\\_062V1](http://www.1212.mn/tables.aspx?TBL_ID=DT_NSO_0300_062V1).

<sup>11</sup> The Constitution of Mongolia. 1992. Article 16 Section 11. <http://www.crc.gov.mn/en/k/xf/1q>.

<sup>12</sup> Government of Mongolia. Civil Code. 2002. Article 126.1 and Article 126.4.

<sup>13</sup> Government of Mongolia. Law of Mongolia on Land. 2002. Article 6.1.

<sup>14</sup> Philippine Commission on Women. <http://www.pcw.gov.ph/international-commitments/cedaw/philippine-participation>.

<sup>15</sup> Government of the Philippines. 1987. The Constitution of the Republic of the Philippines. Article II, Section 15.

spouses in terms of “ownership, acquisition, management, administration, enjoyment and disposition of property.”<sup>16</sup> The Family Code of the Philippines<sup>17</sup> stipulated supplementary provisions on property relations between husband and wife, i.e., in marriage settlements, spouses may agree upon the following property regimes: absolute community, conjugal partnership of gain, complete separation of property, or any other regime.

**Survey period.** The EDGE survey data were collected in 2015, but with varying survey periods in the three countries. The overall length of the fieldwork in the three countries spanned the months of September to November 2015, with slight variation due to previous engagements with regular surveys conducted in the respective countries.

**Reference period.** This refers to the time reference for which data are collected. In the pilot surveys, most questions related to ownership and valuation of assets used the date of the interview as the reference period. However, different reference periods were used for other items such as the last 7 days or the last 365 days for employment status, and average of last 3 operational months for items like income and turnover of enterprise. The respective reference periods were specified for each of these questions.

**Statistical unit.** This is the unit from which data are collected. In the pilot surveys, the households and individuals served as the statistical units. Data were collected using two questionnaires, one through the household questionnaire that collected household level information, and the second, through the individual questionnaire that collected data on the individual level. The respondent for the household module was ideally the primary respondent, and in the person’s

absence, the next person in line was their spouse or partner if applicable. In the individual questionnaire—meant for collecting information on ownership of various assets by type and form—information was independently obtained from a maximum of three selected adults, if available, within the selected households.

**Survey Respondents.** Information was collected from a maximum of three adults (i.e., aged 18 and above) respondents from each selected household. The primary respondent was an adult member of the household deemed as the most knowledgeable in terms of the information on ownership and control of assets needed in the pilot survey. The second respondent was the spouse or partner of the primary respondent if the spouse/partner was also a member of the same household. Together, they were referred to as the principal couple in the survey. The third respondent was the third available adult member of the household or a randomly selected adult from the remaining adult household members. If the primary respondent had no spouse or partner, and the household had more than three adults, two of the adults were randomly selected as respondents. The interviews with each respondent were done independently and simultaneously to the extent feasible and the information was recorded in separate individual questionnaires.

**Interview protocol.** As mentioned above, protocol required interviewing a maximum of three adults per sampled household simultaneously and independently. Each respondent provided self-reported information on the assets they held either exclusively or jointly as well as proxy information on the assets owned by all other adult members of the household. This approach enabled analysis of the self-reported data provided by each individual on assets owned by them, as well as the proxy data provided by them on assets held by other adult household members either exclusively or jointly with others. The data were collected by a team of trained enumerators and supervisors. Asset ownership data for all assets in the pilot survey were collected *de facto*; while information on ownership of

<sup>16</sup> Government of the Philippines. 2008. Republic Act No. 9710: An Act Providing for the Magna Carta of Women. Chapter V, Section 19.

<sup>17</sup> Government of the Philippines. 1987. Executive Order No. 209: The Family Code of the Philippines. Article 75.

### Box 1.2: Sampling Design

A two-stage stratified sampling design was adopted for the Asian Development Bank (ADB)–Evidence and Data for Gender Equality (EDGE) pilot surveys in Georgia and the Philippines. A selection of enumeration areas in Georgia and barangays in the Philippines served as primary sampling units (PSUs) from each stratum. Households within each selected PSU formed the second stage sampling units (SSUs). In the case of Mongolia, the design was extended at the first stage by selecting *aimags* (provinces), *bags* (districts) within the different regions and the capital city of Ulaanbaatar, leading to a three-stage selection process. The *aimags* within the four regions and Ulaanbaatar city as the fifth region constituted the PSUs while the *bags* within the selected *aimags* and *khesegs* (subdistricts) within Ulaanbaatar city made up the SSUs. The households within the selected *bags* and *khesegs* constituted the ultimate stage units (USUs).

**Second- or Ultimate-stage stratification.** The ADB-EDGE pilot surveys sampling design required information on the number of adults for each household in each selected PSU to further form two second- or ultimate-stage strata (SSS-1 and SSS-2 for Georgia and Cavite, Philippines or USS-1 and USS-2 for Mongolia) to ensure that a sufficient number of households with two or more adults and a principal couple would be selected for data collection:

- (i) SSS-1 or USS-1 are all households having three or more adults (aged 18 and above) and
- (ii) SSS-2 or USS-2 are the remaining households.

**Selection of units.** While the provinces within regions were selected with probability proportional to size (PPS) in Mongolia, the PSUs were also selected with PPS while the SSUs were selected following circular systematic sampling (CSS) with a random start in both Mongolia and Georgia. In the Philippines, where the survey was limited to only one province (Cavite), both the PSUs and SSUs were selected following CSS with a random start. In each country, the sample PSUs in each stratum was 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 target sample size was 158 PSUs for Georgia and 96 PSUs for the province of Cavite in the Philippines. For Mongolia, nine *aimags* from the four regions and the capital city Ulaanbaatar constituted the PSUs.

**Sample size—second-stage units.** Equal number of households was selected from each stratum at the PSU level in Georgia and Cavite, Philippines. Thus, if 16 households were targeted per PSU, eight were selected from each SSS. A sample of 3,160 households (20 households per PSU) was selected in Georgia; 1,536 (16 households per PSU) in Cavite, Philippines. The survey could finally collect data from 2,783 households in Georgia; and for all 1,536 in Cavite, Philippines. A total of 5,937 individuals were interviewed in Georgia, and 3,456 in Cavite, Philippines.

In Mongolia, the adjusted sample size was 188 SSUs (130 *bags* and 58 *khesegs*). The selected number of SSUs were allocated to nine selected *aimags* and Ulaanbaatar City using the square root of number of households. A total of 16 households were selected from each selected *bag* and *kheseg*, eight households each from the strata of households. A sample of 3,008 households were selected in Mongolia. About 2,962 households were surveyed and 5,592 individuals were interviewed.

However, achieving second- or ultimate- stage stratification required 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 but generating this extra listing required additional resources. In Mongolia, the information on the number of adults in the selected PSUs was available in the Population Register Database, which is dynamically updated. This served as the frame for Mongolia. In Georgia, the 2014 General Population Census was used to get the information on number of adults in the households in the selected PSUs. As for the Philippines, the enumerators generated a fresh listing of number of adults in the selected 96 PSUs by visiting each household in these PSUs. This list was compiled two months prior to the survey fieldwork.

The available information on the number of adults in the sampled households in each selected PSU was used to divide the households into USS-1 and USS-2 to select 8 sample households from each stratum.

selected assets (agricultural land, principal dwelling, and other real estate) were also collected *de jure* by posing questions on the existence of legal documents with the names of the owners. However, no attempt was made to verify if such documents existed.

**Sampling frame.** The listing of units used to obtain a sample is called the sampling frame. For surveys whose statistical unit is the household, censuses conducted by the NSOs are usually used as the sampling frame.

The General Population Census conducted in 2014 was used as the sampling frame in Georgia. Mongolia used their Population and Household Database, which is updated dynamically, and the update at the end of September 2015 was used as the frame. These two countries used their respective frames for selecting enumeration areas as primary sampling units (PSUs) and households as the secondary sampling units (SSUs). The Philippines used the 2013 Master Sample as the frame for selecting the PSUs. The list of households in the sampled PSUs was updated prior to household selection. Details of the sampling design are discussed in Box 1.2 and in more detail in Chapter 4.

### 1.3.3 Survey Organization

Each country established a project team comprising a project leader, who heads the social statistics unit in the organization; a sampling design expert; a survey operations expert; a data processing expert; and a gender statistics expert.

The draft ADB pilot survey questionnaires were prepared by the ADB project team based on the survey questionnaires developed by the UNSD EDGE team and were adapted to the country context according to the needs of each country. The questionnaires also underwent pretesting, which resulted in their further revision. After revisions, the questionnaires were finalized and translated into the countries' respective local languages.

During the whole process of aligning questionnaires to country context and pretesting, ADB provided technical supervision to the survey teams of the three countries.

**Training.** 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. UNSD and ADB resource persons conducted the training of trainers in each country while the trainers carried out the second phase of training. Training duration varied from 2 days to 5 days and these were composed of lectures, recapitulation, mock interviews, and field practice interviews in each country.

**Quality assurance of fieldwork.** In each country, a team of 2 to 4 enumerators conducted the field interviews. Each team was assigned a field supervisor who constantly guided and monitored the fieldwork. Upon completion of the interviews, the supervisors also checked the completed questionnaires and advised the enumerators to correct any errors found. They also provided feedback during the debriefing sessions on the inconsistencies or errors seen in the filled-in questionnaires, including proper recording of responses and following skip patterns in questions and instructions.

In addition to a supervisor, each team was composed of officials from the central office of the NSOs who monitored the field operations and provided technical overview on the data quality and control process.

**Data flow, documentation, and data processing.** The three countries followed a systematic procedure for their data processing. Upon completion of the interview, the enumerators had to review the questionnaire before leaving the household. This was done to ensure that all appropriate questions were asked and answered properly. Once done, the questionnaires were submitted to the supervisors, who reviewed the questionnaires for completeness,

consistency, and accuracy. If any mistakes were noted, these were highlighted and the questionnaires were returned to the enumerator for correction. The corrected questionnaires were then forwarded for data entry and corresponding checks to NSO's central office. Whenever necessary, the data processing team at the headquarters of the NSOs sought clarifications on filled-in questionnaires from the field enumerators and supervisors.

## 1.4 Report Structure

This report aims to present a detailed discussion of the background, methodology, results and lessons learned from the pilot surveys in Georgia, Mongolia, and Cavite, Philippines. It consists of five chapters.

Chapter 1 provides a discussion of the background, rationale, and coverage of the study, while Chapter 2 sets out the concepts, definitions, and procedures adopted in the survey.

Chapter 3 discusses the principal findings of the pilot surveys on ownership of assets and entrepreneurship, noting the differences between men and women and specific features in Georgia, Mongolia, and the Philippines. The discussion has

been divided into several sections: (3.1) Profile of Respondents and Households, (3.2) Incidence of Ownership, (3.3) Distribution of Type and Forms of Ownership, (3.4) Alienation Rights, (3.5) Modes of Acquisition, (3.6) Comparison of Self-Assigned Ownership Approach and Ownership Assigned by any Respondent Approach, (3.7) Distribution of Wealth: Dwelling Units, and (3.8) Nonagricultural Enterprise.

Chapter 4 provides an assessment of the quality of data obtained through the pilot surveys, while Chapter 5 assesses certain aspects of the survey methodology and operations, such as the questionnaire design, pretesting of questionnaires, and fieldwork experience. It also discusses lessons learned during the survey's implementation and some avenues for further efforts or improvement.

The report also provides the questionnaires used in the survey. The detailed tables with survey results relating to Chapter 3 are presented in <https://www.adb.org/publications/measuring-asset-ownership-entrepreneurship-gender-survey>. Additional 90 indicator tables and 36 quantitative assessment tables for the three countries are also provided in <https://www.adb.org/publications/measuringasset-ownership-entrepreneurship-gender-survey>.



## Chapter 2: Concepts and Methodology

As discussed in Chapter 1, the availability of sex-disaggregated data is important for monitoring progress towards gender equality. Due to the lack of standardized definitions and well-designed instruments and methods to collect relevant and comparable sex-disaggregated data on asset ownership and control, empirical evidence on this topic is sparse. One of the key objectives of the global Evidence and Data for Gender Equality (EDGE) initiative is to establish a set of standard guidelines on methods for data collection through household surveys for compiling indicators on asset ownership from a gender perspective. This chapter presents the concepts, definitions, survey methodology, and survey questionnaires used in the household surveys conducted in Georgia, Mongolia, and in Cavite, Philippines.

### 2.1 Key Concepts

#### 2.1.1 Conceptual Framework

In general, ownership is associated with a bundle of rights that define different types of ownership. However, all these ownership rights may not be vested in one single individual in a household and may vary in extent. Different types of ownership rights with respect to access to, use of, and/or 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, a person may report himself/herself to be an owner of an asset, but the legal document may not reflect this.

Figure 2.1 illustrates the conceptual framework for collecting data on asset ownership. Under this framework, ownership is associated with a bundle of rights, which is associated with 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 his/her 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 he/she has the ability to permanently transfer the asset in return for cash or in kind) and the *right to bequeath* (if he/she has the ability to transfer ownership of the asset by oral or written will).

In addition to the types of ownership, there are 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 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, a monetary figure can be attached to every asset, and the resulting wealth from owning a bundle of assets can be computed both at the household and individual level. Differences in the modes of acquisition may indicate issues in the accessibility of assets and hold policy relevance for inheritance, marital regimes, and purchase. Gender gaps in wealth provide a complementary perspective to gaps in the incidence of assets as they account for differences in the quality of assets and in the value of assets owned.

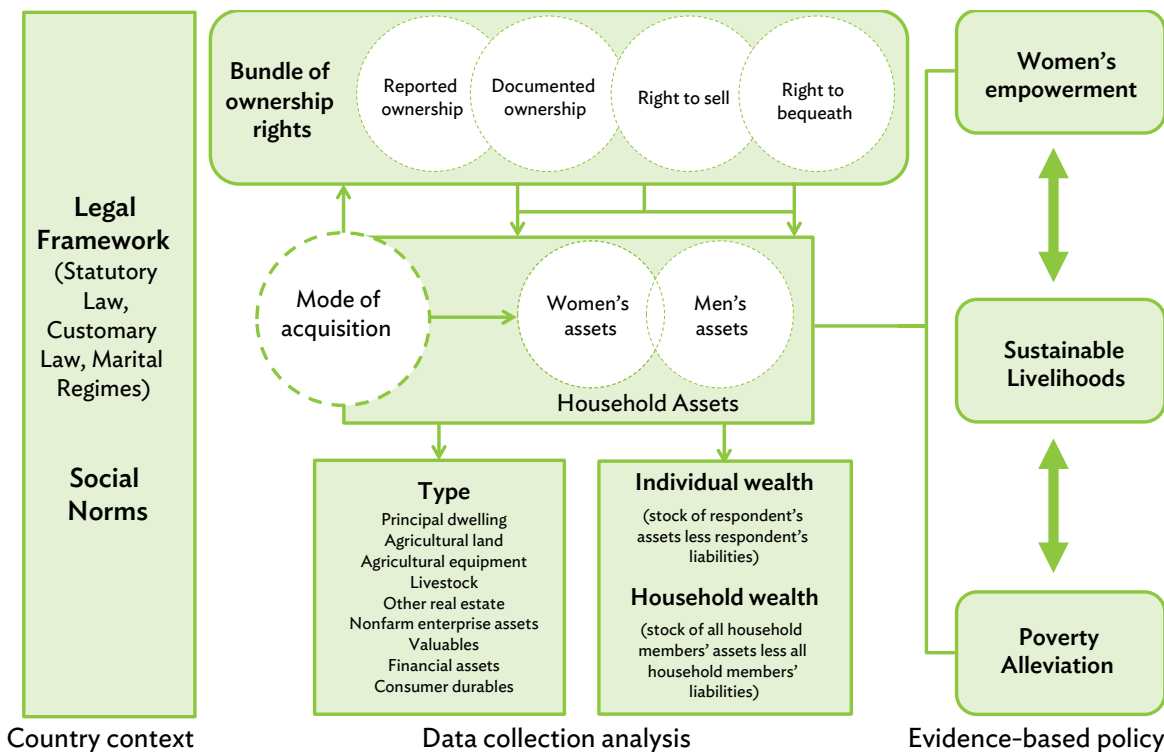
As the conceptual framework in Figure 2.1 illustrates, there are several factors that shape patterns of asset ownership. One such factor is the country context, which includes a country’s legal framework—its customary laws, statutory laws, marital regimes, and social norms. These may affect who can own 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, which 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 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 Economic and Social Affairs, Statistics Division. Forthcoming. *Guidelines for Producing Statistics on Asset Ownership from a Gender Perspective*. <https://unstats.un.org/edge/methodology/asset/>.

## 2.1.2 Objectives of Pilot Surveys

The pilot surveys on measuring asset ownership and entrepreneurship from a gender perspective under ADB technical assistance are stand-alone surveys conducted in 2015 in Georgia, Mongolia, and the province of Cavite in the Philippines. The surveys were carried out to test and refine the methodology drafted under the EDGE initiative for implementing stand-alone household surveys to collect individual-level data on asset ownership and entrepreneurship. Results from the surveys were also used to assess:

- (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.

Different data collection strategies through household surveys were tested under the global EDGE initiative for collecting data on ownership of assets and entrepreneurship at the individual level. As mentioned above, the data collection strategy followed in the three pilot countries under ADB's technical assistance was stand-alone surveys. Other methods such as appending a shorter questionnaire to a main survey were also tested under the EDGE project in three other countries. These countries are Maldives, Mexico, and South Africa. Under the global EDGE initiative, a stand-alone pilot survey, i.e., the Methodological Experiment on Measuring Asset Ownership from a Gender Perspective (MEXA), was first implemented in Uganda in 2014 to help develop the methodology

and interview protocols in collaboration with the World Bank's Living Standards Measurement Study—Integrated Surveys on Agriculture team, hosted by the Uganda Bureau of Statistics. Table 2.1 provides an overview of data collection strategies tested and scope of pilot surveys implemented under the EDGE initiative in seven countries.

## 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.<sup>18</sup> Losses may also be incurred as a result of 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 was 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 nonagricultural enterprise that the household runs. The definition for asset used in the surveys is in line with the definition of assets in the System of National Accounts (SNA). 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.

<sup>18</sup> These are the gains incurred due to owning or holding an asset, usually due to the appreciation of the asset's value.

**Table 2.1: Overview of Evidence and Data for Gender Equality Pilot**

Country	Data Collection Strategy	Asset Coverage	Sample Size	Dates of data collection
Georgia <sup>a</sup>	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 <sup>b</sup>	HIES subsample of 285 households on three islands	May 2016
Mexico	Appended to ENH	All core assets + financial assets and liabilities <sup>b</sup>	ENH subsample of 8,204 households	June 2015 to October 2015
Mongolia <sup>a</sup>	Stand-alone survey	All assets	3,008 households (nationally representative)	September 2015 to November 2015
Philippines <sup>a</sup>	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 (nationally representative)	June 2014 to August 2014

ENH = National Household Survey, HIES = Household Income and Expenditure Survey.

<sup>a</sup> Pilot country supported under ADB's technical assistance.

<sup>b</sup> Core set of assets comprise of dwelling, agricultural land, and other real estate.

Source: United Nations, Department of Economic and Social Affairs, Statistics Division. Forthcoming. *Guidelines for Producing Statistics on Asset Ownership from a Gender Perspective*. <https://unstats.un.org/edge/methodology/asset/>

## 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, bonds, and loans made (money lent). Nonfinancial assets consist of dwellings, agricultural land, livestock, agricultural equipment, nonagricultural enterprises and enterprise assets, other real estate, consumer durables, and valuables.

**Dwellings.** A dwelling unit refers to the structure in where 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 associated structures such as garage. Other dwellings not used as the principal dwelling are categorized under “other real estate.”

**Agricultural land.** 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, irrespective of title, legal form, or size. Each agricultural parcel was to be recorded in the listing of agricultural land of household members.

**Livestock.** Livestock comprises any animal, birds, and insects—excluding aquatic animals—that are kept

or reared in captivity for agriculture (FAO Livestock Statistics). Domestic animals used as pets (e.g., cats, dogs) are excluded, unless they are being raised or kept for food or agricultural purposes. The survey did not collect data on each individual livestock but only the total number of each type of livestock.

The list of livestock also varies across the pilot countries, with countries given the option to include livestock considered important for households and the economy.

**Large and small agricultural equipment.** This refers to any machinery or equipment used for agricultural purposes and can be classified as either small or large. Pilot countries implemented different approaches such as effective capacity, value, and size, to distinguish between large and small agricultural equipment. The inclusion of small agricultural equipment may be useful in understanding differences in productivity, especially for poorer households and those operated by women. However, the pilot countries were given the option of not including small agricultural equipment in the questionnaire.

If two or more of the same type of large agricultural equipment were owned by the household members, these were listed by year of manufacture, from newest to oldest.

**Nonagricultural 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 nonagricultural enterprises, as well as between incorporated and unincorporated enterprises. Agricultural enterprises are those that produce or sell nonprocessed 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 nonagricultural enterprises. For instance, the cultivation and sale by a household member of agricultural products like grapes are considered agricultural activities. However, the sale of wine produced from homegrown grapes is considered as a nonagricultural activity.

Incorporated enterprises are legal entities that exist for the purpose of producing goods and services for the market. 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, these are engaged in the production or sale of goods and services.

The pilot surveys covered nonagricultural enterprises that were currently operating, closed temporarily, or operating seasonally and owned by one or more adults in the household. The enterprise may be formal or informal, run from within or outside the premises of the household and may be 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 nonagricultural enterprises such as equipment,

machinery, furniture, or stock of material. For unincorporated enterprises, the assets that could not be distinguished due to mixed use were recorded under household assets to avoid duplication.

**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 nonagricultural land, either urban or rural. These may be used as stores of value by one or more of the household members, leased, or rented out to other parties. Also included under this category are incomplete dwellings that are yet to be used as primary residence but 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 household appliances are considered consumer durables. Consumer durables that are not working or functional and not intended to be repaired were 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 nonfinancial in nature, but can be kept as a 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 that are of considerable value —such as books, cards, and stamps.

### 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—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 a person self-identifies as the owner of an asset or is identified as the owner by a proxy respondent. This is regardless of whether his/her name appears 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 if his/her name appears on the ownership document of that asset. An individual having documented ownership can enforce or claim his/her rights in law and is usually more legally protected 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 was collected as informed by the respondents by oral inquiry and without verification of 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.<sup>19</sup> The data collected in the survey were 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 actual 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

<sup>19</sup> 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 8 June 2017]).



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.

### **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 incidence 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 are a multitude of ways in which 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. Differences in how men and women typically acquire assets may be indicative of social norms and customs in practice, or legislation that affects 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 the existence of laws or customs that favor men in the inheritance of assets.

In the pilot survey, seven major modes of acquisition were identified: (i) purchase, (ii) inheritance (from either natal or marital family member), (iii) marital law or custom, (iv) allocation or gift (either from a household member or from a non-household member), (v) government program, (vi) encroachment, or (vii) others, where respondents give a different answer from the listed modes. The owner or owners of a nonagricultural 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 is “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 is more likely to hide assets, which assets are typically hidden, and from whom these assets are usually hidden.

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.

To collect data on hidden assets, the three pilot surveys conducted by ADB under the EDGE Initiative tested the Methodological Experiment on Measuring Asset Ownership from a Gender Perspective (MEXA) approach (Box 2.1) 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, nonagricultural 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 of hidden assets were 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, and the information is not shared with other household members, compared to assets like dwellings or agricultural land.

These results are discussed in more detail in Chapter 5.

### 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 further sources of disparity, particularly in financial capability and economic empowerment between men and women, which are not reflected in the incidence of ownership or the distribution of owners by sex.

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 overreporting or underreporting; there could be an unwillingness to disclose information, or refusal to provide value. It is 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 market 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 this type of information through the survey.

The pilot survey, following principles from the 2008 SNA and the OECD'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

### Box 2.1: Capturing 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 collected information regarding ownership of, access to, and control over assets at an individual level, through the conduct of household surveys.<sup>a</sup>

In the survey conducted in Karnataka, India, for example, no explicit question on hidden assets was included in the questionnaires. Instead, the team first prepared an inventory of assets owned by any household member either exclusively or jointly first by gathering information through 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, the common 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.<sup>b</sup>

#### 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 to the 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) also apply to this approach. The data from MEXA suggest that except for the financial assets, the response prevalence of hidden nonfinancial assets was low.

**Box Table 2.1.1: 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		
Nonfarm 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

n = number of respondents.

Source: Kilic, T. & and H. Moylan. 2016. Methodological Experiment on Measuring Asset Ownership from a Gender Perspective (MEXA). Technical Report. Washington DC: The World Bank. Table 24. P. 73. [http://siteresources.worldbank.org/INTLMSM/Resources/3358986-1423600559701/MEXA\\_Technical\\_Report.pdf](http://siteresources.worldbank.org/INTLMSM/Resources/3358986-1423600559701/MEXA_Technical_Report.pdf).

<sup>a</sup> Indian Institute of Management Bangalore. In Her Name: Measuring the Gender Asset Gap a Pilot Study to Collect Sex-Disaggregated Asset Data in Ecuador, Ghana, and India. <http://www.iimb.ac.in/node/12755>.

<sup>b</sup> Kilic, T. & and H. Moylan. 2016. Methodological Experiment on Measuring Asset Ownership from a Gender Perspective (MEXA). Technical Report. Washington DC: The World Bank.

sellers.<sup>20</sup> 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 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.<sup>21</sup> 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 Standards 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,<sup>22</sup> were tested as part of the experiment.

The findings were then considered at the EDGE Midterm Review Technical Meeting in December

2014<sup>23</sup> 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 NSOs of the participating developing member countries of 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 depended 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 in the pilot surveys conducted in Georgia, Mongolia, and Cavite in the Philippines.

Following Treatment Arm 4 of the MEXA experiment, each respondent was asked questions about the assets they own and to provide proxy information on the assets owned by other members of the household. This facilitated the collection of self-reported data on the 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 to at most three respondents 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<sup>24</sup> on the date of the survey.

**Primary respondent.** This refers to a male or female adult household member who is most informed or knowledgeable about the assets of the members of the household. The primary respondent need not be

<sup>20</sup> Paragraphs 3.118 and 3.119 in the 2008 Systems of National Accounts (<https://unstats.un.org/unsd/nationalaccount/docs/sna2008.pdf>)

<sup>21</sup> 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?"

<sup>22</sup> Treatment Arm 1: most knowledgeable adult member; Treatment Arm 2: one 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).

<sup>23</sup> The UNSD and the UN Women, in collaboration with the Kitakyushu Forum on Asian Women, organized a Midterm Review Technical Meeting of the EDGE Initiative held on 3 to 5 December 2014 in Kitakyushu-city, Japan.

<sup>24</sup> The age requirement is relaxed 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.

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 cohabiting partner.

**Principal couple.** The primary respondent and the spouse or partner 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 but were not married).

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

For the random selection of nonprincipal couple respondent, Georgia and Cavite, Philippines employed the nearest birthday method while Mongolia used the random number table.<sup>25</sup>

<sup>25</sup> The nearest birthday method employed in Georgia varied slightly from the method used in Cavite, Philippines. In Georgia, the third respondent selected was the eligible adult member of the household whose day of birth was nearest to the date of the survey (counting forward). For example, if the date of the survey was 15 September, and there were three eligible adult members other than the principal couple, whose birthdays fell on 31 September, 18 July, and 22 February, then counting forward, the one whose birthday fell on 18 July had the nearest day of birth to the date of the survey. Where two adult members of the household had the same day of birth, the month nearest to the date of the survey was then considered.

In Cavite, Philippines, the third respondent selected was the eligible adult member of the household who had the nearest month and day of birth to the date of the survey is selected. Thus, if the date of survey was 5 October and the birthdays of the three eligible adult members, other than the principal couple, were 20 September, 29 September and 30 September, the nearest month and day to the date of the survey was 30 September.

Mongolia, on the other hand, used a table of random numbers to choose the third non-principal couple respondent, using the ID codes of remaining eligible adult members of the household. Using the random number table, the selection started with moving row-wise to the right to find the first number that matches one of the IDs in the list of adult individuals. Once a number matches the individual ID, the square box is marked and the third person to be interviewed is selected.

### 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 or ultimate-stage strata. Households with three or more adult members were classified under Second-Stage Stratum 1 (SSS-1) or Ultimate-Stage Stratum 1 (USS-1), while the rest (households with two or less adult members) were classified under Second-Stage Stratum 2 (SSS-2) or Ultimate-Stage Stratum 2 (USS2).

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 was 20 households, 10 would come from SSS/USS-1 and 10 would be from SSS/USS-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 or USS-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 or USS-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.<sup>26</sup>

## 2.3 Questionnaire Design and Measurement Approaches

### 2.3.1 The Survey Instrument

The ADB-EDGE survey instruments used by the three countries were based on the EDGE questionnaires developed by the Global EDGE project built on the experience gained from the questionnaires used in the MEXA.

The questionnaire was divided into two parts: Household Questionnaire and 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 included the modules in Table 2.2a.

**Table 2.2a: Modules of Household Questionnaire**

Module Number	Name of Module	Description of Module
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 the enumerator and supervisor assigned, as well as interview particulars, such as the starting time and date of the interview.
2a	Roster	Listed household members, including detailed information on their age, ethnicity, relationship to the household head, religion, sex, education, and employment status.
2b	Dwelling Characteristics	Gathered information on the physical characteristics of the dwelling in which the household lived such as the materials used; included some indicators for sanitation and water supply.

Source: Asian Development Bank-Evidence and Data for Gender Equality Pilot Survey.

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 households or nonhousehold members, as well as on assets owned by other adult household members. The information that was obtained through this questionnaire included who owned 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 were hidden. Each asset type was classified as one module (Table 2.2b).

**Table 2.2b: Asset Modules of Individual Questionnaire**

Module Number	Name of Module	Description of Module
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	Asked if 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	Asked if 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 if 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.

<sup>26</sup> Even in the case where there was no adult member, the person who was the most knowledgeable about household assets was still interviewed.

continued on next page



Table 2.2b: continued

Module Number	Name of Module	Description of Module
7	Nonagricultural Enterprises and Enterprise Assets	Collected detailed information on all nonagricultural 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	Asked 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	Asked 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.

Source: Asian Development Bank-Evidence and Data for Gender Equality Pilot Survey.

It was also important to make the questionnaires relevant to the country, and this involved customizing the questionnaires.

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 country questionnaires were first drafted in English language. The translation of the customized survey instruments into local languages and dialect, i.e., Georgian in Georgia; Mongolian in Mongolia; and Tagalog in Cavite, Philippines was mainly done by the staff of the NSOs. In certain cases, they sought advice from relevant entities in their respective countries.

Before their use in the pilot survey, the questionnaires were pretested to determine if questions were phrased appropriately, which concepts would be clearly understood, and what was needed to facilitate understanding. Not only did this help refine the questionnaire, it also aided in improving the survey instructions' manual. For example, it was discovered through the pretests that not all respondents or enumerators could easily grasp what small and large agricultural equipment were, even when a definition was provided. Thus, photos of common agricultural equipment were included in the manual to serve as a reference for both respondents and enumerators.

### 2.3.2 Operationalization of Key Concepts

The key survey concepts were operationalized by framing appropriate and easily understood questions. Table 2.3 provides a summary of how important concepts were operationalized in the questionnaire, as well as the corresponding assets for which these were applicable.

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.

### 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 analyzing the data collected from the survey based on how ownership of assets is assigned to individuals: ownership assigned by any respondent (OAR) and self-assigned ownership (SAO).



**Table 2.3: Key Concepts Operationalized**

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, nonagricultural enterprises, and other real estate	If this [asset] was 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, nonagricultural 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, nonagricultural 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, nonagricultural 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, nonagricultural 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.

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

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. 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. However, in the three EDGE pilot surveys conducted under the Asian Development Bank’s technical assistance project, this definition was not operationalized. The three pilot surveys measured the right to the economic benefits from the asset as the ability to decide how to use or where to allocate the proceeds garnered, whether in cash or in kind, from the sale of an asset.

In the questionnaire, the following question was asked to determine who owns the 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 included in the modules on dwelling, agricultural equipment, nonagricultural 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–Evidence and Data for Gender Equality Pilot Survey.

**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. It 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. On the one hand, the OAAR approach, as previously explained, 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. On the other hand, 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.<sup>27</sup>

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).

**Table 2.4: Example on Tabulation of Responses**

Which household member(s) own this [ASSET]?					
	Adult Household Members				
Respondent	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.  
Source: Asian Development Bank-Evidence and Data for Gender Equality Pilot Survey.

Under the OAAR approach, as long as one of the respondents identifies an adult member as an owner, then that member was counted as an owner. Hence, the fourth and fifth adult household members were considered as owners even though they were not interviewed since the second respondent identified them as such. However, under the SAO approach, only those who identified themselves as owners were counted. Accordingly, the SAO estimation approach required an additional set of sampling weights for individuals selected for interview in a household unlike in the OAAR approach where only household level weights were required to estimate population parameters. Therefore, in the example in Table 2.4, only the first two adult members were counted as owners. What were the implications of these methods for the gap measures? OAAR generally showed a higher individual level incidence for both men and women, thus reducing population level inequality in asset ownership. Nothing conclusive could be said about how it might impact the gender gap measures. This, requires further investigation.

<sup>27</sup> 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 (Husmanns et al. 2011).

### 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, where only the dwelling was considered. This is due to the challenges posed by the data on analyzing responses from different household members for the assets, which also needs further investigation. 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 looked 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.

#### 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.

##### Incidence of Asset Ownership by Sex

Incidence of asset ownership measures what percentage of adult females are owners as well as what percentage of adult males are owners.

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

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 the comparison of 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.

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

##### 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. This measure was only estimated for dwelling.

$$\text{Distribution} = \frac{\text{Value of asset accruing to Men (Women)}}{\text{Total value of asset}}$$

Both incidence and distribution were computed and applied to the OAR 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 was equally split among owners by assuming that the joint owners have equal claim on the asset in question, which may not necessarily be the true situation. Note that owners who are not members of the household were treated as one, 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.

## 2.4 Data Quality Issues

Part of the effort in implementing new guidelines in data collection is managing any data quality issues and challenges that may come up in the course of implementing each stage of the survey. Within the EDGE pilot surveys, these are some of the data issues encountered:

### 2.4.1 Questionnaire design

Issues on the questionnaire design came up during the pre-survey field operations, i.e., during design of questionnaires and instructions manual and pretesting of survey instruments, as well as during the field data collection. These included issues around questions that were deemed difficult to answer such as those pertaining to asset valuation; questions not relevant to country context such as ownership

of small agricultural equipment in Georgia; and sensitive questions such as on bequeathing assets and valuation of assets. In many cases, the respondents from some ethnic groups in Georgia were not happy with the hypothetical questions on selling assets and providing their corresponding value. Other respondents could not provide answers to questions on dates of acquisition of immovable assets, particularly land that are not legally registered.

Some concepts adopted in the survey were difficult to comprehend for some respondents. In Georgia, respondents found certain terms hard to comprehend, such as: reported ownership, enterprise (own account and non-registered firms), and enterprise-related concepts such as revenue, costs, etc. Most Mongolian respondents likewise had difficulty understanding the concept “enterprise” and the idea of selling the enterprise for own-account workers with an unregistered business.

### 2.4.2 Data processing

During manual data processing and machine editing, the issues documented were related to duplicated records, unedited items, unrecorded questionnaires, incorrect data inputs that were not corrected during manual editing, and patterns that were not followed. There were also some inconsistencies in the recorded number of adult respondents for the interviewed households vis-a-vis the actual counts and the questionnaires, as well as some cases when the date of birth of respondents did not match with their age. Some enumerators failed to record callbacks made at the end of the questionnaire.

Additional details about data issues are discussed in Chapters 4 and 5.

## Chapter 3: Analysis of Results

This chapter provides a snapshot of the results from the pilot surveys on *Measuring Asset Ownership and Entrepreneurship from a Gender Perspective* across Georgia; Mongolia; and Cavite, Philippines. Data were organized by key indicators of asset ownership and disaggregated by sex.<sup>28</sup> These key indicators are:

- (i) **Incidence of asset ownership.** This is a commonly used measure that shows the proportion of the adult population owning a particular asset.
- (ii) **Distribution by types and forms of ownership.** These indicate the share of men and women in asset ownership and reveals whether an asset is owned exclusively by one person or jointly by multiple people.
- (iii) **Alienation rights.** This indicator provides information on a person's right to sell or bequeath an asset.
- (iv) **Modes of acquisition.** These indicate how an asset is acquired by its owner, whether through purchase in a market, inheritance from family member, marital or social customs, or received through government programs.

The results are presented for the following assets: dwelling, agricultural land, livestock, large and small agricultural equipment, nonagricultural enterprises, other real estate, consumer durables, and financial assets. The chapter also explores the variation in the indicators by key sociodemographic characteristics. In presenting these results, assets are sometimes grouped into “immovable” and “other assets”. Immovable assets include dwelling, agricultural land, and other real estate, while other assets include livestock, large and small agricultural equipment, consumer durables, and financial assets. Nonagricultural

enterprises are not assets as such; however, their discussion is included among “other assets”. Section 2.3.1 of Chapter 2 describes the two approaches of data analysis for estimating indicators of individual-level ownership based on how ownership of assets is assigned to individuals—ownership assigned by any respondent (OAAR) and self-assigned ownership (SAO). However, the results presented in this chapter are based on estimates from the SAO approach unless otherwise stated. Section 3.6 presents a comparison of the estimates for selected indicators between the two estimation approaches.

### 3.1 Profile of Respondents and Households

Table 3.1a presents the number of households and individuals actually surveyed. Majority of the surveyed households across the three pilot surveys were in urban areas. The pilot survey in Georgia covered 2,783 households, of which 53.7% were in urban areas and 46.3% were in rural areas. From the surveyed households, a total of 5,937 individuals were interviewed. In Mongolia, a total of 2,962 households (63.2% in urban areas and 36.8% in rural areas) were surveyed and 5,592 individuals answered the individual questionnaires. In Cavite, Philippines, the number of households actually surveyed was 1,536, 60.4% of which were in urban areas and 39.6% of which were in rural areas. A total of 3,456 individuals were surveyed.

Country	Number of Households			Number of Respondents		
	Urban	Rural	All	Urban	Rural	All
Georgia	1,495	1,288	2,783	3,182	2,755	5,937
Mongolia	1,873	1,089	2,962	3,495	2,097	5,592
Cavite, Philippines	928	608	1,536	2,064	1,392	3,456

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

<sup>28</sup> Preliminary results of the pilot surveys were published in *Key Indicators for Asia and the Pacific*. 2017. <https://www.adb.org/publications/key-indicators-asia-and-pacific-2017>.

Table 3.1b illustrates the distribution of surveyed households by type of respondents. Majority of the households in all the three countries had both members of the principal couple interviewed (51.3%; 55.3%; and 64.0% of the total surveyed households in Georgia; Mongolia; and Cavite, Philippines, respectively). There were 24.5% of the surveyed households in Georgia and 28.4% in Mongolia with only one adult interviewed. The number was lower in Cavite, Philippines at 14.1%.

Households with respondent type	Georgia	Mongolia	Cavite, Philippines
Principal couple only	23.5	41.3	33.1
Three adults including principal couple	27.8	14.0	30.9
Three adults including either member of the principal couple	1.9	0.6	0.0
Three adults without principal couple	8.2	3.1	8.3
Any two respondents other than principal couple	11.3	8.8	8.7
Any two respondents with either member of the principal couple	2.8	3.6	4.9
Single respondents	24.5	28.4	14.1
No individual respondents	0.0	0.2	0.1
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

As seen in Table 3.1c, the number of women primary respondents in both Georgia and Mongolia was higher than the number of men primary respondents. However, the opposite was true in Cavite, Philippines. The distribution of respondents by type and sex shows that more women than men were interviewed in the surveys in three countries. There was much larger nonresponse for men than women.

Country	Primary Respondent		Spouse of Primary Respondent		Other Respondents		Total Respondents	
	Men	Women	Men	Women	Men	Women	Men	Women
Georgia	1,200	1,577	564	868	735	993	2,499	3,438
Mongolia	1,183	1,750	852	800	453	554	2,488	3,104
Cavite, Philippines	758	719	377	646	470	486	1,605	1,851

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

**Table 3.1d: Distribution of Respondents by Key Sociodemographic Characteristics**

Sociodemographic characteristics	Georgia	Mongolia	Cavite, Philippines
<b>Average Household Size</b>			
Total	3.4	3.7	4.4
Urban	3.4	3.6	4.4
Rural	3.4	4.0	4.5
<b>Average Age of Respondents</b>			
Total			
Male	48	42	39
Female	50	42	40
Urban			
Male	44	42	38
Female	47	42	40
Rural			
Male	48	42	39
Female	51	43	40
<b>Sex (%)</b>			
Male	42.1	44.5	46.4
Female	57.9	55.5	53.6
<b>Marital Status (%)</b>			
Married	66.1	71.3	67.7
Widowed/Separated/Divorced	19.3	13.9	11.5
Never Married	14.6	14.8	20.8
<b>Educational Level (%)</b>			
Primary or lower	3.2	26.9	17.2
Secondary	43.4	45.3	46.1
Post secondary Non-tertiary	24.5	n.a.	n.a.
Tertiary or above	29.0	27.7	36.4
<b>Status in Employment - past week (%)</b>			
Employed	57.0	60.4	50.2
Not engaged in economic activity	43.0	39.6	49.8

n.a. = not applicable.

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: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

Table 3.1d provides a numerical description of the profile of the respondents.

The average size of interviewed households is 3.4 in both urban and rural areas in Georgia. In Mongolia, the average household size in urban areas is 3.6 and 4.0 for rural areas. The average urban household size in Cavite, Philippines, is 4.4 and 4.5 for rural areas. The average age of surveyed respondents in Georgia falls within 44 years to 51 years. In Cavite, Philippines, the respondents were much younger with average age ranging from 38 to 40 years old. The surveyed respondents are predominantly female at 57.9% of the total respondents in Mongolia, 55.5% in Georgia, and 53.6% in Cavite, Philippines. About 7 out of 10 respondents are married.



More than 40% of the respondents in the three countries have attained a secondary level education. However, only 3.2% of respondents have primary or lower educational level in Georgia as compared to 26.9% in Mongolia and 17.2% in Cavite, Philippines. In terms of status in employment, about six in 10 respondents in Georgia and Mongolia are employed. In Cavite, Philippines, half are employed while the remaining half are either unemployed or not in the labor force.

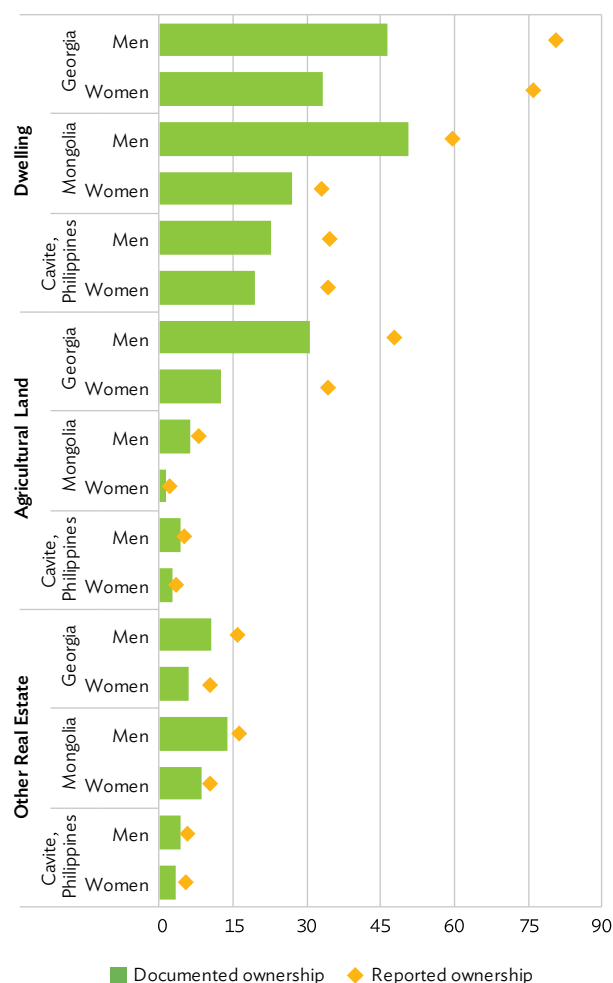
## 3.2 Incidence of Asset Ownership

An analysis of the incidence of ownership rates illustrates several noteworthy results. There is a clear gender gap in asset ownership in the three countries. Incidence rates are significantly higher for reported ownership than documented ownership. These results hold for most assets with a few exceptions. The gender gap in asset ownership generally appears to be narrower in Cavite, Philippines compared to the other two countries.

### 3.2.1 Immovable Assets

Figure 3.1 presents the reported and documented incidence of ownership for immovable assets by sex across the three countries, and Table 3.2 shows a summary of results of corresponding t-tests. The t-test helps assess whether the incidences of asset ownership between men and women are significantly different. In this case, a one-tailed test was used. The null hypothesis is that the incidence of ownership of assets of men is equal to the incidence of ownership of assets of women. One tailed t-test assessed if the incidence was significantly higher for men than for women. While reported ownership is based on self-reported information by the respondent as the owner of an asset, the documented ownership is assigned if the name of the respondent appears in some form of document that is considered proof of ownership.

**Figure 3.1: Incidence of Ownership of Immovable Assets, by Sex and Type of Ownership (%)**



Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

**Table 3.2: Incidence of Ownership of Immovable Assets (Results of t-Tests Comparing Men and Women)**

Country	Documented	Reported
<b>Dwelling</b>		
Georgia	M>W***; t=7.58	M>W***; t=3.39
Mongolia	M>W***; t=15.05	M>W***; t=15.55
Cavite, Philippines	M>W**; t=2.16	M=W; t=0.13
<b>Agricultural Land</b>		
Georgia	M>W***; t=11.66	M>W***; t=8.49
Mongolia	M>W***; t=6.05	M>W***; t=6.67
Cavite, Philippines	M>W**; t=2.24	M>W***; t=2.34
<b>Other Real Estate</b>		
Georgia	M>W***; t=5.18	M>W***; t=5.24
Mongolia	M>W***; t=4.76	M>W***; t=4.99
Cavite, Philippines	M>W*; t=1.82	M=W; t=0.40

M= Men, W=Women, \*\*\* = 1% significance, \*\* = 5% significance, \* = 10% significance.

Note: Significant t-test result implies that the incidence of ownership among men is statistically higher than the incidence of ownership among women.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.



Immovable assets are high-valued and are also likely to be income-generating assets. Overall, dwelling has the highest incidence of ownership for men and women across all immovable assets considered in this study. This is because dwelling is considered one of the most important assets and owning a dwelling provides a sense of security. The incidence of both reported and documented ownership of dwelling shows that men are more likely to own their principal dwelling than women.

The gender gap in dwelling ownership is most evident in Mongolia where men are almost twice as likely to own their dwelling in comparison to women. In Georgia, a 5-percentage point gap is observed in reported ownership, which increases to 13 percentage points for documented ownership. In Cavite, Philippines, the incidence of reported ownership of dwelling is similar for men and women.

The incidence of reported ownership of dwellings is generally higher than documented ownership; the difference between reported and documented ownership is most significant in Georgia where the proportion of documented owners is about half of the proportion of reported owners. The gender gap is higher for documented ownership, implying that while many women perceive and identify themselves as the dwelling owner, not all of them have their names on the ownership documents.

Similar patterns are observed in the incidence of ownership for agricultural land. The gender gap is biased toward men and there are more reported owners in all three countries than documented owners. The reported ownership of agricultural land in Cavite, Philippines is quite low, with less than 5% for both men and women. This reflects the relatively urban nature of this province. In Mongolia, the incidence of reported ownership of agricultural land for men is 8.0% and 2.0% for women. A much higher ownership is observed in Georgia at 47.7% for men and 34.1% for women.

The observed pattern for incidence of ownership for other real estate is similar to dwellings and

agricultural land. In Cavite, Philippines, while men and women are reported as equal owners of other real estate, the incidence of ownership at 6.0% is relatively low. In both Georgia and Mongolia, men are at least 1.5 times more likely than women to own other real estate.

Disaggregating ownership of immovable assets by sex and by rural–urban location, reveals that there are mixed patterns for differences in dwelling ownership between men and women in rural and urban areas in the three countries (Table 3.3). The same is true for 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 rural areas across all assets.

Tables 3.3 and 3.4 show that gender disparity in all immovable assets is more observable within urban and rural areas in Georgia and Mongolia. On the other hand, there is no significant difference in the incidences of ownership of dwelling and other real estate between men and women in urban and rural Cavite, Philippines. For agricultural land, however, men are more likely to be owners than women in rural Cavite, Philippines.

The distribution of sociodemographic characteristics of reported owners shows that the majority of the owners of immovable assets in the three countries are currently married. The much larger proportion of women owners are widowed, divorced, or separated as compared to being never married. However, the converse is true for men. This suggests a correlation between marriage and asset ownership for women but not for men. In terms of educational attainment, most owners of dwelling and agricultural land had attained secondary school level while other real estate owners had attained tertiary education or above. In Mongolia, 42.6% of agricultural land owners had only attained primary level or below. While most owners are likely to be currently employed, a larger proportion of women owners, as compared to men owners, report that they are not engaged in any economic activity. Most reported owners of immovable assets across the three countries are around 30–49 years old. In Georgia, more

**Table 3.3: Incidence of Ownership of Immovable Assets, by Sex, Location, and Type of Ownership (%)**

Country	Sex	Documented			Reported		
		Rural	Urban	Total	Rural	Urban	Total
<b>Dwelling</b>							
Georgia	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
Mongolia	Men	53.0	49.6	50.7	66.9	56.1	59.6
	Women	18.7	30.4	26.9	27.1	35.3	32.8
Cavite, Philippines	Men	24.4	21.5	22.7	34.5	34.4	34.4
	Women	19.7	18.9	19.2	33.6	34.7	34.2
<b>Agricultural Land</b>							
Georgia	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
Mongolia	Men	15.4	1.9	6.3	19.4	2.4	8.0
	Women	3.2	0.6*	1.4	4.8	0.9*	2.0
Cavite, Philippines	Men	5.4	3.2	4.1	7.0	3.2	4.8
	Women	3.2	2.2	2.6	3.9	2.7	3.2
<b>Other Real Estate</b>							
Georgia	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
Mongolia	Men	13.9	13.8	13.8	19.5	14.7	16.3
	Women	5.0	10.0	8.5	7.9	11.4	10.4
Cavite, Philippines	Men	3.6*	5.1	4.4	4.0	7.0	5.7
	Women	2.5	3.8	3.3	3.3	7.0	5.4

\* The number of observations was fewer than 25. Thus, estimates should be interpreted with caution.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

**Table 3.4: Incidence of Ownership of Immovable Assets (Results of t-Tests Comparing Men and Women, by Location)**

Country	Documented		Reported	
	Rural	Urban	Rural	Urban
<b>Dwelling</b>				
Georgia	M>W***; t=8.60	M>W***; t=3.28	M>W***; t=2.76	M>W**; t=1.96
Mongolia	M>W***; t=15.10	M>W***; t=9.75	M>W***; t=15.06	M>W***; t=9.98
Cavite, Philippines	M>W*; t=1.60	M>W*; t=1.40	M=W; t=0.38	M=W; t=0.16
<b>Agricultural Land</b>				
Georgia	M>W***; t=10.30	M>W***; t=6.69	M>W***; t=6.35	M>W***; t=5.38
Mongolia	M>W***; t=5.84	M>W***; t=3.34	M>W***; t=6.59	M>W***; t=3.42
Cavite, Philippines	M>W***; t=2.19	M=W; t=1.08	M>W***; t=2.71	M=W; t=0.60
<b>Other Real Estate</b>				
Georgia	M>W***; t=3.88	M>W***; t=3.71	M>W***; t=3.81	M>W***; t=4.07
Mongolia	M>W***; t=4.65	M>W***; t=2.82	M>W***; t=5.53	M>W***; t=2.39
Cavite, Philippines	M>W*; t=1.33	M>W*; t=1.47	M=W; t=0.89	M=W; t=0.01

M= Men, W=Women, \*\*\* = 1% significance, \*\* = 5% significance, \* = 10% significance.

Note: Significant t-test result implies that the incidence of ownership among men is statistically higher than the incidence of ownership among women.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

than a quarter of among the owners of all three types of immovable assets are 60 years or above. Additionally, in both Georgia and Cavite, Philippines, approximately 35% of agricultural land owners are 60 years or above.

### 3.2.2 Other Assets

Figure 3.2 presents the incidence of ownership of other assets—livestock, large agricultural equipment, small agricultural equipment, and consumer durables. Incidence of livestock ownership, as in the case of agricultural land ownership, is highest in Georgia for

both men and women compared with Mongolia and Cavite, Philippines. There is also a higher incidence of ownership among men than women for all the three countries. Specifically, incidence of livestock ownership among men and women is 41.6% versus 38.6% in Georgia, 32.7% versus 18.3% in Mongolia, and 14.3% versus 5.4% in Cavite, Philippines. These figures reveal a huge gap in ownership between men and women in Mongolia and Cavite, Philippines. The gender gap is not big in the case of Georgia, as livestock in Georgian households are not personally owned but considered as belonging to the household.

**Table 3.5: Distribution of Reported Ownership of Immovable Assets, by Sex and Sociodemographic Characteristics**  
(%)

Country	Sociodemographic characteristics	Dwelling			Agricultural Land			Other Real Estate		
		Men	Women	Total	Men	Women	Total	Men	Women	Total
<b>Marital Status</b>										
Georgia	Married	71.8	63.0	67.1	75.5	64.6	70.5	72.9	72.6	72.8
	Widowed/Separated/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
Mongolia	Married	85.7	60.5	76.4	86.5	66.3	82.2	87.2	69.0	79.9
	Widowed/Separated/Divorced	7.8	33.6	17.4	6.0	32.4	11.6	4.8	20.2	11.1
	Never married	6.5	5.9	6.3	7.5	1.3	6.2	7.9	10.8	9.1
Cavite, Philippines	Married	86.9	75.6	81.2	82.7	64.2	75.2	85.1	75.2	80.2
	Widowed/Separated/Divorced	7.3	21.1	14.3	8.0	32.7	17.9	3.5	21.5	12.4
	Never married	5.8	3.3	4.6	9.4	3.1	6.8	11.4	3.3	7.4
<b>Education Level</b>										
Georgia	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
Mongolia	Primary or lower	28.8	20.7	25.8	44.4	35.9	42.6	26.0	14.1	21.2
	Secondary	44.2	40.1	42.7	41.5	43.0	41.8	37.5	34.5	36.3
	Tertiary or above	27.0	39.2	31.5	14.1	21.0	15.6	36.5	51.3	42.5
Cavite, Philippines	Primary or lower	18.8	21.7	20.3	27.7	31.4	29.2	7.7	14.4	11.0
	Secondary	46.7	45.6	46.1	39.3	45.2	41.7	39.9	35.3	37.6
	Tertiary or above	34.6	32.7	33.6	33.0	23.3	29.1	52.4	50.2	51.3
<b>Employment Status</b>										
Georgia	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
Mongolia	Employed	70.4	57.5	65.6	79.1	58.4	74.7	83.5	67.0	76.9
	Not engaged in economic activity	29.6	42.5	34.4	20.9	41.6	25.3	16.5	33.0	23.1
Cavite, Philippines	Employed	80.4	50.3	65.2	77.5	56.7	69.1	82.4	59.7	71.2
	Not engaged in economic activity	19.6	49.7	34.8	22.5	43.3	30.9	17.6	40.3	28.8
<b>Age Group</b>										
Georgia	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
Mongolia	18–29	13.7	13.1	13.5	10.9	5.3	9.7	20.7	17.4	19.4
	30–49	50.0	46.9	48.8	55.4	39.5	52.0	49.5	52.8	50.9
	50–59	22.2	24.0	22.9	23.4	34.8	25.9	19.9	21.1	20.4
	60 and above	14.1	15.9	14.8	10.3	20.4	12.5	9.8	8.7	9.3
Cavite, Philippines	18–29	7.2	6.5	6.8	15.0	8.2	12.2	12.6	8.7	10.7
	30–49	47.8	43.0	45.4	30.7	33.9	32.0	46.1	41.3	43.7
	50–59	25.4	26.6	26.0	18.7	24.8	21.2	21.3	28.3	24.8
	60 and above	19.7	23.9	21.8	35.6	33.1	34.6	20.0	21.7	20.8

Notes: 1. The number of sample observations owning agricultural land in Mongolia and Cavite, Philippines and other real estate in Cavite, Philippines may not be sufficient to generate reliable disaggregated data on sociodemographic characteristics. Thus, estimates should be interpreted with caution.

2. 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.

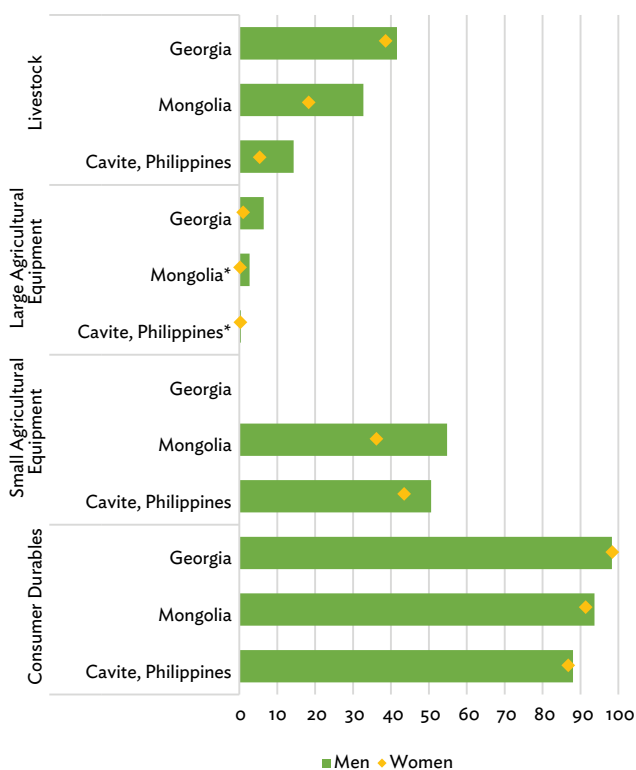
Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

Relatively few adults are owners of large agricultural equipment. The incidence of ownership is much lower in both Mongolia and Cavite, Philippines compared to Georgia. This low incidence in Cavite, Philippines is reflective of the relatively low ownership of agricultural land in the area. In Georgia and Mongolia, there is a gender disparity in favor of men on the ownership of large agricultural equipment. The estimates of incidence of large agricultural equipment are prone to high standard error due to small sample size. The small agricultural equipment module was included only in the questionnaires of Mongolia and Cavite, Philippines.

Georgia did not include small agricultural equipment in their survey as these are generally considered owned by all household members which may lead to difficulty in assigning individual level ownership, and therefore not relevant in their context. Figure 3.2 shows that for small agricultural equipment, there is a higher proportion of men owners in Mongolia and Cavite, Philippines. In general, around half of the men and a third of the adult women surveyed are owners.

Consumer durables represent the highest incidence of ownership among all the assets included

**Figure 3.2: Incidence of Reported Ownership of Other Assets (%)**



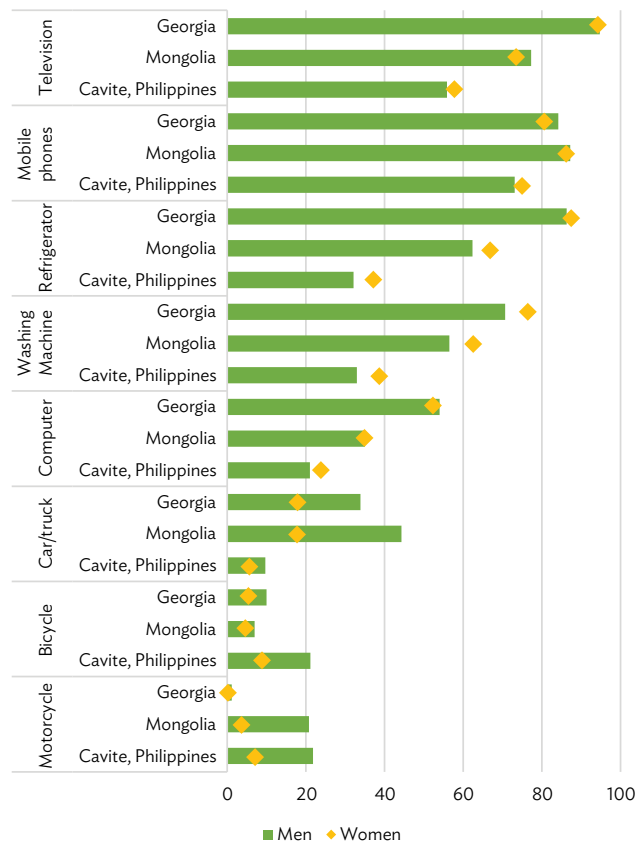
\* The number of sample observations is fewer than 25. Thus, estimates should be interpreted with caution.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

in the survey (Figure 3.2). For Mongolia, the ownership incidence is slightly higher for men compared to women while Georgia and Cavite, Philippines have equal incidences of ownership among men and women. In terms of incidence of ownership, the top consumer durables owned in the three countries are television sets, mobile phones, and refrigerators. A greater proportion of men than women own vehicles (i.e., motorcycles, cars, trucks) while ownership of consumer durables such as refrigerators and washing machines are more prevalent among women than men. It is also noted that the incidence of ownership of computers and mobile phones is almost the same between men and women in Georgia, Mongolia, and Cavite, Philippines (Figure 3.3).

Incidence of ownership of financial assets as reported in the three pilot surveys is low. The incidence was the lowest in Georgia at below 2% compared with

**Figure 3.3: Incidence of Reported Ownership, by Type of Consumer Durables and Sex (%)**

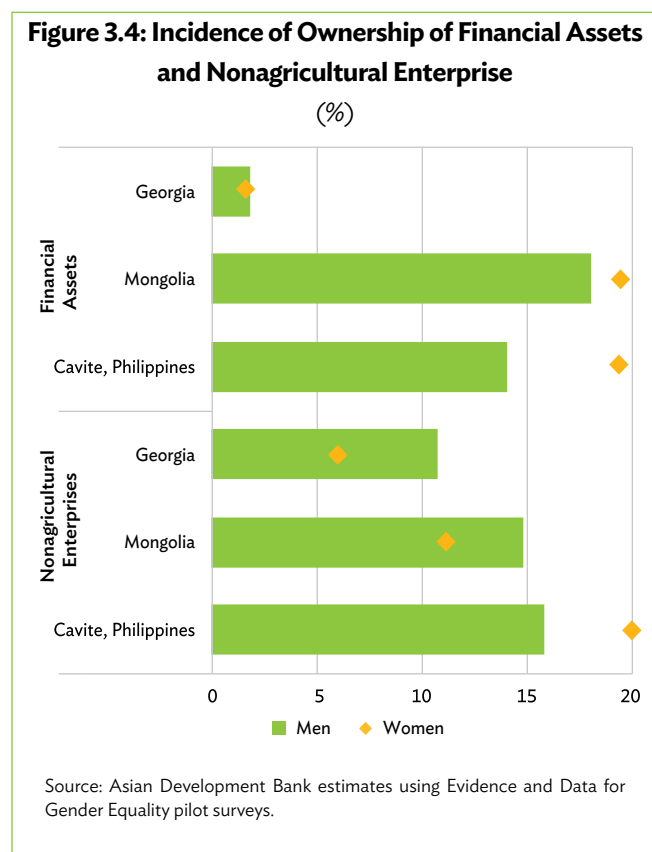


Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

below 20% in Mongolia and Cavite, Philippines. As will be further discussed in the succeeding chapters of this report, respondents in Georgia were not comfortable discussing ownership and valuation of financial assets. In other countries as well, the incidence of ownership of financial assets, captured in the survey, was low as respondents shied away from declaring information about their cash. The largest gap in the incidence of ownership of financial assets can be seen in Cavite, Philippines (19.3% women versus 14.0% men). This finding is consistent with results of other related studies such as that of the Philippines' National Demographic and Health Survey results showing women's empowerment and control over cash and earnings.<sup>29</sup>

<sup>29</sup> Philippine Statistics Authority. 2013. *Women's Status and Empowerment 2013 National Demographic and Health Survey*. [http://www.psa.gov.ph/sites/default/files/attachments/hsd/pressrelease/2013Wempowerment\\_factsheet.pdf](http://www.psa.gov.ph/sites/default/files/attachments/hsd/pressrelease/2013Wempowerment_factsheet.pdf).

Figure 3.4 shows that the highest incidence of nonagricultural enterprises ownership is reported in Cavite, Philippines and it also reveals a slight gender gap in favor of women. The incidence of ownership among women is 19.9% and 15.8% among men. The implementation of livelihood programs that target and empower women possibly contribute to this result. For Georgia and Mongolia, incidence of ownership among men is higher than among women by approximately 4 percentage points.



Tables 3.6 and 3.7 show the disaggregation of asset ownership rates for men and women by rural–urban for other assets. As in the case of agricultural land, the incidence of ownership of large and small agricultural equipment and livestock is higher in rural areas since a large population in rural areas is employed in the agriculture sector. On the other hand, the incidence of ownership of nonagricultural enterprises and financial assets are higher in urban areas. Although in Georgia, the incidence of ownership of nonagricultural

**Table 3.6: Incidence of Ownership of Other Assets, by Sex and Location**  
(%)

Country	Sex	Reported		
		Rural	Urban	Total
<b>Livestock</b>				
Georgia	Men	73.5	14.5	41.6
	Women	71.1	14.5	38.6
Mongolia	Men	69.5	14.8	32.7
	Women	42.8	7.9	18.3
Cavite, Philippines	Men	19.1	10.7	14.3
	Women	7.7	3.7	5.4
<b>Large Agricultural Equipment</b>				
Georgia	Men	11.1	2.4	6.4
	Women	1.9	0.4*	1.0
Mongolia	Men	6.4	1.0*	2.7
	Women	0.6*	0.1*	0.2*
Cavite, Philippines	Men	0.8*	0.1*	0.4*
	Women	0.4*	0.2*	0.3*
<b>Small Agricultural Equipment</b>				
Mongolia	Men	81.4	41.9	54.8
	Women	60.3	26.0	36.2
Cavite, Philippines	Men	52.3	49.2	50.6
	Women	44.1	43.1	43.5
<b>Consumer Durables</b>				
Georgia	Men	99.1	97.7	98.3
	Women	98.5	98.3	98.4
Mongolia	Men	94.8	93.2	93.7
	Women	91.2	91.5	91.4
Cavite, Philippines	Men	88.3	87.7	88.0
	Women	82.6	89.9	86.8

\* The number of sample observations is fewer than 25. Thus, estimates should be interpreted with caution.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

**Table 3.7: Incidence of Ownership of Financial Assets and Nonagricultural Enterprises, by Sex and Location**  
(%)

Country	Sex	Reported		
		Rural	Urban	Total
<b>Financial Asset</b>				
Georgia	Men	1.0*	2.5	1.8
	Women	1.0*	2.0	1.6
Mongolia	Men	16.5	18.7	18.0
	Women	18.3	19.8	19.4
Cavite, Philippines	Men	9.1	17.6	14.0
	Women	17.9	20.2	19.3
<b>Nonagricultural Enterprises</b>				
Georgia	Men	9.6	11.6	10.7
	Women	6.5	5.6	6.0
Mongolia	Men	11.7	16.3	14.8
	Women	10.4	11.4	11.1
Cavite, Philippines	Men	14.2	17.0	15.8
	Women	18.7	20.8	19.9

\* The number of sample observations is fewer than 25. Thus, estimates should be interpreted with caution.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

enterprises for women in rural areas is slightly higher than their counterparts in urban areas. Gender gaps also exist both in rural and urban areas for other assets. The

gender gaps for the incidence of financial assets and large agricultural equipment are much more evident in urban areas compared with the rural areas.

Table 3.8 presents the results of t-test comparing the incidence of ownership of other assets for men and women. Except for large agricultural equipment in Cavite, Philippines; consumer durables in Georgia and Cavite, Philippines; and financial assets in Georgia and Mongolia, there are significant differences in asset ownership between men and women.

Table 3.8: Incidence of Reported Ownership of Other Assets (Results of t-Tests Comparing Men and Women, by Location)			
Country	Reported		
	Total	Rural	Urban
<b>Livestock</b>			
Georgia	M>W**, t=2.17	M>W*, t=1.32	M=W; t=0.33
Mongolia	M>W***, t=11.32	M>W***, t=12.19	M>W***, t=6.90
Cavite, Philippines	M>W***, t=8.89	M>W***, t=6.73	M>W***, t=6.33
<b>Large Agricultural Equipment</b>			
Georgia	M>W***, t=7.29	M>W***, t=7.23	M>W***, t=3.32
Mongolia	M>W***, t=5.19	M>W***, t=4.32	M>W***, t=3.70
Cavite, Philippines	M=W; t=0.39	M=W; t=0.77	M=W; t=0.63
<b>Small Agricultural Equipment</b>			
Georgia	n.a.	n.a.	n.a.
Mongolia	M>W***, t=11.78	M>W***, t=8.37	M>W***, t=8.23
Cavite, Philippines	M>W***, t=3.53	M>W***, t=2.52	M>W***, t=2.44
<b>Consumer Durables</b>			
Georgia	M=W; t=0.11	M=W; 0.59	M=W; t=1.22
Mongolia	M>W***, t=2.67	M>W***, t=2.90	M>W*, t=1.50
Cavite, Philippines	M=W; t=0.73	M>W**, t=1.94	M>W*, t=1.38
<b>Financial Assets</b>			
Georgia	M=W; t=0.44	M=W; t=0.12	M=W; t=0.64
Mongolia	M=W; t=1.07	M=W; t=0.83	M=W; t=0.69
Cavite, Philippines	M<W***, t=-4.01	M<W***, t=-4.62	M>W**, t=1.52
<b>Nonagricultural Enterprises</b>			
Georgia	M>W***, t=5.86	M>W***, t=3.07	M>W***, t=5.00
Mongolia	M>W***, t=3.55	M=W; 0.87	M>W***, t=3.65
Cavite, Philippines	M<W***, t=-3.22	M<W**, t=-2.27	M<W**, t=-2.27

M= Men, W=Women, n.a.= not applicable, \*\*\* = 1% significance, \*\* = 5% significance, \* = 10% significance.

Note: Significant t-test result implies that incidence of ownership among men is statistically different from the incidence of ownership among women.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

Looking at the rural–urban dimension, the incidences of ownership of the following assets between men and women are not statistically different: livestock in rural Georgia; large agricultural equipment in both rural and urban Cavite, Philippines; consumer durables in rural and urban Georgia; financial assets in rural and urban Georgia and Mongolia; and nonagricultural enterprises in rural Mongolia.

Sociodemographic characteristics of the asset owners are presented in Table 3.9 and Table 3.10. Most asset owners are married, employed, have attained at least secondary level education, and fall within the age group of 30–49 years.

### 3.3 Distribution by Type and Forms of Ownership

#### 3.3.1 Distribution of Ownership

Figure 3.5 presents distribution of ownership of immovable assets by sex and by type (reported and documented ownership). The distribution of asset ownership indicates whether women and men are equally represented as owners of a particular asset. Figure 3.5 reveals that gender parity is observed in reported ownership of dwelling and other real estate in Cavite, Philippines, while in Georgia, women accounted for more than 50% of reported dwelling owners. Mongolian women are inadequately represented compared to Mongolian men in both reported and documented ownership of all immovable assets.

#### 3.3.2 Distribution of Forms of Ownership

Individuals can hold assets either exclusively or jointly. Joint ownership of an asset can be between members of a principal couple, with other household members, or between household and non-household members. Joint ownership between a principal couple includes those where the primary respondent and his/her spouse/partner own assets jointly, while other forms of joint ownership refers to any combination of household members who own assets jointly. Factors that influence the forms of ownership include the prevailing inheritance and marital regimes.

Figure 3.6 shows the distribution of the forms of ownership for immovable assets and illustrates different patterns across countries. Exclusive ownership by men is the dominant form of ownership for all assets in Mongolia. In Mongolia, land ownership certificates were issued under the name of the head of



**Table 3.9: Distribution of Reported Ownership of Other Assets, by Sex and Sociodemographic Characteristics (%)**

Country	Sociodemographic Characteristics	Livestock			Large Agricultural Equipment			Small Agricultural Equipment			Consumer Durables		
		Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
<b>Marital Status</b>													
Georgia	Married	75.6	69.5	72.4	79.9	60.3	76.7	n.a.	n.a.	n.a.	70.1	63.2	66.4
	Widowed/Separated/Divorced	6.4	23.1	15.2	4.6	32.9	9.1	n.a.	n.a.	n.a.	7.3	25.6	17.2
	Never married	18.0	7.4	12.4	15.5	6.8	14.1	n.a.	n.a.	n.a.	22.6	11.1	16.4
Mongolia	Married	86.2	75.5	82.2	95.6	62.9	93.0	80.3	67.4	75.0	75.9	68.4	72.1
	Widowed/Separated/Divorced	4.8	20.4	10.6	2.1	37.1	4.9	6.9	25.3	14.5	7.3	20.1	13.8
	Never married	8.9	4.1	7.1	2.3	0.0	2.1	12.8	7.2	10.5	16.8	11.6	14.1
Cavite, Philippines	Married	82.3	85.0	83.0	73.7	91.3	81.5	83.2	73.8	78.8	67.9	65.5	66.7
	Widowed/Separated/Divorced	7.0	12.0	8.4	26.3	8.7	18.5	5.5	19.2	11.9	5.1	14.0	9.5
	Never married	10.8	3.0	8.6	0.0	0.0	0.0	11.3	7.1	9.3	27.0	20.5	23.8
<b>Education Level</b>													
Georgia	Primary or lower	4.5	5.4	5.0	1.5	0.0	1.3	n.a.	n.a.	n.a.	2.4	3.0	2.7
	Secondary	51.5	49.2	50.3	39.5	32.9	38.4	n.a.	n.a.	n.a.	44.9	39.9	42.2
	Post-secondary non-tertiary	23.7	26.0	24.9	19.1	34.5	21.6	n.a.	n.a.	n.a.	20.9	24.2	22.7
	Tertiary or above	20.3	19.3	19.8	39.9	32.5	38.7	n.a.	n.a.	n.a.	31.8	32.9	32.4
Mongolia	Primary or lower	47.0	40.2	44.4	37.1	14.3	35.3	36.8	33.3	35.3	26.9	21.1	23.9
	Secondary	39.2	42.3	40.4	52.5	67.9	53.7	46.3	45.4	45.9	45.9	43.8	44.8
	Tertiary or above	13.9	17.4	15.2	10.4	17.8	11.0	17.0	21.3	18.8	27.2	35.2	31.3
Cavite, Philippines	Primary or lower	25.6	27.1	26.0	14.8	8.7	12.1	19.1	18.9	19.0	14.7	14.4	14.6
	Secondary	51.9	41.3	49.0	43.5	91.3	64.7	46.1	47.5	46.8	46.5	44.8	45.6
	Tertiary or above	22.5	31.6	25.0	41.6	0.0	23.2	34.8	33.5	34.2	38.8	40.8	39.8
<b>Employment Status</b>													
Georgia	Employed	78.1	62.6	70.0	90.0	83.6	88.9	n.a.	n.a.	n.a.	66.0	46.9	55.6
	Not engaged in economic activity	21.9	37.4	30.0	10.0	16.4	11.1	n.a.	n.a.	n.a.	34.0	53.1	44.4
Mongolia	Employed	77.5	71.6	75.3	81.5	94.3	82.5	67.2	60.4	64.4	67.2	56.2	61.6
	Not engaged in economic activity	22.5	28.4	24.7	18.5	5.7	17.5	32.8	39.6	35.6	32.8	43.8	38.4
Cavite, Philippines	Employed	77.8	48.7	69.7	100.0	37.1	72.1	83.3	51.5	68.3	77.6	49.6	63.5
	Not engaged in economic activity	22.2	51.3	30.3	0.0	62.9	27.9	16.7	48.5	31.7	22.4	50.4	36.5
<b>Age Group</b>													
Georgia	18–29	16.5	12.1	14.2	15.4	9.3	14.4	n.a.	n.a.	n.a.	20.7	18.5	19.5
	30–49	31.3	33.5	32.4	33.3	33.8	33.4	n.a.	n.a.	n.a.	34.0	33.0	33.5
	50–59	21.8	20.1	20.9	24.9	25.9	25.1	n.a.	n.a.	n.a.	18.7	18.8	18.8
	60 and above	30.4	34.3	32.5	26.4	31.0	27.2	n.a.	n.a.	n.a.	26.5	29.7	28.2
Mongolia	18–29	18.9	14.9	17.4	7.5	0.0	6.9	21.9	16.4	19.6	25.7	24.3	25.0
	30–49	52.8	53.1	52.9	53.2	23.2	50.8	47.8	47.6	47.7	44.7	45.7	45.2
	50–59	18.3	19.7	18.8	26.5	56.5	28.9	18.2	21.6	19.6	17.9	18.4	18.2
	60 and above	10.1	12.2	10.9	12.8	20.3	13.4	12.1	14.4	13.0	11.6	11.5	11.6
Cavite, Philippines	18–29	13.6	8.0	12.0	0.0	16.9	7.5	16.1	14.8	15.5	31.7	28.0	29.8
	30–49	44.1	51.8	46.2	27.2	74.4	48.1	50.1	47.5	48.9	41.5	43.5	42.5
	50–59	25.6	20.8	24.3	43.5	0.0	24.2	20.3	20.7	20.5	16.6	16.3	16.4
	60 and above	16.7	19.4	17.4	29.3	8.7	20.2	13.4	17.1	15.1	10.2	12.2	11.2

n.a. = not applicable.

Note: The number of sample observations reported owners of large agricultural equipment is too small to generate reliable disaggregated data on sociodemographic characteristics. Thus, estimates should be interpreted with caution.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

the household as the primary owner and by custom, men are considered to have “head of household” status in families or households not headed by single women. In Georgia, joint ownership by all members of the household is the most common form among reported owners but this shifts to exclusive male owners for documented ownership, suggesting that the perception of ownership is more inclusive than the documented reality. In Cavite, Philippines, forms

of ownership vary by asset. For dwellings, ownership by the principal couple is the most prevalent (63.0% for reported and 33.3% for documented). This reflects the law on ownership of properties during marriage in the country, i.e., the husband and wife equally own any property acquired during marriage. Agricultural land in Cavite, Philippines is jointly owned with non-household members. Other real estate is commonly owned by the principal couple for reported owners



**Table 3.10: Distribution of Reported Ownership of Financial Assets and Nonagricultural Enterprises, by Sex and Sociodemographic Characteristics (%)**

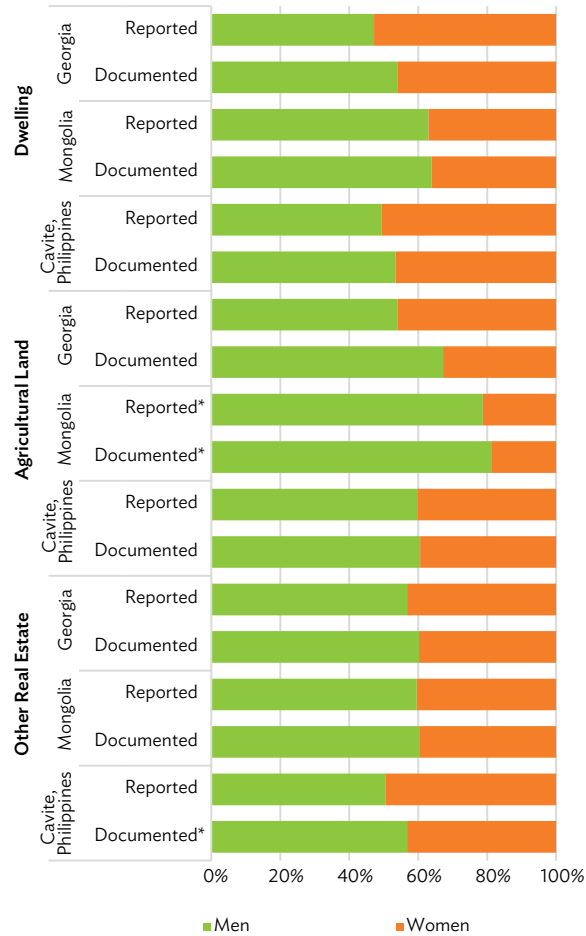
Country	Sociodemographic characteristics	Financial Asset			Nonagricultural Enterprises		
		Men	Women	Total	Men	Women	Total
<b>Marital status</b>							
Georgia	Married	61.5	52.7	57.0	82.8	68.2	77.0
	Widowed/Separated/Divorced	6.0	20.7	13.5	3.0	24.7	11.7
	Never married	32.4	26.6	29.5	14.1	7.1	11.3
Mongolia	Married	78.6	70.7	74.4	88.8	77.9	83.9
	Widowed/Separated/Divorced	7.8	18.4	13.5	1.9	15.4	7.9
	Never married	13.6	10.9	12.1	9.3	6.7	8.1
Cavite, Philippines	Married	72.0	63.2	66.8	85.4	77.1	80.7
	Widowed/Separated/Divorced	4.5	19.5	13.3	6.9	15.4	11.7
	Never married	23.5	17.3	19.9	7.7	7.5	7.6
<b>Education level</b>							
Georgia	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
Mongolia	Primary or lower	19.8	14.3	16.9	15.9	12.8	14.5
	Secondary	40.8	36.3	38.4	57.2	54.6	56.0
	Tertiary or above	39.5	49.4	44.8	26.9	32.7	29.5
Cavite, Philippines	Primary or lower	4.0	10.8	8.0	17.0	18.6	17.9
	Secondary	33.6	35.3	34.6	45.1	51.8	48.9
	Tertiary or above	62.4	54.0	57.4	37.9	29.6	33.2
<b>Employment status</b>							
Georgia	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
Mongolia	Employed	73.6	69.0	71.1	87.2	86.6	86.9
	Not engaged in economic activity	26.4	31.0	28.9	12.8	13.4	13.1
Cavite, Philippines	Employed	83.9	61.9	71.0	95.9	88.3	91.6
	Not engaged in economic activity	16.1	38.1	29.0	4.1	11.7	8.4
<b>Age Group</b>							
Georgia	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 & above	26.2	30.7	28.5	15.5	25.4	19.4
Mongolia	18-29	23.6	21.7	22.6	19.6	13.8	17.0
	30-49	49.4	55.6	52.7	57.9	61.7	59.6
	50-59	14.4	15.1	14.8	18.7	20.0	19.3
	60 & above	12.6	7.6	9.9	3.8	4.5	4.1
Cavite, Philippines	18-29	20.8	21.3	21.1	9.0	11.0	10.2
	30-49	49.4	45.3	47.0	52.5	49.5	50.8
	50-59	15.4	17.0	16.3	26.8	25.5	26.1
	60 & above	14.5	16.4	15.6	11.7	13.9	12.9

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

but for documented owners, joint ownership with non-household members is more typical. Exclusive male ownership of agricultural land is also common in Cavite, Philippines. However, it should be noted that only 5% of the adult population in the province owns any agricultural land. Generally, the gender disparity

in exclusive ownership is highest in Mongolia for both reported and documented ownership. High gender gap is also observed for documented ownership in Georgia. In the Philippines, there are no substantive gender gaps in exclusive ownership; joint ownership is more common than exclusive ownership.

**Figure 3.5: Distribution of Ownership of Immovable Assets, by Sex and Type of Ownership (%)**

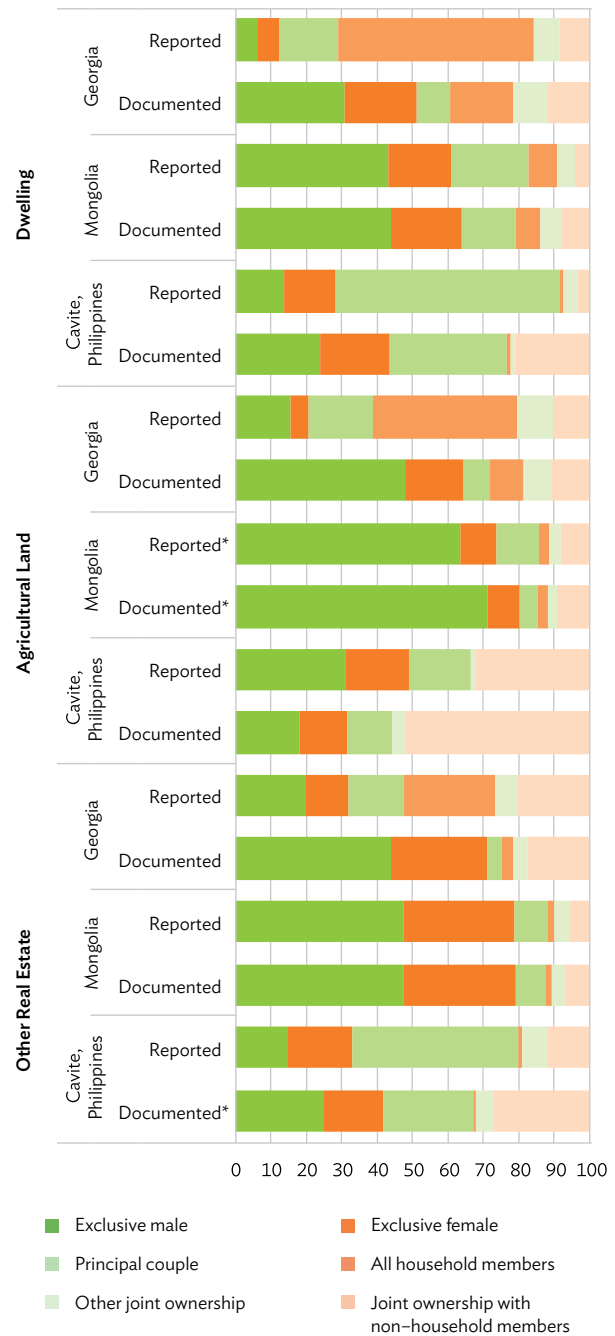


\* The number of sample observations may not be sufficient to facilitate comparison of asset owners by sex. Thus, estimates should be interpreted with caution.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

Figure 3.7 shows the distribution of the forms of ownership for all other assets—large agricultural equipment, small agricultural equipment, livestock, nonagricultural enterprises, and consumer durables. In Mongolia, similar to immovable assets, exclusive ownership by men is most common across all assets except for consumer durables where ownership by a principal couple is the most common. In Georgia, both livestock and consumer durables are perceived

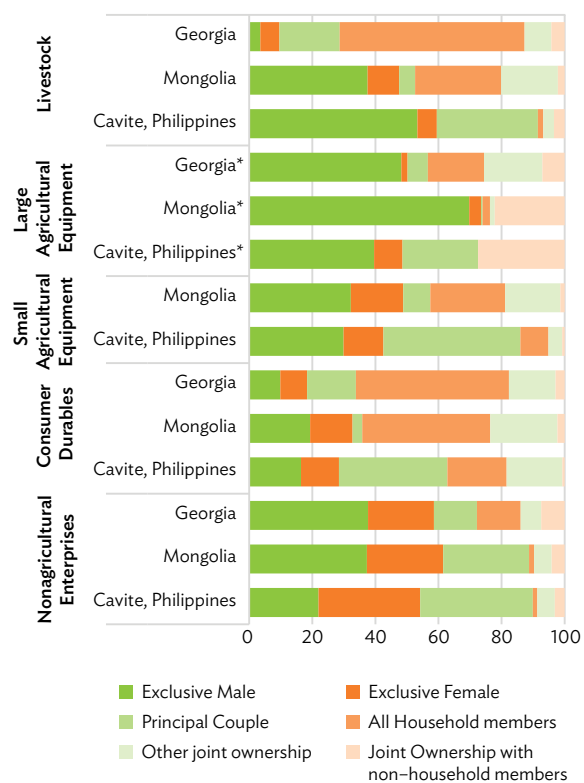
**Figure 3.6: Distribution of Forms of Asset Ownership—Immovable Assets, by Type of Ownership (%)**



\* The number of sample observations may not be sufficient to facilitate comparison of categories of forms of ownership. Thus, estimates should be interpreted with caution.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

**Figure 3.7: Distribution of Forms of Asset Ownership—Other Assets (%)**

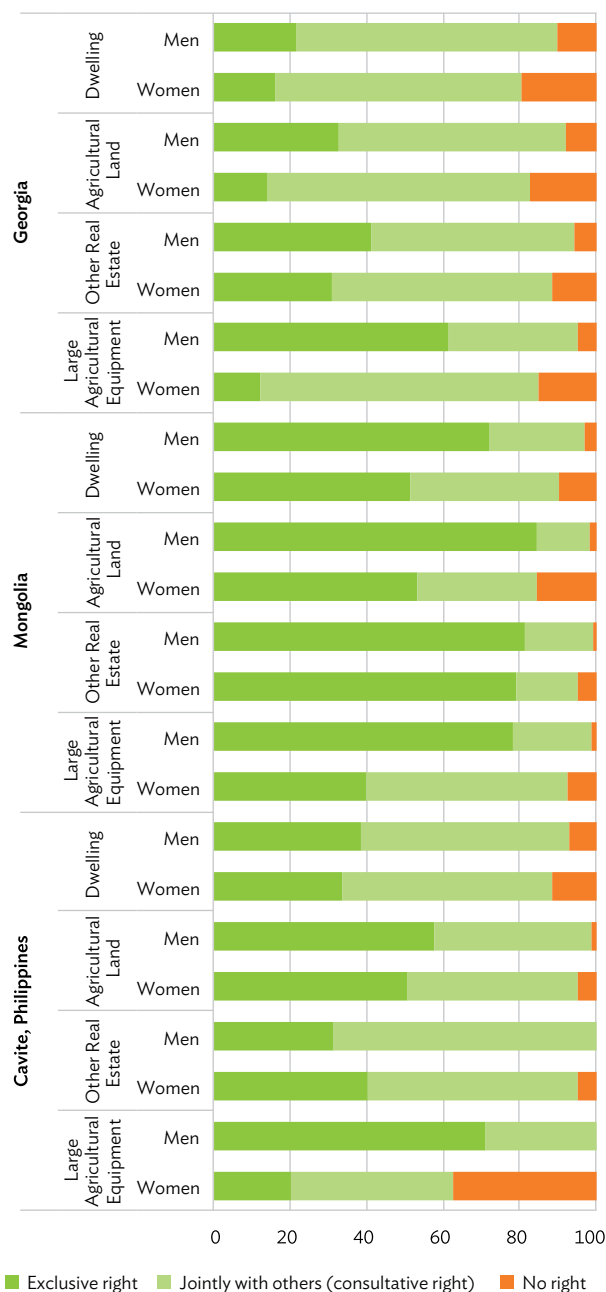


\* The number of sample observations may not be sufficient to facilitate comparison of categories of forms of ownership. Thus, estimates should be interpreted with caution.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

as property of all members of the household while men are likely to be exclusive owners of large agricultural equipment, small agricultural equipment, and nonagricultural enterprise. In Cavite, Philippines, large agricultural equipment and livestock are commonly owned exclusively by men while small agricultural equipment, consumer durables, and nonagricultural enterprise are owned by the principal couple. Exclusive female ownership of nonagricultural enterprises in Cavite, Philippines is also high at 32.2% and higher than exclusive ownership of men at 22.0%.

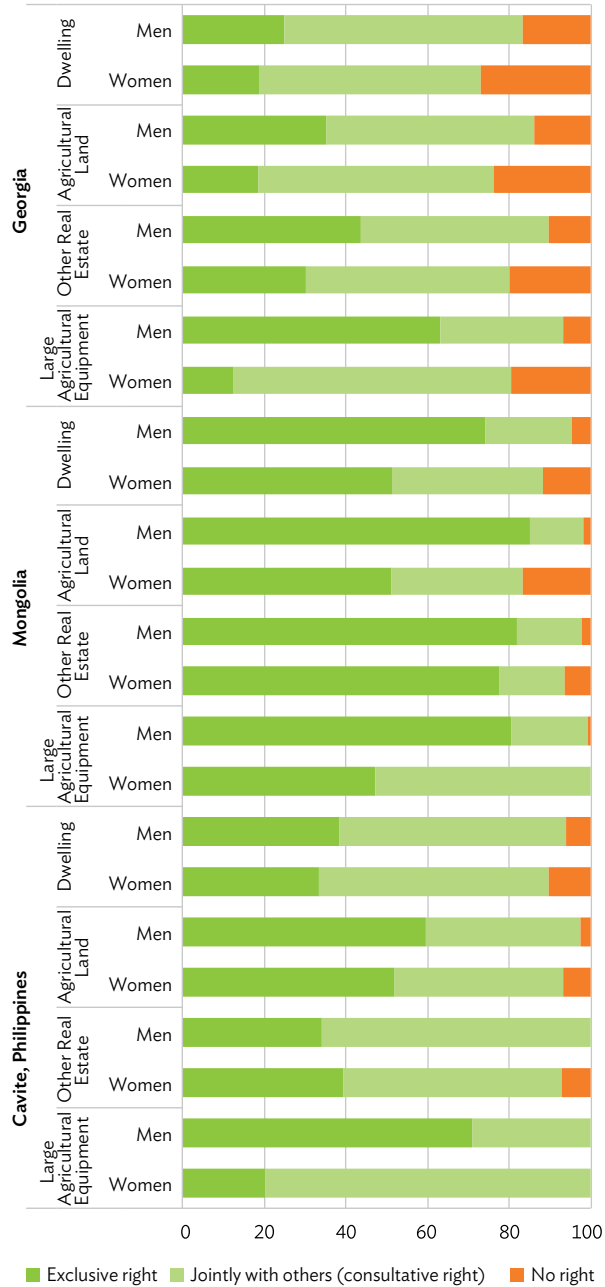
**Figure 3.8: Distribution of Rights to Sell Select Assets, by Sex (%)**



Note: The number of sample observations for large agricultural equipment is too small to facilitate comparison of categories of right to sell. Thus, estimates should be interpreted with caution.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

**Figure 3.9: Distribution of Rights to Bequeath Select Assets, by Sex**  
(%)



Note: The number of sample observations for large agricultural equipment is too small to facilitate comparison of categories of right to bequeath. Thus, estimates should be interpreted with caution.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

### 3.4 Alienation Rights

Among the bundle of ownership rights, the information on alienation rights (right to sell and right to bequeath) over the assets further delineates the concept of ownership. It draws attention to the question of whether the reported or documented ownership also implies control over decision-making in relation to the owned assets. This section looks into the distribution of men and women owners' right to sell or bequeath key productive assets—main dwelling unit, agricultural land, other real estate, and large agricultural equipment.

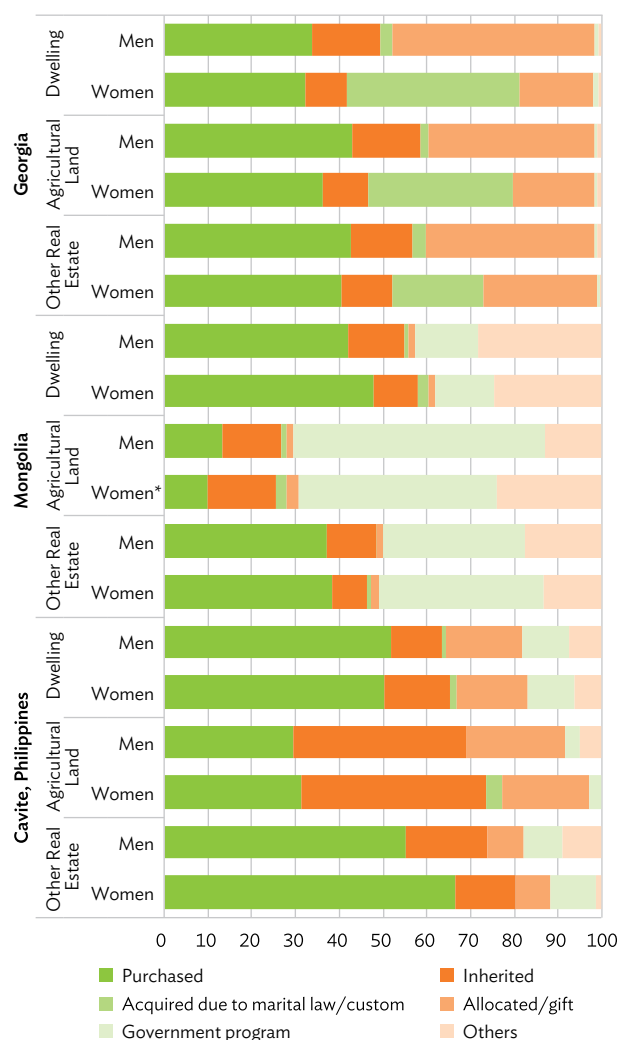
In both Georgia and Cavite, Philippines, the decision to sell or bequeath the asset is largely consultative in nature, which is reflected in the high incidence of joint form of ownership among all household members in Georgia. On the other hand, in Mongolia, the right to sell or bequeath assets is more exclusive in nature. Remarkably, while most assets in Mongolia are exclusively owned by men, the majority of the women who owns assets also reported exclusive rights to alienate the assets.

In general, the exclusive right to sell or bequeath the asset is higher among men than among women owners for all asset categories in the three countries. A larger proportion of women as compared to men reported not having the right to sell or bequeath the assets that they owned. This suggests that women reported limited influence on the decision to alienate an asset even if they considered themselves as owners. The perceived lack of alienation rights by women compared with men is more pronounced in Georgia and Mongolia, but the disparity is somewhat narrow in Cavite, Philippines.

### 3.5 Modes of Acquisition

Modes of acquisition of asset include purchases made in a market, inheritance after the death of a natal or marital family member, and acquisition due to marital law or custom, gifts, and government

**Figure 3.10: Distribution of Mode of Acquisition—  
Immovable Assets, by Sex**  
(%)



\* The number of sample observations may not be sufficient to facilitate comparison of categories of mode of acquisition. Thus, estimates should be interpreted with caution.

Note: Inherited includes natal inheritance from marital family members; others combine encroachment, don't know, and other response.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

programs. Although data has been collected for all assets, the analysis here focuses on the main dwelling unit, agricultural land, other real estate, and nonagricultural enterprises.

Figure 3.10 presents the distribution of modes of acquisition for immovable assets. In both Mongolia

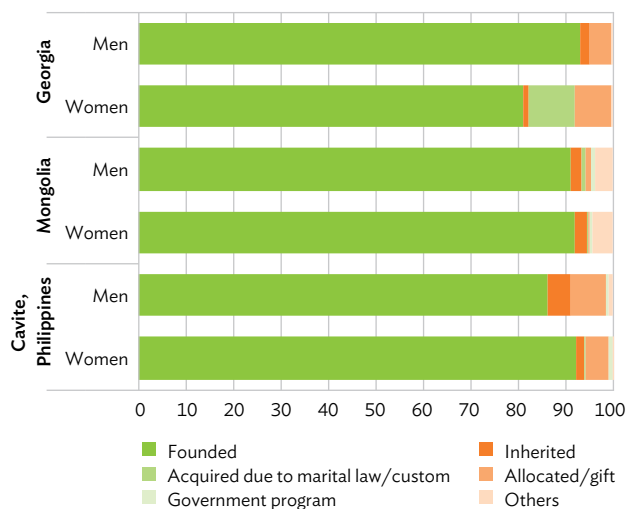
and Cavite, Philippines, the most common channel by which men and women owners reportedly acquired their principal dwelling is through purchase. However, in Georgia, different patterns of acquisition by men and women are reported. Allocation or gift from household and non-household members dominated men owners' acquisition (46.1%), but comprises only 17.0% of women owners' acquisition. On the other hand, 39.4% of women owners acquired the principal dwelling because of marital law or custom. The comparable figure for men owners was only 2%. Nonetheless, acquiring the principal dwelling through purchase also appeared to be quite significant in Georgia (33.9% for men owners and 32.3% for women owners).

The primary mode of acquisition of agricultural land differs for each country. In Georgia, 42.9% of men owners and 36.2% of women owners acquired agricultural land by purchasing the asset. Another 38.2% of men owners while only 18.9% of women owners reported to have received agricultural land as a gift. A remarkable difference between men and women can be seen in acquiring the agricultural land because of marital law or custom, wherein 33.0% of women owners acquired the land through marriage compared to only 1.8% of men owners. In Mongolia, the majority of the agricultural land owners acquired the asset through government programs (57.5% of men and 45.3% of women owners). In Cavite, Philippines, although agricultural land ownership is quite low, most men and women owners either purchased or inherited the land.

Other real estate owners mostly acquired the asset through purchase. In Georgia, the pattern is similar to the acquisition of dwelling and agricultural land. Acquisition through marriage is substantial among women owners while receiving as a gift is high among men owners. Government programs contribute significantly to how people acquired other real assets in Mongolia; 32.2% of men owners and 37.6% of women owners received the asset from the government.

Modes of acquisition of nonagricultural enterprises is presented in Figure 3.11. In all three

**Figure 3.11: Distribution of Mode of Acquisition—  
Nonagricultural Enterprises, by Sex**  
(%)



Note: Inherited includes natal inheritance from marital family members; others combines encroachment, don't know, and other responses.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

countries, setting up (founded) is the main channel by which men and women owners acquired their nonagricultural enterprise. In Georgia and Mongolia, the incidence of acquiring an enterprise either by setting up or purchasing is higher among men owners; however in Cavite, Philippines, 92.1% of women owners and only 86.3% of men owners set up their nonagricultural enterprise. This might reflect the efforts of current entrepreneurship programs of the government and nongovernment organizations in the Philippines that are geared toward supporting women entrepreneurs.

Overall, self-acquisition of assets is common in the three countries regardless of sex. In Mongolia, government programs played a major role in the acquisition of dwelling, agricultural land, and other real estate. This may be because land is a state property and the state may give plots for private ownership to citizens according to the criteria laid out in the law. Gender disparity, specifically on acquiring the assets as an inheritance or as a gift, is observed in Georgia. This may be because of the culture in the country that favors

men in transferring the family property. Meanwhile, the incidence of owners acquiring the asset because of marital law or custom is higher among women owners compared to men owners, reflecting the existing marital regime in Georgia, where by a woman becomes a co-owner of her spouse's property after marriage.

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

As mentioned earlier, the indicators of individual-level ownership can be estimated using two approaches based on how ownership is assigned to individuals—SAO and OAAR (see Chapter 2). All results presented in this chapter are estimated using SAO approach. Comparing SAO and OAAR approaches, the results suggest that estimated proportions of reported and documented owners are generally higher using the OAAR approach than the SAO approach. However, there are variations across asset types, sex, and country. The differences are less than 5 percentage points in most instances. The largest differences are observed in Georgia, where the SAO approach gives lower estimates for incidence of ownership of dwelling and agricultural land (Figure 3.11). Reported and documented ownership for dwelling in Mongolia is slightly higher using SAO approach than the OAAR approach. This might be suggestive of lack of information sharing within the household on such matters.

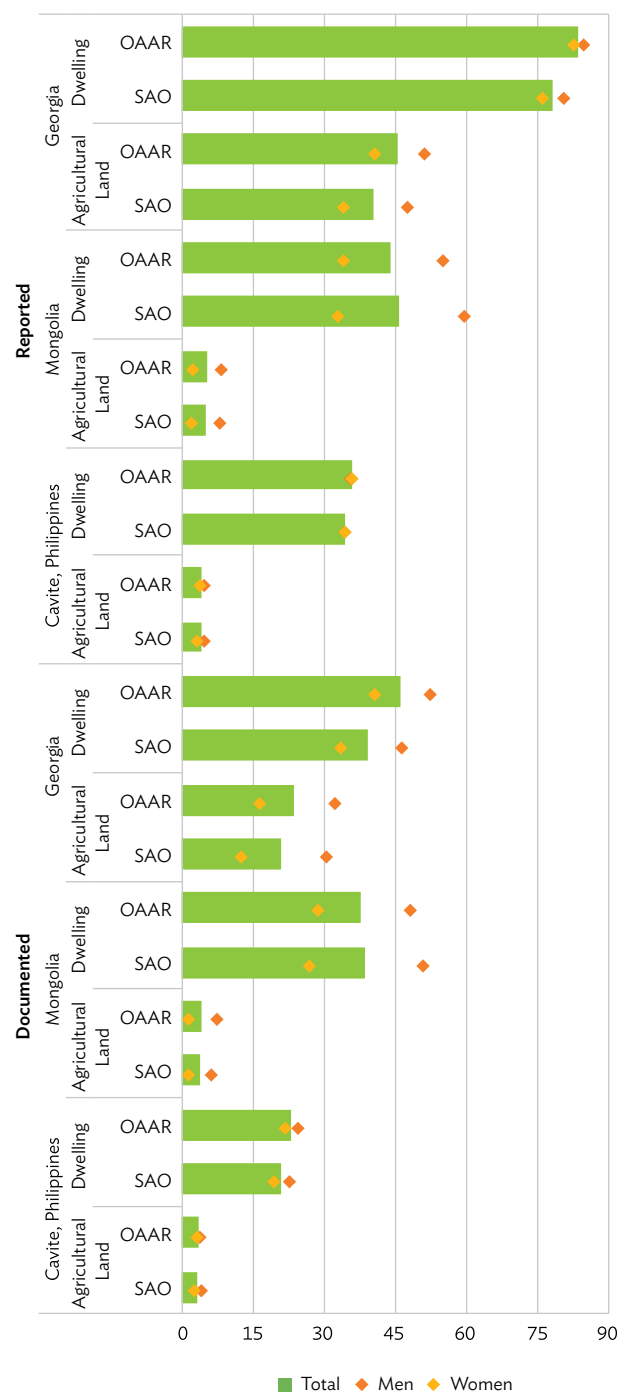
The trend in gender disparities in incidence of ownership assets is the same for both SAO and OAAR approaches, where men are generally more likely to own dwelling and agricultural land compared to women.

### 3.7 Distribution of Wealth: Dwelling

The incidence of asset ownership provides a simple indicator of gender gap. But, incidence indicators



**Figure 3.12: Comparison of Estimates of Incidence of Ownership of Select Assets Using Self-Assigned Ownership and Ownership Assigned by Any Respondent Approaches (%)**



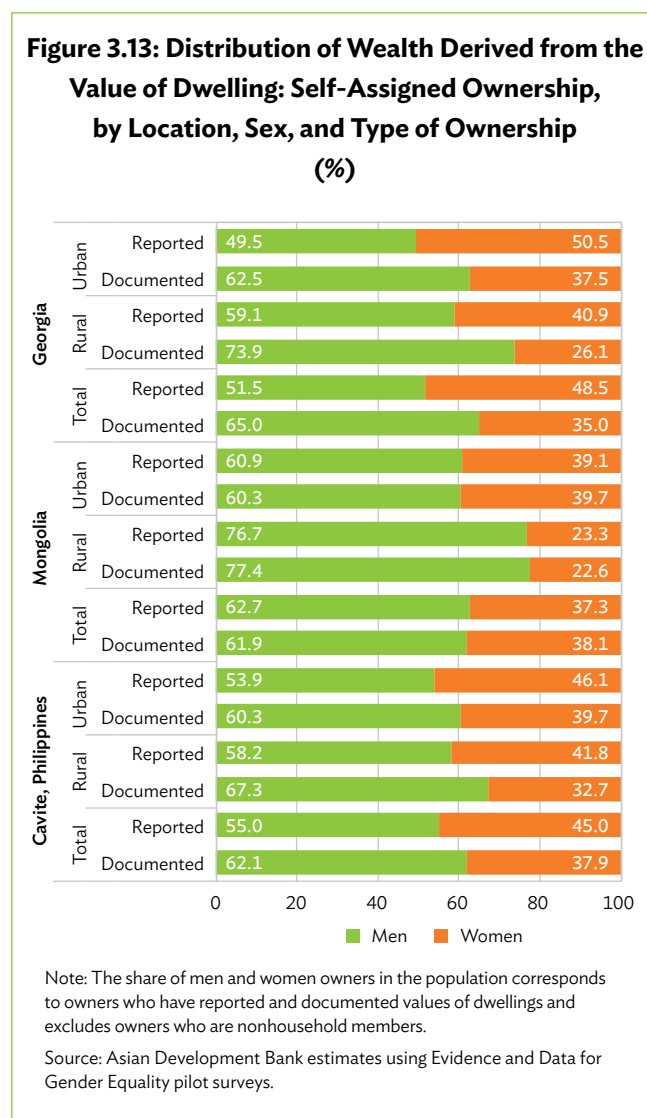
OAAR = Ownership Assigned by Any Respondent, SAO = Self-Assigned Ownership.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

do not provide information about the quantity, size, and quality of assets. For example, an owner of a dwelling that is 500 sq ft. in size is treated the same as an owner of dwelling that is 2000 square feet in size as the measurement only relies on the incidence. Further, a simple count of assets held by men and women does not fully describe gender disparities in asset ownership. It is therefore also useful to consider asset values and the gender distribution of wealth to understand the relative economic positions of men and women within these households. The value of an asset is a function of its numerous attributes. For example, the value of dwelling will depend upon size, location, and quality of construction. Thus, while survey data may reveal a lower incidence of ownership for women, this disparity will be worsened if women own assets of inferior quality, leading to a lower valuation than men's assets. The EDGE surveys collected data on the ownership of dwellings and other immovable assets along with their market value from the owners. This section presents sex-disaggregated analysis of wealth. It is important to note that operationally, it was very challenging to collect data on value of assets and the valuation estimates suffer from very high nonresponse rates. High nonresponse led to high missing values, making data less reliable for use. Women were less likely to report values for dwelling than men. Mongolia reported the lowest nonresponse rate among the three pilot countries, at 15% for men and 18% for women. In Cavite, Philippines, nonresponse rates were 48% for men and 60% for women, while Georgia reported the highest nonresponse rates for dwelling at 65% for men and 72% for women. The estimates presented here are subject to nonresponse, with no imputations made for missing values. Further, to avoid double counting, in case of joint ownership of dwelling, the value was apportioned equally among the joint owners. The estimates of shares of wealth of dwelling ownership presented here are therefore subject to these severe limitations, although are indicative of the disparities in share of wealth between men and women.

The distribution of wealth derived from the value of dwellings favors men as seen in Figure 3.13. For reported ownership, the gender gap was more

evident in Mongolia, where men owned 62.7% of wealth derived from the dwelling units compared to men in Georgia and Cavite, Philippines who owned 51.5% and 55.0% of the wealth derived from dwelling units, respectively. For documented ownership, the gender disparity was even sharper, with men owning more than 60% of the wealth derived from dwellings in Georgia, Mongolia, and Cavite, Philippines. The difference in the distribution of wealth between men and women was more pronounced in the rural areas of Mongolia where men owned nearly 77% of wealth from dwelling units (Figure 3.13).



### 3.8 Nonagricultural Enterprises

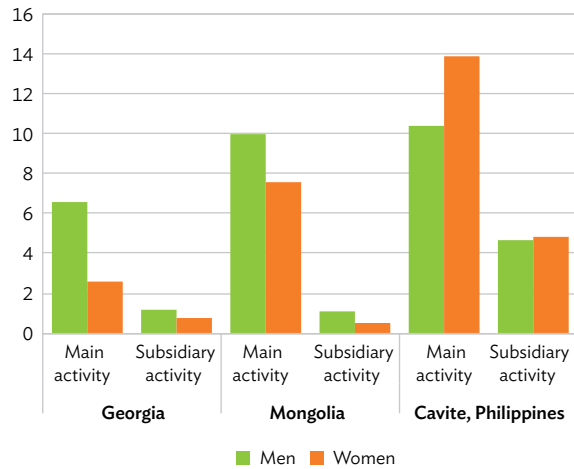
This section provides more details on the composition and management of nonagricultural enterprises by examining the following: main and subsidiary activity, size of enterprise, source of funding, and source of advice separately for male and female owners. Similar to the previous sections, the estimates presented here are based on the SAO approach.

#### Enterprise as main versus subsidiary activity.

Overall, the incidence of entrepreneurship was highest in Cavite, Philippines and lowest in Georgia. Entrepreneurship was the main activity for 10.4% of adult men and 13.9% of adult women in Cavite, Philippines; 9.9% of adult men and 7.5% of adult women in Mongolia; and 6.5% of adult men and 2.6% of adult women in Georgia. Unlike Georgia and Mongolia, a higher proportion of women (13.9%) than men (10.4%) had entrepreneurship as their main activity in Cavite, Philippines. Even as a subsidiary activity, Cavite, Philippines had higher proportion of men and women entrepreneurs than Georgia and Mongolia. Entrepreneurship was the subsidiary activity for 1.2% of men and 0.7% of women owners in Georgia, 1.1% of men and 0.5% of women owners in Mongolia, and 4.7% of men and 4.9% of women owners in the Philippines (Figure 3.14).

In general, more adults in urban areas stated that the enterprises they owned is their main activity, while more adults in rural areas stated that the enterprises they owned is their subsidiary activity. In Georgia, 9.3% of men and 3.8% of women in urban areas stated that the enterprises they owned were their main activity, while only 3.4% of men and 0.9% of women in rural areas stated the same. The pattern is the same in Mongolia (12.3% of men and 8.7% of women in urban areas versus 5.4% of men and 5.1% of women in rural areas) and Cavite, Philippines (11.7% of men and 13.9% of women in urban areas versus 4.3% of men and 5.3% of women in rural areas) (Figure 3.15).

**Figure 3.14: Incidence of Ownership of Enterprise as Main or Subsidiary Activity, by Sex (%)**

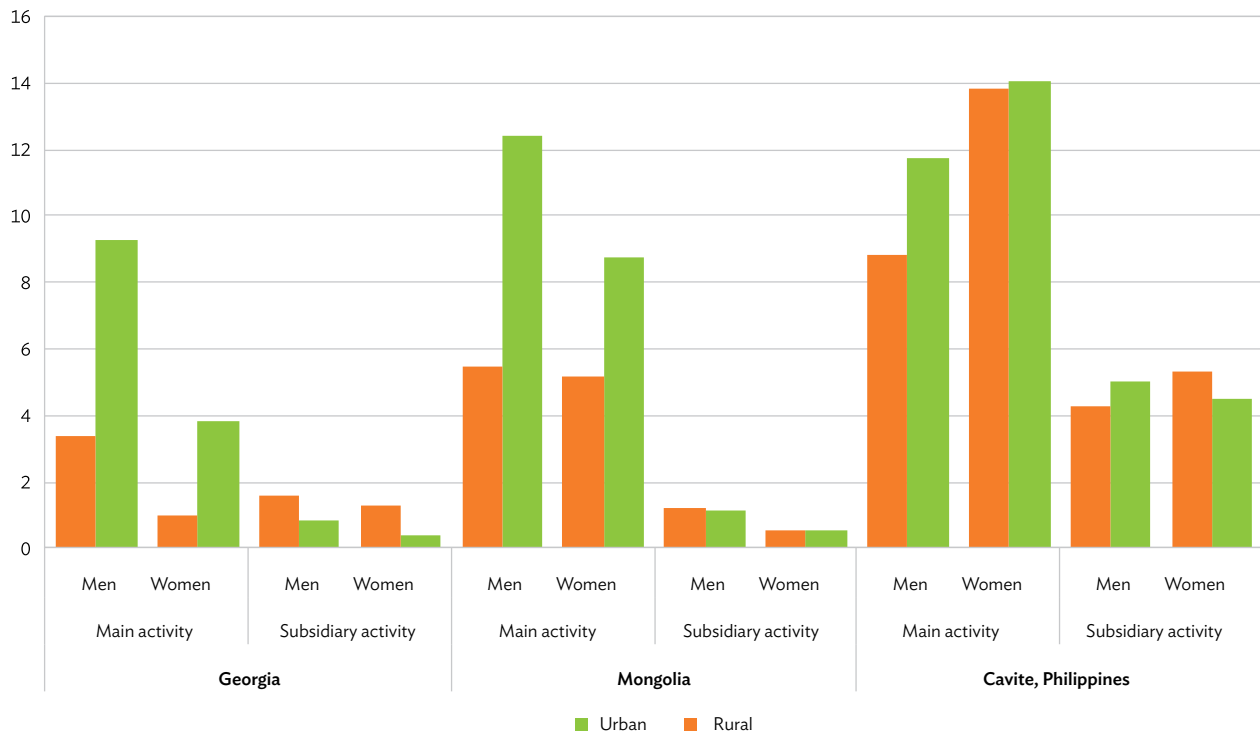


Note: The incidence of ownership of enterprise as main or subsidiary activity represents proportion of adult male (or female) population who own enterprises as either their main or subsidiary activities.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

**Source of funding.** Enterprise owners who founded their enterprise were asked about the source of funding for purchasing or founding the enterprise. In case someone accessed multiple sources of funding, all such sources were recorded in the survey. The pattern of incidence is found to be the same across gender and countries. Majority of the enterprise founding owners in the three countries used their own household savings in putting up the enterprise. In both Georgia (81.0% women vs 71.4% men) and Cavite, Philippines (88.6% women vs 85.0% men) more women than men used their “own household savings”. Commercial and development banks played a secondary role in funding the owners in 9-13% cases during setting up of enterprises in Georgia and 22-23% cases in Mongolia. In Cavite, Philippines, “friends/ relatives” was second source of funding the enterprise at 7%. (Table 3.11)

**Figure 3.15: Incidence of Ownership of Enterprise as Main or Subsidiary Activity, by Sex and Location (%)**



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: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

**Table 3.11: Incidence of Founder Enterprise Owners, by Sex and Source of Funding Used to Start Enterprise (%)**

Source of funding	Georgia		Mongolia		Cavite, Philippines	
	Men	Women	Men	Women	Men	Women
Own/Household's savings	71.4	81.0	67.3	64.4	85.0	88.6
Friends/Relatives	5.9	2.1	8.4	5.4	7.3	7.0
Private Moneylender	2.5	1.5	1.1	1.5	4.4	3.5
Commercial/Development Bank	13.2	9.2	22.0	22.6	0.7	0.0
Others	6.1	6.3	4.1	3.2	1.7	1.1

Note: Column totals may exceed 100 as multiple sources of financing were reported by the respondents.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

**Size of firm.** The majority of the nonagricultural enterprises owned by adult men and women in the survey are very small household enterprises, which had no employees. In Georgia, 82.9% of men and 89.5% women enterprise owners, have enterprises without any employee. In Mongolia, 71.8% of men and 75.2% of women owners have enterprises without any employee. In Cavite, Philippines, 88.1% of enterprises owned by men and 93.9% of enterprises owned by women do not have any employee (Table 3.12).

Relative to those in urban areas, people in rural areas are more likely to operate nonagricultural enterprises without any employee. Furthermore, in rural areas of Georgia and Mongolia, men are more likely than women to operate enterprises without employees. A different picture emerges when looking at urban areas where women are more likely to operate enterprises with no employees compared to men. In general, enterprises operated by men tend to have higher firm size relative to those operated by women.

**Joint ownership with spouse or partner.** Enterprise owners who are married or have adult partners were asked if they jointly owned the firms with their spouse or partner. Overall, more women enterprise owners hold their firms jointly with their spouses or partners in the three pilot areas covered by the study. In Mongolia, the estimates are at 6.4% for women versus 5.3% for men, while in Cavite, Philippines, the numbers are estimated at 12.0% for women versus 10.5% for men. Georgia offers a different case, where

**Table 3.12: Incidence of Ownership of Enterprises of Various Sizes, by Sex and Location (%)**

Country	Size class	All		Urban		Rural	
		Men	Women	Men	Women	Men	Women
Georgia	0	82.9	89.5	73.5	86.2	96.2	93.2
	1 to 5	14.7	13.2	21.4	18.5	5.2	7.0
	6 to 10	3.4	0.4	4.5	0.0	1.8	0.9
	11 to 15	1.6	0.4	2.6	0.0	0.2	0.9
	16 to 20	0.0	0.0	0.0	0.0	0.0	0.0
	20+	1.4	0.1	2.4	0.2	0.0	0.0
Mongolia	0	71.8	75.2	66.3	76.7	87.7	71.3
	1 to 5	30.5	27.9	33.4	24.4	22.2	37.1
	6 to 10	5.3	2.3	6.3	2.4	2.5	2.1
	11 to 15	0.7	0.0	0.7	0.0	0.6	0.0
	16 to 20	0.4	0.0	0.5	0.0	0.0	0.0
	20+	0.6	0.9	0.9	1.2	0.0	0.0
Cavite, Philippines	0	88.1	93.9	87.4	94.9	89.3	92.4
	1 to 5	19.0	13.2	20.2	15.6	17.1	9.7
	6 to 10	0.6	0.2	0.0	0.0	1.5	0.4
	11 to 15	0.0	0.0	0.0	0.0	0.0	0.0
	16 to 20	0.0	0.0	0.0	0.0	0.0	0.0
	20+	0.1	0.1	0.0	0.0	0.4	0.2

Notes: The incidence of ownership of enterprise in a size class represents the proportion of enterprise owners who have at least one enterprise that employs a number of workers in the concerned size class. An owner can have more than one enterprise of different size class. In the above table, an owner is counted in a row (a particular size class) if he/she owns at least one enterprise in that particular size class. In view of this, the total across different size class may exceed 100%.

Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

more men reported to co-own their enterprises with their spouse or partner. Estimates for Georgia are at 3.6% for men and 3.2% for women (Figure 3.16).

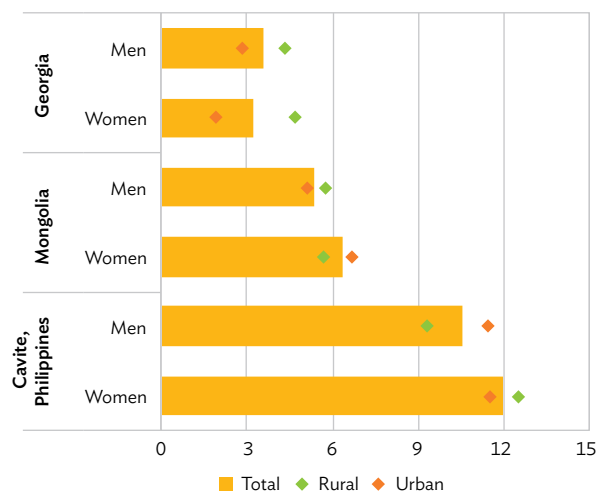
**Application for loan for enterprise.** At least 18.0% of the enterprise owners applied for loans and at least 73.0% of applicants were successful in getting loans (Figure 3.17).

In general, more female enterprises owners applied for loans, except in Georgia, where only 18.5% of women enterprise owners applied for a loan compared to 21.8% of men. Further, among the loan applicants, a large percentage of women enterprise owners reported that their loan application were accepted. This is true for all three pilot surveys, where the estimates stand at 94.6% of the men who owned enterprises versus 100.0% of the women in Georgia; 73.9% of the men versus 86.0% of the women in Mongolia; and 73.4% of the men versus 77.3% of the women in Cavite, Philippines (Figure 3.17).

**Sought managerial advice.** The enterprise owners were also asked if they received advice on managing the operations of their enterprises, and if yes, from whom? The results are presented in Figure 3.18. It is more common for men not to seek managerial advice. In Georgia, 46.5% of the men who owned enterprises did not seek advice, as opposed to 35.2% of the women. In Mongolia, 62.4% of the men did not seek advice versus 54.7% of the women. In Cavite, Philippines, the estimates are 37.6% of the men versus 37.2% of the women.

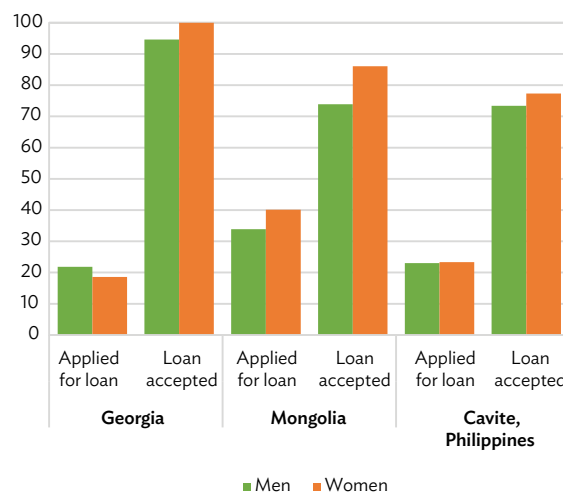
Some enterprise owners reported getting advice from multiple sources, and all these sources were recorded during the survey. The most common sources of managerial advice in the three countries were spouses or partners and family members or other relatives. A larger share of women enterprise owners in Georgia and Mongolia seek advice from spouses and other family members (34.1% from spouses and 34.9% from other relatives in Georgia; 23.1% from spouses and 22.4% from other relatives

**Figure 3.16: Incidence of Enterprise Owners with Joint Ownership with Spouse or Partner, by Location and Sex (%)**



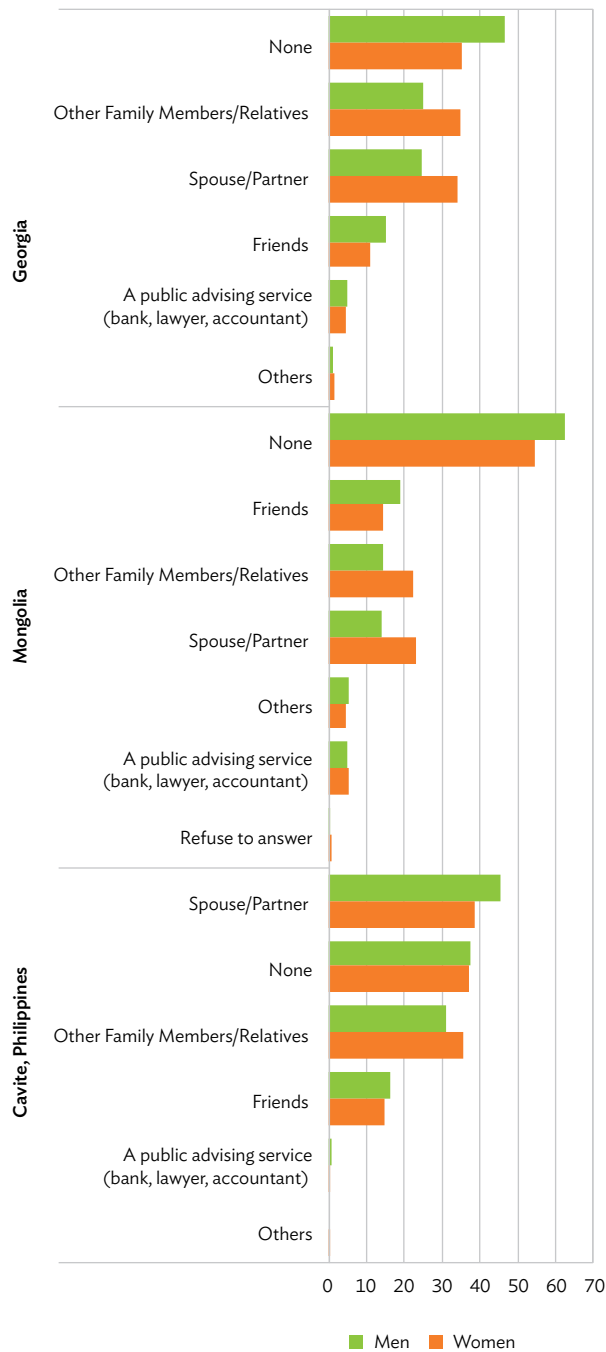
Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

**Figure 3.17: Incidence of Enterprise Owners, by Loan Application Status and Sex (%)**



Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

**Figure 3.18: Incidence of Enterprise Owners Who Sought Managerial Advice, by Sex and Source of Managerial Advice (%)**



Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

in Mongolia) compared to their male counterparts (24.4% from spouses and 24.9% from other relatives in Georgia; 13.9% from spouses and 14.4% from other relatives in Mongolia). Less than 5% of the enterprise owners reported to have taken advice from any public advising agency.

Meanwhile, in Cavite, Philippines, men were more likely to seek advice from their spouse or partner (45.4% of men versus 38.6% of women), while women were more likely to seek advice from other family members or relatives (35.7% of men versus 31.3% of women) (Figure 3.18).



## Chapter 4: Examining Data Quality from the Evidence and Data for Gender Equality Pilot Surveys

This chapter provides assessment of the quality of the Evidence and Data for Gender Equality (EDGE) pilot survey operations and data collected to measure ownership of assets. The first section documents the steps undertaken before, during, and after survey field operations to ensure the high quality of data. The second section provides a quantitative assessment of the accuracy and precision of the survey estimates. As a way of evaluating accuracy and precision, select indicators are compared as estimated from EDGE pilot survey with other external data sources to assess the representativeness of the survey. Confidence intervals of the survey estimates are also presented as a measure of precision.

### 4.1 Quality Control Pre-Survey Field Operations

#### 4.1.1 Questionnaire Design

The customization of the country survey questionnaires and the instructions manual was based on standard Asian Development Bank (ADB)–EDGE survey instruments. This was mainly done in-house by the officials of the national statistics offices (NSOs) of the three countries, in close consultation with ADB and the United Nations Statistics Division (UNSD). During customization, no additional questions and/or modules were added to the country EDGE questionnaires. However, some amendments to the standard ADB–EDGE questionnaire were done, such as modifications in the wording of the questions or in the response categories. Some questions and modules that were not considered relevant to the country context were deleted, e.g., the National Statistics Office of Georgia (Geostat) dropped the module on small agricultural equipment and questions on tenure status of dwelling and parcel.

The pilot countries also included other types of large agricultural equipment in their questionnaire. In the questionnaire for Georgia, distinction between hand tractors, mini tractors, and tractors with larger capacity. In Mongolia, other types of equipment were added. These are combines, horse and tractor raker, *jatka* (combined header and harvesting equipment), manure fertilizer spreaders, irrigation systems, porters, and rickers. Respondents were also given the option to list other large agricultural equipment they may have.

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

For better operationalization of field interviews, questionnaires were translated into the local language. The translation of the questionnaire and instructions manual was undertaken mostly by staff of the NSOs. A translator was hired by the Georgian survey team to assist with the translation of the questionnaire and manual. In all the countries, the translation process did not identify any major problems. In some cases, they sought the help of experts from other specialized institutions in their country to translate certain specific English technical terms used in the survey and to get the most appropriate word in their language.

The questionnaires were pretested prior to the conduct of pilot survey to assess their applicability in the country's context. More specifically, pretesting was done to gauge the clarity of the questions and skip patterns, and evaluate the operational feasibility of conducting the interviews. Pretesting of the questionnaire and instructions manual was done in one round in Georgia and two rounds in Mongolia, and

Cavite, Philippines. The pretesting was conducted from May 2015 to August 2015 in the three countries. The pretesting team consisted of officials and staff from the NSOs, field supervisors, and enumerators. In all the three countries, ADB representatives also participated in the pretesting operations. Based on the pretests' results, the questionnaires' instructions manual were revised in line with the country's context.

#### **4.1.2 Training and Organization of Fieldwork**

Well-trained field staff is essential to collect high quality survey data. 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. The training of trainers (TOT) in each country was facilitated by resource persons from ADB and UNSD. The trainers, who were mostly staff of the three NSOs, conducted the second phase of training. Training duration varied from 2 to 5 days.

In each country, the TOT was primarily a classroom discussion. The survey goals, questionnaire design, main concepts, definitions, and the procedures of survey were discussed. Clarifications were also made on specific topics that were not clear or misinterpreted by the trainers. This was essential to convey the concepts to the field operations staff. In Georgia, role-playing sessions were conducted for some modules, during which the enumerators interviewed each other. In Mongolia and the Philippines, however, no field trainings or mock interviews were done during the TOT. The TOT in Mongolia and the Philippines focused on the understanding of the concepts, definitions and the items in the questionnaire.

The training of field enumerators and supervisors, broadly comprised of lectures, recapitulation, mock interviews, and field practice interviews in all countries. In Cavite, Philippines, written exercises were also conducted to evaluate participants' level

of understanding of the concepts and definitions of the survey. Participants carried out practical interviews in the field to familiarize themselves with the questionnaire, the procedures on data gathering operations, as well as to allow them to experience the actual environment in administering the survey questionnaires. A quiz session with 20 questions was also organized in Mongolia. In each country, the training ended with a debriefing session to discuss the issues observed in the field and to provide necessary clarifications on them.

In Mongolia and Cavite, Philippines, a workshop was also organized for supervisors to discuss their roles and responsibilities when conducting field operations: the process for distributing assignments; the protocols for nonresponsive households; data quality assurance, including the importance of reviewing questionnaires to ensure that all questions were asked and answers were recorded accurately; what to do if mistakes were found in completed questionnaires; how to deal with problems that might arise in the field; and maintaining contact with NSO headquarters; etc.

As a result of these training activities, the questionnaires were modified to correct typographical errors, inconsistent skip patterns, and categories of responses. The instructions manual was also revised for more clarity and better comprehension. Additional explanations and illustrations of possible field situations were provided. Other survey concepts and questions that were found to be more difficult were also documented during the training.

## **4.2 Quality Control During Survey Field Operations**

### **4.2.1 Organization of Field Operations**

As the pilot survey was the first of its kind for all the three NSOs that participated in the project, the pre-survey preparation entailed learning new concepts. The three participating NSOs took necessary quality

control measures during the actual survey field operations.

The pilot surveys conducted in the three countries spanned over the months of September 2015 to November 2015. Face-to-face interviews using paper questionnaires were implemented in all the three countries for collecting data.

A team approach was used during field enumeration, wherein each field team consisted of one supervisor and two to four enumerators. This approach was considered suitable to implement in the survey protocol that required simultaneously interviewing of all available respondents in the selected households. This was required to ensure independent interviews of individuals without any influence due to the presence or intervention by other household members.

In Mongolia, all enumerators and supervisors were centrally recruited as contractual staff for carrying out the field operations. In Georgia, the field teams were experienced contractual staff recruited at the regional level, while in Cavite, Philippines, the recruitment was done at the provincial level. In Cavite, Philippines and in Georgia, while the enumerators were hired on contract, the field supervision was undertaken by the regular staff of the two NSOs.

As part of the quality assurance of field operations, the team supervisors checked the completed questionnaires and advised the enumerators to correct any errors found. During the debriefing sessions, supervisors provided feedback on the inconsistencies or errors seen in the filled-out questionnaires, including omissions, improper recording of responses, and not following the prescribed skip patterns in the questions and instructions. Where it was deemed necessary, sample households were revisited to allow for the subsequent correction of errors identified by the supervisors. Apart from these field supervisors, a team composed of officials from the headquarters of the countries' respective NSOs monitored the

overall field operations and data quality control. In Mongolia, monitoring teams from the headquarters undertook field visits to check the fieldwork of each team of enumerators at the beginning of the fieldwork. This facilitated direct feedback from the headquarter team to ensure that the enumerators and supervisors correctly understood the survey concepts, instructions, and field protocols. To further ensure the quality of data reported by enumerators in Georgia, a special field monitoring team of Geostat conducted additional interviews using a special questionnaire in two households previously interviewed by every field enumerator. After completing the monitoring activity, the filled-out actual and special questionnaires were compared for every household and checked for consistency.

Standard protocols, as set by each participating country, on safekeeping, validation, and processing of accomplished survey questionnaires, were carefully followed.

#### 4.2.2 General Sampling Design

The pilot surveys followed a multi-stage stratified sampling design. In Georgia and Cavite, Philippines, a village or a cluster of villages constitutes the primary sampling unit (PSU), while a household within each PSU makes up the second stage sampling unit (SSU). Households within each PSU were stratified into two groups based on the number of adult members. In Mongolia, the design was extended at the first stage by selecting provinces within the different regions leading to a three-stage selection process. The *aimags* within the four regions and Ulaanbaatar city as the fifth region constituted the primary sampling units (PSU) while the *bags* and *khesegs* within the selected *aimags* and Ulaanbaatar city respectively, comprised the second stage sampling unit (SSU). The households within the selected *bags* and *khesegs* constituted the ultimate stage units (USU). Households within each PSU were stratified into two groups based on the number of adult members—one for households with three or more adults (second-stage stratum 1 [SSS-1] or ultimate-stage stratum 1 [USS-1]) and

another one for households with at most two adult members (second stage stratum-2 [SSS-2] or ultimate stage stratum-2 [USS-2]). For households in SSS-2 or USS-2, all adult members were selected for interview with a probability equal to one. For households in SSS-1 or USS-1, the primary respondent and his/her spouse were selected with a probability equal to one and a third member was randomly selected from all remaining adult household members.

In Mongolia and Cavite, Philippines, where 16 households were targeted per PSU, eight households were selected from each second stage stratum. This approach is expected to provide enough sample households with at least 3 adults and to achieve an adequate number of households with a principal couple—an important unit of analysis of the survey. A random selection of households could have led to an inadequate number of households with principal couple as observed from the sampling design adopted in previous studies (e.g., Uganda MEXA EDGE survey).

Achieving second- or ultimate- stage stratification required recent or an updated listing of households with information on the number of adults per household. Ideally, a fresh listing of all households in each selected PSU was desirable for the purpose. However, this extra listing required additional resources. In Mongolia, the information on the number of adults in the selected PSUs was available in the population database, which served as the sampling frame and is also expected to be updated dynamically. In Georgia, the 2014 population census frame (nearly 1 year-old at the time of fieldwork) was used to get the information on number of adults in the selected PSUs. In Cavite, Philippines, however, a fresh household listing was undertaken 2 months before fieldwork to gather information on the number of adults per household in each of the selected PSUs. With the available data on the number of adults in the households of the selected PSUs, the households in each selected PSU were divided into SSS-1 and SSS-2 to select the desired number of sample households from each stratum.

In Georgia, the PSUs were selected with probability proportional to size (PPS), and second stage units were selected following a circular systematic sampling (CSS) with a random start. In Mongolia, the PSUs as well as the SSUs were selected with probability proportional to size (PPS), and ultimate stage units were selected following the CSS with a random start. In the Philippines, where the survey was limited to only one province (Cavite), both the PSUs and SSUs were selected following circular systematic sampling (CSS) with a random start. In each country, the sample PSUs/SSUs in each stratum was 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.

### 4.3 Quality Control Post-Survey Field Operations

#### 4.3.1 Data Processing

In large scale surveys, scrutiny and checking of the data collected through the interviews is an essential part of data processing to ensure internal consistency of data. Once the data were collected in the field through the survey instruments, the supervisors manually checked the completeness and consistencies of the entries in the questionnaire. After manual checking, and carrying out necessary corrections, the questionnaires were submitted to the NSO's central office for data processing. A series of data processing activities were carried out to ensure the quality and consistency of the data. Prior to data entry, preliminary checks were made by the NSO staff at their headquarters. This step includes coverage checking to ensure that all surveyed questionnaires for each sample as per the sample list has been received and undertaking checks for completeness of identification information of each questionnaire.

In general, the data entered were subjected to different validation checks by developing a

series of rules for data consistency within and across survey questionnaires. These included checks for completeness of data entry of all survey questionnaires for which data were collected, duplicate records, omissions, range, skip, consistency, and typographical errors. A range check ensures that every variable in the survey is within a limited domain of valid values. A skip check verifies whether the skip patterns and codes have been followed appropriately. A consistency check verifies if the values from one question are consistent with the values from another question. A typographic check entails transposition of figures mistakenly encoded.

Double data entry procedure was implemented in the three countries, wherein the questionnaires were entered in two different databases and compared. If any inconsistencies were found, the data encoder made the necessary correction.

Data cleaning codes per module using Stata were created by the ADB–EDGE team to validate the data from the NSOs. A list of errors was generated per module and sent to NSOs for review and action. Cleaned up datasets were then provided after each round of data validation. A regional workshop was also conducted for all participating countries and it served as a venue to sort out the problems encountered during data cleaning and validation.

### 4.3.2 Calculation of Sampling Weights

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

As discussed earlier, the survey protocol required interviewing selected respondents via household separately to provide information about assets that they own either exclusively or jointly with others as well as proxy information

on assets which other adult household members own. In principle, an unbiased estimate of any desired population parameter (e.g., proportion of adult household population owning a specific type of asset) can be derived using self-reported information from all survey respondents. However, the complexity arises from using proxy information about assets that other household members own, as reported by survey respondents. The rationale for collecting proxy information was to provide a comprehensive inventory of all assets owned by all household members. Chapter 2 already discussed ownership assigned by any respondent (OAAR) and self-assigned ownership (SAO), two methodological approaches to analyze proxy and self-reported information, respectively. The appropriate sampling weight depends on the estimation approach under consideration. This section discusses how the survey sampling weights were calculated under the two approaches.

#### Sampling Weights for Ownership Assigned by Any Respondent Approach

Under the 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 an adult household member is identified as an owner of any asset by at least one respondent, that person is 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 and are given below for the three countries:

Equation 1: Two-Stage Probability Proportional to Size (PPS) Design (Georgia)

$$\frac{Z_i}{n_i} \times \frac{1}{z_{ij}} \times \frac{H_{ijk}}{h_{ijk}}$$

Equation 2: Three-Stage PPS Design (Mongolia)

$$\frac{P_l}{d_l} \times \frac{1}{p_{lm}} \times \frac{Z_{lmi}}{n_{lmi}} \times \frac{1}{z_{lmi j}} \times \frac{H_{lmijk}}{h_{lmijk}}$$

Equation 3: Two-Stage Circular Systematic Sampling (CSS) Design (Cavite, Philippines)

$$\frac{N_i}{n_i} \times \frac{H_{ijk}}{h_{ijk}}$$

Where:

- l stands for the region
- m stands for the m<sup>th</sup> province
- i stands for the i<sup>th</sup> stratum
- j stands for the j<sup>th</sup> PSU
- k stands for the second stage stratum (SSS) of households
- $z_{ij}$  total number of households in the j<sup>th</sup> PSU of the i<sup>th</sup> stratum (available in census database)
- $H_{ijk}$  is the total number of households in the k<sup>th</sup> second stage stratum (SSS) of the j<sup>th</sup> PSU of i<sup>th</sup> stratum
- $h_{ijk}$  is the number of households actually surveyed (Box 4.1) in the k<sup>th</sup> SSS of the j<sup>th</sup> PSU of i<sup>th</sup> stratum
- $n_i$  is the number of PSUs selected from i<sup>th</sup> stratum
- $Z_i = \sum_j z_{ij}$  is the total number of households in the i<sup>th</sup> stratum (available in the Census database)
- $N_i$  is the total number of PSUs in the i<sup>th</sup> stratum (available in the Census database)
- $d_l$  is the number of *aimags* selected in the l<sup>th</sup> region
- $P_l$  is the total population in the l<sup>th</sup> region
- $P_{lm}$  is the population of m<sup>th</sup> province in the l<sup>th</sup> region

### Sampling Weights for Self-Assigned Ownership Approach

In the SAO approach, the assets owned by the respondent were considered for analysis, ignoring the

(proxy) information provided by a respondent for other household members. Thus, had the sampling design allowed interviewing all adult household members (i.e., all selected with probability 1) for collecting data on SAO, the sampling weights would have been calculated in the usual manner as in household surveys and could have been applied for the 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 OAA approach. Additional weights could be assigned to each individual and multiplied by the usual household weights to obtain individual level weights.

During the data analysis, various situations were observed regarding the number of target respondents who were available for interview. The following sections describe the procedure for adjusting 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 equal to 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. The three respondents in a household were selected following a procedure that required selecting both members of the principal couple (or the primary respondent in households without a principal couple) with probability equal to one, and then 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). The following section explains the procedure of assigning weights at the individual level in different situations that were encountered in the survey on account of nonresponse of individual household members.<sup>30</sup>

(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 equal to 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 could not be interviewed and there was no additional adult interviewed to replace the member of the principal couple due to nonresponse or non-availability, then the surveyed member of the principal couple was treated as if he/she were 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.

(c) In cases where both members of the principal couple could not be interviewed and only the third selected adult was interviewed, the selected adult was treated as if representing all the adult members in the household. Thus, the selection probability of  $1/M$  was assigned with 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 or her with another randomly selected adult in the household) due to nonresponse/non-availability, then the members of the principal couple were treated as two randomly selected members representing M adults with a

**Table 4.1: Survey Weights for Households with Principal Couple**

Table 4.1: 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 nonresponse. 3. “M” denotes the total number of adults in the household.

Source: Asian Development Bank–Evidence and Data for Gender Equality pilot surveys.

<sup>30</sup> This approach introduces weight adjustment to account for nonresponse at the household level. In other cases, nonresponse adjustments can be done at a higher level.

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 the remaining household adults) then the only surveyed member of the principal couple was assigned a weight of  $M$ .
- (ii) Households without a “principal couple” (i.e., a primary respondent exists but no spouse or partner living in the household):
  - (a) If there was no principal couple found in the household but a primary respondent existed, then the primary respondent was selected purposely with probability equal to one and the remaining two 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  $M-1/2$ .
  - (b) If the primary respondent was not interviewed due to nonresponse/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  $M/2$ . However, if an additional adult member of the household was selected randomly to replace the primary respondent, then the three randomly selected adults were assigned equal weights of  $M/3$ .

- (c) 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 nonresponse/non-availability, then the primary respondent was treated as selected with probability  $1/M$  and assigned a weight of  $M$ .

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 self-assigned approach. This procedure took care of the nonresponses at the individual level, and is operationally convenient.

Regardless of whether one uses the OAAR or the SAO approach, specific care should be taken in distinguishing the nonresponse cases from the surveyed cases before calculating the weights (Box 4.1).

Table 4.2: 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 nonresponse.  
 3. “M” denotes the total number of adults in the household.

Source: Asian Development Bank–Evidence and Data for Gender Equality pilot surveys.

### Post-stratification Weight Adjustment

The pilot survey's target population is the collection of all adult household members. If the nonresponse rate is zero or 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. 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 in Mongolia and Georgia, nonresponse rates among men were significantly higher than among women. 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 a bias warrants a post-stratification adjustment to be introduced for the individual level weights.

In dealing with nonresponse cases, the EDGE pilot surveys only studied the gender bias caused by nonresponding adults. Hence, post-stratification weight adjustments were implemented using only the gender distribution of adults. Analysis across age groups, marital status, and educational levels 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 unnecessarily inflate the sampling error.

To illustrate how post-stratification works, consider Table 4.3, which shows hypothetical data depicting the weighted distribution of the total number of men and women based from a survey and another estimate of the number of men and women from a census for the same time. Column A 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 this table are significant differences between survey and census distributions. If there is reason to believe that census records are more

#### Box 4.1: Distinguishing Nonresponse 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 which 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 that: (a) refused to give information, (b) are found temporarily locked on the date of survey, or (c) moved or migrated to other primary sampling units 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 and is expected to happen due to the deficiency in the sampling frame. If a difference in the number of adults between the sample list and the actual survey is found for a particular household which 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 the originally available information.

Table 4.3: Sample Post-stratification Adjustment

Geographic Area	Gender	Survey (A)	Administrative Data (e.g., census) (B)	Post-stratification Adjustment Factor (B/A)
X	Men	895,672	1,032,451	1.15
X	Women	1,049,530	987,956	0.94
Y	Men	297,673	501,678	1.69
Y	Women	549,530	432,145	0.79
Z	Men	695,672	502,675	0.72
Z	Women	249,530	4,569,123	18.31

Source: Asian Development Bank–Evidence and Data for Gender Equality pilot surveys.

reliable, post-stratification can be used to adjust the survey weights. The numbers provided in the last column of Table 4.3 will be multiplied with the survey weights for each of the respondent from the same geographic area and gender group.

Apart from this, the analysis of data for Mongolia where three-stage sampling was done revealed that the selection of provinces within the regions did not yield good estimates of the number of households, population, and distribution over rural and urban areas. Further analysis revealed that the provinces were highly heterogeneous in size (households or population) as well as in rural-urban composition, which prompted for the need to incorporate post-stratification weight adjustment too. In the Philippines, however, the adjustment for both household and individual weights estimates were calibrated as a conventional practice done by the Philippine Statistics Authority (PSA) for their surveys.

The three countries adopted slightly different sampling strategies in the EDGE survey. While Georgia and Cavite, Philippines adopted the two-stage stratified sampling design, Mongolia adopted a three-stage stratified sampling design with provinces within each region as the first stage units. The selection procedures were also slightly different in the three countries and thus, the magnitude of the sampling error of the estimates was expected to be different. Keeping all these in view, post-stratification weight adjustment was done in the three countries by making use of most recent population estimates

close to the survey period. The post-stratification procedure is explained separately for the 3 countries along with their findings on Box 4.2.

#### 4.4 Accuracy and Reliability

Sections 4.1, 4.2 and 4.3 have described the measures undertaken to control quality of survey data at various stages of implementation. These measures, including the measures to validate internal consistency of data, are expected to minimize errors in the data and improve the quality of survey.

Another way to assess the survey results is by validating and comparing results with external data sources. The three countries collected data on individual asset ownership for the first time. As such, there are no other source against which individual-level ownership can be directly compared with. The alternative method to validate the survey results is to consider household level indicators which can be compared with estimates from other conventional data sources.

Tables 4.4, 4.5, and 4.6 present comparative results from the EDGE pilot surveys with indicators from other conventional sources such as population census or household surveys for Georgia, Mongolia, and Cavite, Philippines, respectively. In Georgia, the 2015 EDGE derived estimates were compared mostly with the 2014 General Population Census data. There were no significant discrepancies between the two sets of estimates.

**Box 4.2: Post-Stratification of Survey Weights in Georgia, Mongolia, and Cavite, Philippines****Georgia**

The survey estimate of the number of adults and sex ratio based on household weights at the national level were found to be very close to that of Georgia's Population Census 2014. Hence, there was no post-stratification weight adjustment implemented on the "household level" weights. However, based on the "individual level" weights, even though the estimated number of adults from the EDGE survey was found to be close to that of Georgia's 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 National Statistics Office of Georgia conducted its 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.

**Mongolia**

Based on the outcome of the weighted distribution (by region, sex, and urban-rural residence), it was decided to introduce post-stratification adjustment to both household and individual weights to pull the sample distribution close to the population-level distribution.

Post-stratification weight adjustment was first done at the household level. The adjustment weight factor considered was the ratio of the total number of households from the 2015 Census of Population to the weighted number of households from the EDGE survey by region and urban-rural residence. The adjusted household weights were then used to calculate the new individual weights. However, after post-stratification of the household weights, nontrivial differences between the sex distribution of the adult population were still noted. Thus, another stage of post-stratification adjustment at the individual level weights was introduced to make the sex ratio consistent with that of the census. The adjustment weight factor was calculated using the ratio of the total number of adult male(female) based on the 2015 Census of Population to the weighted number of male(female) based on the new individual weights by region and urban-rural residence.

**Cavite, Philippines**

Given the result of the weighted distribution of the EDGE survey, the Asian Development Bank-EDGE team and the Philippine Statistics Authority (PSA) agreed to do post-stratification weight adjustments to both household and individual level weights to align the sample distribution with the 2010 Census-based Population Projections for 2015. Although the estimate at the household level was not that far from the 2010 Census-based Population Projections, post-stratification was still done since this is the conventional practice done by PSA for their surveys. An adjustment weight factor which was the ratio of the 2010 Census-based Population Projection's number of the households to the weighted number of household based on the EDGE survey, was multiplied to the basic household weights to obtain the adjusted household weights. New individual level weights were also calculated using an adjustment factor. Post-stratification adjustment at the individual level weights was obtained by multiplying the individual level weights to an adjustment factor which was obtained as the ratio of the total number of adult male (female) based on the 2010 Census-based Population Projections to the weighted number of male (female) based on the individual level weights.

Source: Asian Development Bank from Evidence and Data for Gender Equality Pilot Surveys.

For Mongolia, the results of the 2015 EDGE pilot study were compared with the results of the 2014 Household Socio-Economic Survey (HSES), 2015 Labor Force Survey (LFS) and 2015 Population Census. The observed differences in average household size derived from the HSES and EDGE surveys may be attributed to differences in sampling designs and

in survey reference periods, while the differences in employment indicators between the EDGE pilot survey and the LFS may be associated with the operationalization of the definition and collection of data. The EDGE survey data was collected at one point in time whereas LFS is undertaken on a quarterly basis.

**Table 4.4: Comparative Estimates from the Evidence and Data for Gender Equality Pilot Surveys and Other Sources, Georgia**

No.	Variable Category	Estimate from Pilot EDGE Survey (2015)	External Data Source		Remarks
			Estimate	Source (Reference Period)	
1	Number of Household	1,097,890 (31,651)	1,109,130	2014 General Population Census	Private households
1.1	Household: Rural	473,786 (35,858)	461,740	2014 General Population Census	Private households
1.2	Household: Urban	624,104 (39,916)	647,390	2014 General Population Census	Private households
2	Population	3,734,787 (116,848)	3,702,130	2014 General Population Census	Population living in private households
2.1	Population: Rural	1,607,752 (129,218)	1,586,881	2014 General Population Census	Population living in private households
2.2	Adult population: Rural	1,283,972 (102,250)	1,247,177	2014 General Population Census	Population living in private households: 18 years and above
2.3	Population: Urban	2,127,034 (142,944)	2,115,249	2014 General Population Census	Population living in private households
2.4	Adult population: Urban	1,631,096 (110,156)	1,629,873	2014 General Population Census	Population living in private households: 18 years and over
3	Average household size	3.4 (0.05)	3.3	2014 General Population Census	Private households
3.1	Average household size: Rural	3.4 (0.11)	3.4	2014 General Population Census	Private households
3.2	Average household size: Urban	3.4 (0.08)	3.3	2014 General Population Census	Private households
4	Sex Ratio	111.0 (0.02)	110.0	2014 General Population Census	Private households (Women/Men)*100
4.1	Sex Ratio: Rural	104.7 (0.02)	101.3	2014 General Population Census	Private households (Women/Men)*100
4.2	Sex Ratio: Urban	116.0 (0.02)	117.0	2014 General Population Census	Private households (Women/Men)*100
5	Percentage of currently married men	66.7 (1.15)	65.8	2014 General Population Census	15 years and above
6	Percentage of currently married women	57.8 (0.95)	58.6	2014 General Population Census	15 years and above
7	Percentage of people below primary level of education	2.3 (0.23)	3.6	2014 General Population Census	10 years and above
8	Percentage of households having electricity	100.0	98.5	2014 General Population Census	
9	Percentage of households owning dwelling unit	90.3	86.4	2014 General Population Census	
10	Percentage of households owning agricultural land	53.4	51.8	Census of Agriculture 2014	

( ) = standard error of the EDGE estimates.

EDGE = Evidence and Data for Gender Equality.

Sources: National Statistics Office of Georgia estimates using Evidence and Data for Gender Equality pilot survey. For external data: Government of Georgia, 2014 General Population Census, and Government of Georgia, Census of Agriculture 2014.



Table 4.5: Comparative Estimates from the Evidence and Data for Gender Equality Pilot Surveys and Other Sources, Mongolia

No.	Variable Category	Estimate from Pilot EDGE Survey (2015)	External Data Source	
			Estimate	Source (Reference Period)
1	Average household size	3.7 (0.044)	3.5	HSES-2014
1.1	Average household size: Rural	4.0 (0.087)	3.5	HSES-2014
1.2	Average household size: Urban	3.6 (0.057)	3.5	HSES-2014
2	Employment Rate (%)	64.0 (0.008)	56.9	estimated using data available from LFS-2015
2.1	Men	70.1 (0.009)	62.6	estimated using data available from LFS-2015
2.2	Women	58.5 (0.010)	51.7	estimated using data available from LFS-2015
2.3	Percentage of self-employed to total workers	39.7 (0.010)	22.4	estimated using data available from LFS-2015
3	Percentage of households with electricity	97.0 (0.004)	97.0	2015 Population Census
4	Percentage of households that own their dwelling unit	79.0 (0.011)	97.9	2015 Population Census

( ) = standard error of the EDGE estimates, EDGE = Evidence and Data for Gender Equality, HSES = Household Socio-Economic Survey, LFS = Labour Force Survey.

Sources: National Statistics Office of Mongolia estimates using Evidence and Data for Gender Equality pilot survey. For external data: Government of Mongolia, 2015 Population Census 2015 Labour Force Survey, and Government of Mongolia, 2014 Household Socio-Economic Survey.

For Cavite, Philippines, there is no available data source to compare estimates from the 2015 EDGE pilot survey. Hence, the 2015 EDGE pilot survey results were compared with the 2010 Census of Population and Housing (CPH) results for most of the indicators. With regard to the 2015 Census of Population (POPCEN), the only available data at the provincial level was the total population since validation of urban-rural population and other indicators was still being conducted. There is a minimal difference of around 1% between the total population estimated for Cavite province from the EDGE and the total population from the 2015 population census.

### Precision of Evidence and Data for Gender Equality Data

The precision of the survey estimates could be gauged using measures of sampling error. Sampling errors are errors encountered simply because indicators were estimated from a sample instead of the entire population. Sampling errors are generally measured in terms of standard errors, coefficients of variation, and confidence intervals of the estimates obtained from the survey.

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 provincial level. For assessing the magnitude of sampling error, some key variables were identified. Estimates for standard errors were obtained for the household characteristics, demographic, profile of the population, coefficient of variations for incidence of and self-assigned ownership of key assets from the survey data. These are the key indicators highlighted in Chapter 3.

In general, the coefficient of variation is found to be low for the majority of the assets presented in Figures 4.1 to 4.3 across the three countries. It is observed that on average, the coefficient of variation for the ownership of the selected asset is 10%. However, in both Mongolia and Cavite, Philippines, a relatively high coefficient of variation is found for ownership of agricultural land. This is because of the low incidence of ownership levels of agricultural land in Mongolia and Cavite, Philippines, respectively. The low ownership in Cavite reflects the urban nature of the province. For Georgia, indicators of financial asset have the largest coefficient of variation (greater

Table 4.6: Comparative Estimates from the Evidence and Data for Gender Equality Pilot Surveys and Other Sources, Cavite, Philippines

No.	Variable Category	Estimate from Pilot EDGE Survey (2015)	External Data Source	
			Estimate	Source (Reference period)
1	Number of Household	838,458 (24,330)	703,841	2010 Census of Population and Housing (CPH)
1.1	Household: Rural	347,510 (34,952)	253,280	2010 CPH
1.2	Household: Urban	490,948 (34,197)	450,561	2010 CPH
2	Population*	3,723,647 (115,178)	3,678,301	2015 Census of Population (PopCen)
2.1	Population: Rural	1,569,972 (164,123)	1,138,964	2010 CPH
2.2	Adult population: Rural	1,019,726 (108,591)	726,288	2010 CPH
2.3	Population: Urban	2,153,675 (152,619)	1,951,727	2010 CPH
2.4	Adult population: Urban	1,320,087	1,220,539	2010 CPH
3	Average household size	4.4 (0.06)	4.4	2010 CPH
3.1	Average household size: Rural	4.4 (0.1)	4.3	2010 CPH
3.2	Average household size: Urban	4.5 (0.14)	4.5	2010 CPH
4	Sex Ratio	99 (2.3)	97	2010 CPH
4.1	Sex Ratio: Rural	95 (3.5)	96	2010 CPH
4.2	Sex Ratio: Urban	101 (3.1)	99	2010 CPH
5	Percentage of currently married men	39.9 (0.7)	34.2	2010 CPH
6	Percentage of currently married women	39.3 (0.8)	34.1	2010 CPH
7	Percentage of people below primary level of education	4.3	5.5	2010 CPH
8	Percentage of households having electricity	97.5 (0.5)	96	2010 CPH
9	Percentage of households owning dwelling unit	57.6	70.5	2010 CPH

( ) = standard error of the EDGE estimate.

\* No available data for urban and rural areas and for other indicators.

EDGE = Evidence and Data for Gender Equality.

Sources: Philippine Statistics Authority estimates using Evidence and Data for Gender Equality pilot survey. For external data: Government of the Philippines, 2010 Census of Population and Housing and 2015 Census of Population.

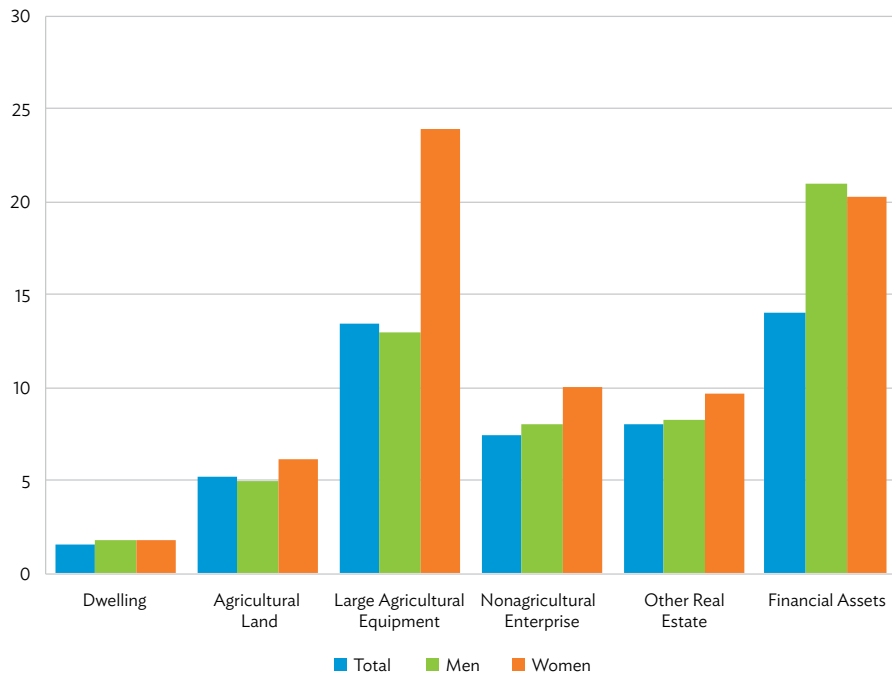
than 15%). For all the three countries, a large degree of variability is evident for incidences of ownership of large agricultural equipment. Ownership of large agricultural equipment in the three countries is relatively low and the sample sizes may not be large enough to provide estimates with high precision unlike other assets which have much higher incidence of ownership.

### Overall Assessment of EDGE Data

Given the lack of external sources to compute individual level indicators from EDGE survey, it

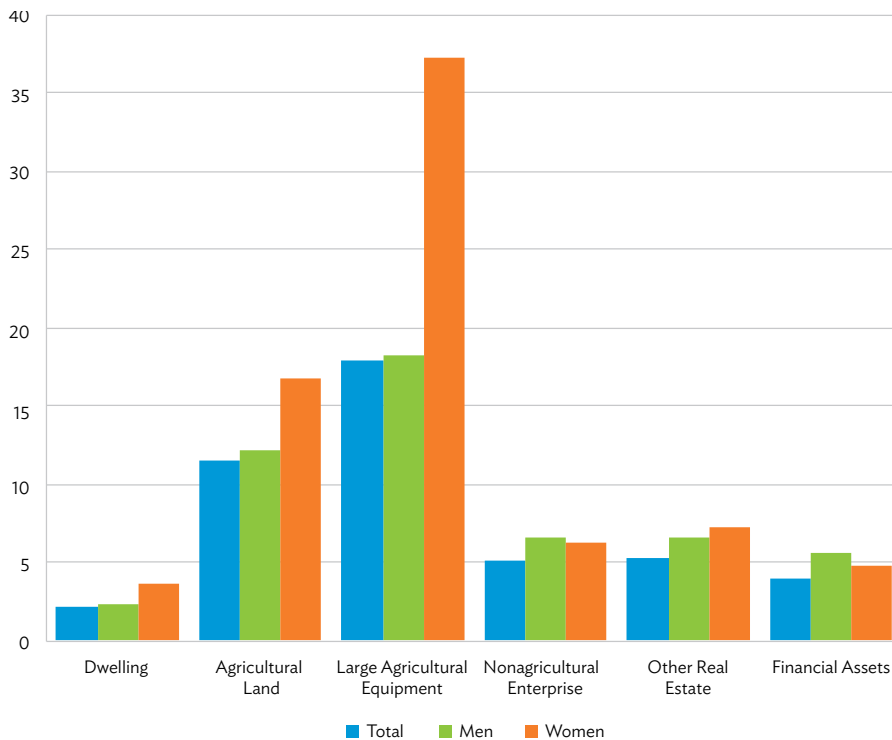
is not possible to assess these directly with other sources. However, based on some other indicators at the household level, it can be concluded that the overall quality of data of the pilot EDGE survey is consistent with external data sets, and highly reliable at the national level from a statistical standpoint. As this survey was implemented by the statistical offices of the three countries for the first time, lessons learned on methods, survey instruments and field operations are of great value in drafting methodological guidelines by the UN Statistics Division for conducting similar surveys in the future.

**Figure 4.1: Coefficient of Variation of Reported Ownership by Asset, Georgia (%)**



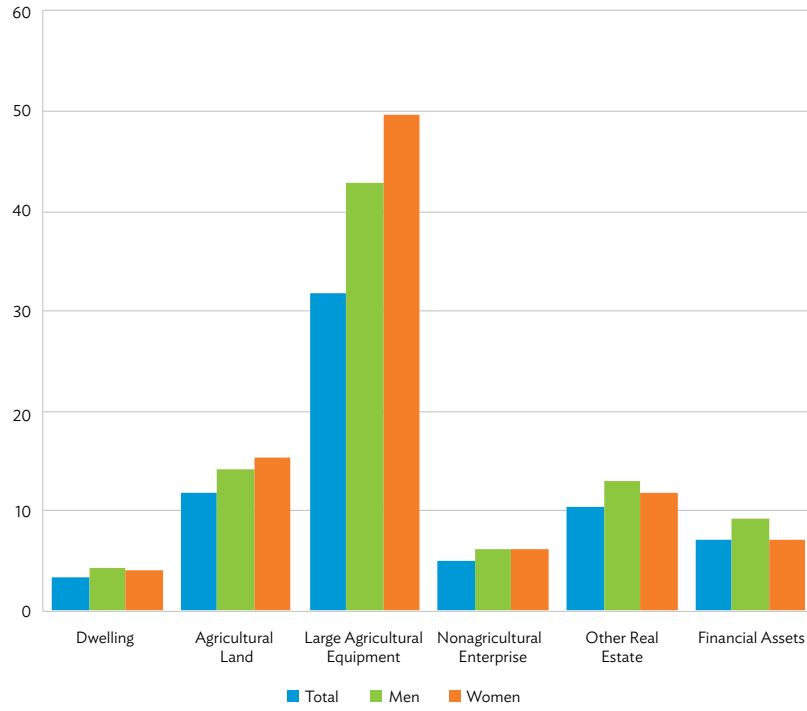
Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

**Figure 4.2: Coefficient of Variation of Reported Ownership by Asset, Mongolia (%)**



Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

**Figure 4.3: Coefficient of Variation of Reported Ownership by Asset, Cavite, Philippines (%)**



Source: Asian Development Bank estimates using Evidence and Data for Gender Equality pilot surveys.

## Chapter 5: Survey Assessment, Lessons Learned, Conclusion, and Ways Forward

As presented in the previous chapters, the main objective of the pilot surveys is to test the methodology for collecting data on asset ownership and entrepreneurship from a gender perspective and to inform the development of United Nations (UN) guidelines on the subject. The implementation of Evidence and Data for Gender Equality (EDGE) pilot surveys also aims to build the capacity of national statistics offices (NSOs) in the three participating countries to routinely collect data on the subject. The survey instruments used in Georgia, Mongolia, and Cavite, Philippines were based on the guidelines and questionnaires developed under the global EDGE initiative for piloting the approach conducting a stand-alone survey.

This concluding chapter summarizes the challenges faced during survey implementation, and lessons learned in various stages of the implementation process.

### 5.1 Issues and Lessons Learned in Survey Implementation

#### 5.1.1 Key Findings and Lessons from Pre-Survey Field Operations

##### Questionnaire Design

One of the main objectives of conducting pilot surveys was to test the design of survey instruments, particularly core questions pertaining to asset ownership, in the context of conducting stand-alone surveys. Questionnaire design may vary depending on the survey objectives, target indicators, and data collection strategies in generating data on asset ownership. The EDGE survey manual and questionnaires had to be customized and translated from English into the spoken languages in each

country. The most important aspect of the translation process was to identify appropriate local language words for technical terms. While the three NSOs preferred undertaking in-house translation of the survey instruments and manual of instructions, in some cases, experts from other institutions were consulted to correctly translate certain technical terms. For instance, NSOM requested assistance from its Foreign Relations Divisions, particularly for translation of difficult terms and definitions given in the survey instruments and survey manual. In general, the NSOs of the three countries did not encounter any major problems during customization and translation. The key lesson is to carefully check the two language versions and ensure full consistency between the two and that all technical terms are correctly reflected in the translated version. Any discrepancy may result in loss of information in the survey if it goes unnoticed.

##### Pretesting of Survey Instruments

Survey instruments were pretested to assess implementation of interview protocols, and test survey questions. This process was deemed important since most questions were new and not yet used in existing surveys conducted by participating NSOs. Based on the lessons from the pretests, the questionnaires were amended to accurately reflect each country's context. One important example was the inclusion of pictures of large and small agricultural equipment in the instruction manuals to make sure that the enumerators and respondents were able to identify them accurately during the field interviews. To improve the flow of questions, revisions were made on skipping patterns, and the sequencing of questions and response categories. In addition, the list of consumer durables and small agricultural equipment were customized to reflect commonly items used in each country. An optional answer response of “*I don't know*” was also added in some questions. Pretesting the questionnaire

in the three countries also helped bring about additional improvements to the survey questionnaires. Some of the challenges faced during pretesting were non-availability of key respondents and reluctance/resistance of some respondents on the protocol of being interviewed separately. This was particularly the case when female respondents were interviewed independently. Respondents also hesitated sharing sensitive information on financial assets, valuables and hidden assets. In Mongolia, respondents in rural areas were more responsive in providing answers to asset ownership questions as opposed to respondents in Ulaanbaatar. Enumerators and supervisors were advised to make appointments with the respondents according to their availability. They were also provided training to explain the purpose of the survey to the respondents before the interview. In addition, enumerators were encouraged to gain the trust of respondents by assuring them that the information collected would be treated as confidential and would solely be used for the purpose of the study. The support of local community representatives was invaluable in getting the cooperation of the respondents.

### Training of Enumerators and Supervisors

A specific aspect of the pilot survey that needed special attention during the training was the introduction of new concepts and procedures, which are not used in the conventional surveys conducted by the NSOs. Difficulties were observed in understanding of the concepts of “primary respondents,” “principal couple,” and “individual respondents;” learning the selection method for second and third respondents; conducting simultaneous interviews. Another issue that required attention during the training was the implementation of the skipping patterns in the questionnaires.

The length of training was reported sufficient for carrying out classroom type discussions, mock interviews, and field trainings as well as for the discussions on the observations during the field

visits. ADB and UNSD staff’s participation as training resource persons was effective in communicating the main objectives of the project, explaining the survey concepts and instructions, and addressing the questions of trainees. A good amount of practical training in the field for enumerators and supervisors followed by a quiz session were found effective and useful. In Georgia, the “homework” method<sup>31</sup> proved to be more effective than role-playing sessions. It was also noted that role-playing method was less efficient when one or two trainers oversee more than 20 trainees.

### Survey Planning

The planning of the survey was carried out by a small group of subject-matter specialists, technical and administrative staff members of the three participating NSOs, in close collaboration with key stakeholders. Each NSO formed a team which comprised a project leader who was a senior official in charge of social and gender statistics, a sampling design expert, survey design management expert, and a data processing expert. This team of experts played a crucial role, especially since it was the first time the NSO collected data on asset ownership from a gender perspective.

A survey requires the cooperation of the households selected to be interviewed, and effort should be made to inform those households in advance about the survey. One of the lessons from the field reported by the Philippine Statistics Authority (PSA) was the need for information dissemination prior to the start of the survey fieldwork to ensure people’s awareness of the survey. Similarly, the NSOM felt that a well-organized advocacy activity before data collection, using all channels available in providing timely and concrete information about the survey objectives and importance, would ensure active participation of selected households.

<sup>31</sup> In the “homework” method, enumerators were requested to interview household members and/or neighbors and to bring the completed questionnaires the following day.



## 5.1.2 Key Findings and Lessons During Survey Field Operations

### Self-Reporting versus Proxy Reporting

As per survey protocol, each respondent was asked to provide information on all assets which he/she owned and information on all assets owned by other adult members of the household. Chapter 3 presented the results of the pilot surveys comparing self-assigned ownership (SAO) and ownership assigned by any respondent (OAR) approaches, which show generally higher estimates for incidences of ownership of assets using the OAR approach when compared to the SAO approach. Under the OAR approach, there were a considerable number of instances when a respondent did not identify himself/herself as the owner of a specific asset but other members of the household identified him/her

as the owner of that asset. Although there was no “established standard” in evaluating the accuracy of data provided by proxy versus self-reporting respondents, proxy reporting was deemed more problematic, as one person may not be well-informed about the assets held by other household members.

Weighing in on the findings from pilot surveys and in consonance with the UN Guidelines, this study recommends that individual-level data on asset ownership be collected through the SAO rather than the OAR approach (see Box 5.1).

### Identifying Target Respondents

For the pilot survey, a maximum of three adults, including the principal couple if available in the selected household, were interviewed. To capture the gender perspective, the appropriate number of

#### Box 5.1: Pros and Cons of Self-Reporting versus Proxy Reporting

Self-Reporting	Proxy Reporting
<p><b>Pros</b></p> <ul style="list-style-type: none"> <li>Collecting information on self-reported asset ownership has an important implication for policy and program design in areas such as women’s empowerment, livelihood strategies, and poverty reduction. This is because the success of interventions is likely driven by people’s self-perceptions of what assets they own and how much control they have over these assets rather than what other people think they own.</li> </ul>	<p><b>Pros</b></p> <ul style="list-style-type: none"> <li>Many national statistics offices that collect individual-level data from household surveys minimize costs by obtaining proxy information from the head of the household or the person most knowledgeable about the survey topic. This approach assumes that the proxy informant has the requisite information for his/her household.</li> </ul>
<p><b>Cons</b></p> <ul style="list-style-type: none"> <li>The requirement to collect self-reported data from one or more randomly selected adult household members or from all household members would considerably increase the burden, length, and cost of the data collection.</li> <li>There may be inadequate sharing of information within households about ownership of assets by household members.</li> </ul>	<p><b>Cons</b></p> <ul style="list-style-type: none"> <li>There are existing gender norms about asset ownership that may result to bias in proxy responses about the ownership status and control of assets.</li> <li>There are countries that do not clearly differentiate the ownership rights among household members and hence, perception of individual household members on who owns a particular asset may differ.</li> </ul>

Note: The UN Guidelines provided detailed discussions on the pros and cons of selecting self-reporting versus proxy respondents. United Nations Statistics Division. <https://unstats.un.org/unsd/statcom/48th-session/documents/BG-2017-3h-UN-Guidelines-Statistics-on-Asset-Ownership-From-Gender-Perspective-E.pdf>.

Source: United Nations, Department of Economic and Social Affairs, Statistics Division. Forthcoming. *UN Guidelines for Producing Statistics on Asset Ownership from a Gender Perspective*. <https://unstats.un.org/edge/methodology/asset/>.

adult household members to be interviewed could vary depending on the main objective for collecting data, budget allocations, and the desired indicators for analysis. The UN Guidelines explain that if the objective is to obtain reliable estimates of both asset ownership prevalence and intra-household analysis, a couple and a third randomly selected person in a household should be interviewed in a host survey covering more than 2,500 households. If the host survey covered sample households larger than 3,500, information from two adult respondents, i.e., one adult member and his or her partner, if available, should generate estimates for both asset ownership prevalence and for intra-household analysis.<sup>32</sup>

### **Conducting Simultaneous Interviews**

As discussed earlier, conducting simultaneous interviews within each household was attempted to avoid contamination of information provided by respondents. However, the three pilot survey activities found this feat challenging. In most cases, this was not achieved: out of every 10 sample households interviewed, about 5–6 with all eligible adult members were interviewed simultaneously in Georgia and only three in Mongolia. This approach was particularly difficult to implement in small houses or apartments, especially those located in urban areas, as respondents could hear each other's answers to the questions. Other household members also had the tendency to interrupt the interview. In most regions of Georgia, conducting simultaneous interview was challenging for households with working members who were only present in late evenings. Thus, field enumerators had to repeatedly visit the household to interview at most three eligible respondents.

Considering the challenges in implementing simultaneity in interviews, including the budgetary constraints of hiring additional enumerators to

conduct the interviews, the UN Guidelines provide two recommendations: one, in view of the sensitivity of the questions and the possible bias introduced by the presence of other household members during enumeration, the respondents should be interviewed alone. Two, if NSOs decide to cover more than one respondent per household, interviews should be conducted at least consecutively one after the other to minimize the contamination of data that may result when household members discuss and share the content of and answers to the questionnaire. Countries should weigh their options depending on how their field teams and/or resources could be mobilized and optimally used to achieve the objectives of conducting interviews independently.

### **Team Approach**

Doing simultaneous interviews entails having a team of enumerators visiting each target household. The PSA deemed this practice suitable to maintain privacy of the interview and necessary when all the respondents were present during the time of interview and can be interviewed simultaneously. Mongolia's fieldwork experience showed that team supervisors played a key role in ensuring both data quality and team members' safety. In terms of team size, supervisors in Georgia reported that a team of two enumerators was optimal in collecting data simultaneously from three available persons in a household. In the Philippines, an ideal team size was one team supervisor and three enumerators and in Mongolia, the prescribed team size was one supervisor and four enumerators.

### **Gender Matching**

Considering the gender perspective of this pilot survey, another desirable approach tested was gender matching of enumerator and the respondents. The rationale of this approach is the assumption that respondents may be more comfortable disclosing sensitive information (e.g., valuation of fixed assets, hidden assets, financial assets, etc.) when the enumerators and respondents were of the same sex.

<sup>32</sup> The UN Guidelines have detailed recommendations on the number of respondents to be interviewed based on desired indicators to be analyzed. United Nations Statistics Division. <https://unstats.un.org/unsd/statcom/48th-session/documents/BG-2017-3h-UN-Guidelines-Statistics-on-Asset-Ownership-From-Gender-Perspective-E.pdf>.

The overall interview rate for women vs women was 93% in Cavite, Philippines; 91% in Georgia; and 74% in Mongolia compared to rate for men versus men of only 9% in Cavite, Philippines; 18% in Georgia; and 40% in Mongolia. This was because most enumerators hired for the survey were women. At the time of recruitment there was no effort made to have a balance in the recruited enumerators as enumerators were hired based on availability and suitability irrespective of the sex of the enumerator. Thus, 87% of the enumerators in Georgia were females, 68% field staff in Mongolia were females, and 92% enumerators in Cavite, Philippines were females. In general, matching the gender of respondents to enumerators proved challenging. In the case of Mongolia, the NSOM reckoned that ensuring that enumerators are equipped with the necessary skills is more important than matching the gender of respondents and enumerators.

### **Other Issues During Field Operations**

Other challenges experienced during the field operations were identifying and locating the addresses of the households; dealing with reluctant respondents who were impatient and noncooperative; and interviewing eligible respondents who were working during weekdays. For instance, in locating remote places in Mongolia, the survey team had to travel using horses or camels. Field visits had to be rescheduled several times when eligible respondents were busy or sick or traveling at the time of the interview. To mitigate the problem on nonavailability in some urban centers in Mongolia, appointments were arranged with respondents to interview them at their workplace during the daytime. Meanwhile, in Georgia, some enumerators were mistaken as social agents from the Social Service Agency who were collecting information for providing social benefits. In Cavite, Philippines, some enumerators were mistaken for individuals with criminal intent due to questions about financial assets and valuables being asked of household members.

In one of the three regions in Georgia, with a relatively high proportion of ethnic minorities, concerns were raised by some household members on female respondents being interviewed alone. In some cases, if female respondents wanted to answer about ownership of assets, the male members of the household interrupted and tried to correct them.

These kinds of field problems on dealing with reluctant respondents were addressed through extensive training of enumerators in handling such situations by explaining the objectives of the survey, patiently handling non-cooperative respondents, and by seeking support from the local community representatives.

### **5.1.3 Key Findings and Lessons from Post-Survey Field Operations**

At the household level, nonresponse rates were registered at 11.9% in Georgia and 1.5% in Mongolia and were more pronounced in urban than in rural areas. The figure was not significant in Cavite, Philippines. At the individual level, the nonresponse rate was highest in Mongolia where only 5,592 adults (80.8%) were interviewed out of 6,922 selected adults. Nonresponse cases were relatively higher for males (24.3%) than for females (14.7%) as during field operations, males were more likely to be working and were not available for interview. In Georgia, of the 6,949 total number of individuals selected for the survey, only 5,937 (85.4%) were actually interviewed, with corresponding 20.6% nonresponse rates among male adults and 9.6% among female adults. In Cavite, Philippines, only 3,456 out of 3,733 individuals responded to the survey or a nonresponse rate of 7.4% (9.5% for males and 5.5% for females). As a result, the distribution of adults calculated based on the sum of the survey weights was biased toward women. These large variations in the response rates between males and females were not visualized during the survey design stage. Such bias warranted post-stratification adjustment introduced for the individual level weights (see Box 4.2).

**Table 5.1: Household and Individual Nonresponse Rates (%)**

	Households	Individuals		
		Male	Female	Total
Georgia	11.9	20.6	9.6	14.6
Mongolia	1.5	24.3	14.7	19.2
Cavite, Philippines	0.0	9.5	5.5	7.4

Source: Asian Development Bank estimates from Evidence and Data for Gender Equality pilot surveys.

The post-stratification weight adjustment done was deemed effective in compensating for the differences in control population figures obtained from the census counts of number of adults in the population and unadjusted weighted estimates of male and female population (Table 5.2).

## 5.2 Related Survey Assessments

This section summarizes the qualitative and quantitative assessment of the survey questionnaires, reporting of hidden assets, and feasibility of interviewing household members selected for interview.

### 5.2.1 Qualitative Assessment of Survey Questionnaire

Assessment of the questionnaire design, among other issues, was one of the central objectives of the pilot survey. For this purpose, a qualitative assessment template was designed. The information was completed based on the qualitative remarks provided by the enumerators and supervisors from their field survey experience.

#### General Comments

The respondents in all pilot countries had difficulty in estimating the value of agricultural parcels, agricultural equipment, dwellings, financial assets, and other real estate. The respondent especially in rural areas struggled to estimate the value of all types of assets due to lack of knowledge of markets or absence of markets for the asset type. In the three countries, respondents' reluctance to answer questions on sale value of asset resulted to high nonresponse.

**Table 5.2: Number of Adult Population based on Population Census, Unadjusted Weights, and Post-Stratification**

Country and Sex	Number of Adult Population			Number of Adult Household Members (After Post-Stratification of Household Weights)	Number of Adult Respondents (After Post-Stratification of Individual Weights)
	Population Census	With Unadjusted Household Weights	With Unadjusted Individual Weights		
Georgia <sup>a</sup>					
Male	1,329,054	1,333,444	1,185,974	1,333,444	1,333,444
Female	1,547,996	1,581,624	1,729,094	1,581,624	1,581,624
Total	2,877,050	2,915,068	2,915,068	2,915,068	2,915,068
Mongolia <sup>b</sup>					
Male	943,117	968,299	976,149	904,344	942,755
Female	1,005,511	1,074,895	1,296,564	1,209,629	1,005,215
Total	1,948,628	2,043,193	2,272,714	2,113,973	1,947,970
Cavite, Philippines <sup>c</sup>					
Male	1,137,700	1,177,827	1,104,495	1,162,263	1,137,699
Female	1,170,659	1,238,233	1,310,559	1,221,871	1,170,658
Total	2,308,359	2,416,060	2,415,054	2,384,134	2,308,357

<sup>a</sup> Estimated number of adults and sex ratio based on EDGE survey household weights were found to be very close to that of 2014 Population Census. Thus, no post-stratification weight adjustment was applied on the household level weights.

<sup>b</sup> Considerable differences in the estimated number of urban and rural households between the 2015 Census of Population and EDGE pilot survey at the regional level were noted. Thus, post-stratification was first done at the household level.

<sup>c</sup> Although the estimated number was not that far from the 2015 Census of Population, post-stratification at the household level was still done to make the EDGE survey estimates consistent with the population.

Sources: Asian Development Bank estimates using 2014 General Population Census of Georgia; 2015 Census of Population of Mongolia; and 2015 Census of Population of the Philippines and Evidence and Data for Gender Equality pilot surveys.

Questions on bequeathing and selling of assets, and ownership of assets were deemed sensitive and viewed as invasion of privacy. Some old and sick respondents refused to answer these questions.

### **Household Questionnaire**

In general, there were no problems faced in canvassing household questionnaires. In Mongolia, some respondents found it unsuitable to collect information on the marital status of children aged 15 years to 18 years old in the survey. Similarly, in Mongolia, asking the religion of each child in the household was considered inappropriate by respondents so it is not expected to be different from others.

### **Dwelling**

The main issue encountered in accomplishing this module was on estimating the cost of construction and sale value of dwelling. In Cavite, Philippines, respondents were either unfamiliar with the sale value and/or could not recall the cost of construction.

### **Agricultural Land**

One of the major problems faced in Georgia was in differentiating whether the plot on which the dwelling is located is a backyard or an agricultural land. Furthermore, after the collapse of the Soviet Union, most households acquired land through the privatization process. Thus, respondents were uncertain about land ownership.

In Georgia, estimating the current selling price of parcel when no sales transaction was reported in the area was an issue. Similar for dwelling, collecting data on the valuation of agricultural parcels was found to be difficult. In Mongolia, enumerators had to explain such questions. It was realized that the enumerators should be knowledgeable on ownership, possession, use of land and the provisions of the Law of Mongolia on Land.

### **Livestock**

In Georgia, questions on individual livestock ownership were vague as these assets are considered belonging to the households and not to an individual. Similarly, in Mongolia, livestock ownership was registered under the name of the household head; hence, it was difficult for the respondents to identify the individual owners of livestock.

### **Large and Small Agricultural Equipment**

Similar for dwelling and agricultural land, respondents found it difficult to estimate the current value of the equipment or were reluctant to provide a value. Careful probing on ownership was needed to properly identify if the large agricultural equipment was owned or rented.

Mongolia suggested to categorize small equipment into two categories—for agriculture and livestock.

### **Nonagricultural Enterprises and Enterprise Assets**

In the three countries, respondents had difficulty in understanding the term “enterprise” as this generally applies to registered enterprises. Enumerators had to explain that this refers to “income-generating” activities and small businesses operated by household members. Also, comprehending the idea of selling the enterprise owned by household members was proved to be difficult.

The question on the average number of hours of work per week that an enterprise owner spent managing or working on the enterprise over the last operational month was found challenging. Enumerators often refer to average number of hours of the “previous week” instead of “hours per week for the last operational month”. It was hard to collect an estimate of the average monthly income by self-employed person whose enterprise was not operating on a continuous basis since a lot of enterprise owners refused to disclose their income.

**Other Real Estate**

Respondents were reluctant in providing information on the value of the construction of other real estate, especially if the property was built many years ago. Further clarification was provided to the question “What is the [real estate] used for?”, i.e., if a household owned an enterprise operating from a different location, then the property owned by the household should report for “household commercial use”.

**Financial Assets**

In all the three countries, respondents were hesitant to share information on their financial assets. In Georgia, respondents mixed pension funds with state pension allowances. In general, it was difficult to capture data on financial assets and their valuation. However, it is recommended to collect data on types of financial assets that are considered important and relevant from the policy perspective of a country.

**Liabilities**

Fieldwork in Georgia revealed that it was necessary to pay attention to the purpose of loan—whether the loan is for household use or for nonagricultural enterprise. The latter would be covered in the module on nonagricultural enterprise. Respondents in Mongolia were cautious in declaring their loan amount and corresponding balance. In Cavite, Philippines, respondents were hesitant in declaring their liability and its valuation. Similar with financial assets, collecting data on financial liabilities is in general also difficult and eliciting information from reluctant respondents would require the skills of well-trained enumerators.

**Valuables**

Respondents were reluctant to give detailed responses on valuables. This was experienced in all the three countries. It was recommended that enumerators acquire the necessary skills in asking questions on valuables. The enumerators’ manual should have a complete list and definition of items considered as valuables.

**5.2.2 Quantitative Assessment of Survey Questionnaire**

The quantitative assessment aimed at testing whether there was any association between sex and the proportions observed for men and women for selected variables. These variables included missing responses of men and women for the sale value of dwelling, construction value of dwelling, sale value of agricultural land, sale value of large agricultural equipment, sale value of enterprise assets, and for valuation of financial assets.

Based on the responses of attribute nature, the Chi-square statistic was calculated to test any association between the responses provided by men and women. In a few cases, where the mean value of sale or construction was to be tested for equality as reported by men and women respondents, the t-statistic was calculated.

Findings on the number of missing sale values for dwellings revealed that the responses provided by men and women respondents in all three countries were associated with the sex of respondents. The responses provided by men and women members of the households (or pooled response of all men and women) and responses by men and women members of the principal couple on the number of missing values for sales valuation of large agricultural equipment in rural areas were associated with the sex of respondents in the pilot countries. However, when respondents were asked if they had information on the value of recent agricultural equipment’s sales transactions, the pooled response and response given by members of the principal couple were associated with the gender of respondents only in Georgia and Mongolia. For the other attributes in Table 5.3, the association of responses by the sex of respondents or principal couple were not consistent in the three countries.

**5.2.3 Alternative Approaches to Data Collection**

The pilot surveys in Georgia, Mongolia, and Cavite, Philippines tested the stand-alone survey



methodology, which is a complex data collection strategy. However, the countries also have the option to either attach a minimum set of questions or append a module to existing nationally representative household surveys. The choice of approach will depend on the objectives of data collection and relevant policy needed by the country, apart from available resources for conduct of the survey. A stand-alone survey approach is recommended if the survey objective is to provide data on incidence of asset ownership, gender wealth gaps and analysis of intra-household dynamics of ownership and control of assets. However, if the survey objective is to derive the incidence of asset ownership by sex, only basic information on reported and documented ownership, and right to sell and bequeath for each asset type is sufficient. For each asset, minimum set of questions, using the individual as the unit of observation, can be appended to an existing questionnaire to measure the bundle of ownership rights.

The minimum set of questions, as recommended in the UN Guidelines, can cover priority assets such as dwellings, agricultural land, other real estate, and financial assets, and would include the full bundle of rights over those assets. As the intention is to limit the number of questions, there is no need to ask for the roster of assets.

The UN Guidelines explained that using this approach to measure the incidence of dwelling and agricultural land ownership in the population by sex, would avoid a new survey and reduce response burden. This strategy requires less budget, as compared to stand-alone data collection method, and hence would likely ensure sustainability of activity and provide timely estimates for indicators on ownership of assets.

**Table 5.3: Summary of Results of Quantitative Assessment of Questionnaire Design**

Attributes	Test for Association <sup>a</sup> of Responses with Gender of Respondents	Significant at 5% Level <sup>b</sup> or Not		
		Georgia	Mongolia	Cavite, Philippines
Number of missing sale value for dwellings	(a) Sex of all adult respondents	Significant	Significant	Significant
	(b) Sex of members of principal couple	Not significant for urban only	Not significant	Significant
Number of missing construction value for dwellings	(a) Sex of all adult respondents	Significant	Not significant for urban or rural	Not significant
	(b) Sex of members of principal couple	Significant	Not significant	Not significant
Number of parcels located in areas where respondents were informed of land sales value	(a) Sex of all adult respondents	Significant	Not significant	Not significant
	(b) Sex of members of principal couple	Not significant for urban or rural	Not significant	Not significant
Number of missing values for sale of agricultural land	(a) Sex of all adult respondents	Significant	Not significant	Not significant for rural only
	(b) Sex of members of principal couple	Significant	Not significant for urban or rural	Not significant
Number of large agricultural equipment for which respondents were informed about recent sales transactions (rural only)	(a) Sex of all adult respondents	Significant	Significant	Cell frequency is zero
	(b) Sex of members of principal couple	Significant	Significant	Cell frequency is zero
Number of missing values for sales valuation of large agricultural equipment (rural only)	(a) Sex of all adult respondents	Significant	Significant	Significant
	(b) Sex of members of principal couple	Significant	Significant	Significant
Number of missing values of sale of enterprise assets (equipment, machinery, or furniture)	(a) Sex of all adult respondents	Significant	Not significant for rural only	Not significant
	(b) Sex of members of principal couple	Significant	Significant	Not significant
	(c) Sex of respondent enterprise owners	Not significant	Not significant for urban or rural	Not significant
Number of missing values for sales valuation of real estate	Sex of all adult respondents	Not significant for urban or rural	Not significant	Not significant
Number of missing values for valuation of financial assets by type of financial asset	(a) Sex of all adult respondents	Not significant	Significant	Significant
	(b) Sex of members of principal couple	Not significant	Significant	Not significant

<sup>a</sup> Results are based on a Chi-square test, unless otherwise mentioned.

<sup>b</sup> Test is significant, which means that the responses for the item provided by men and women respondents, or by men and women members of the principal couple, or by men and women enterprise owners are associated with the gender of respondents.

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

## 5.2.4 Assessment of Hidden Assets

This section presents the assessment done on the ownership of selected hidden assets, i.e., assets that household members owned but reportedly kept confidential from other members of the household. The UN Guidelines explained the rationale for assessing hidden assets, i.e., a household roster of assets listed by one respondent in the household questionnaire might be inaccurate due to information asymmetries within the household and thus, a large proportion of hidden assets can bias the estimates of asset ownership.

Results of three pilot surveys showed that overall frequencies and incidence of reported hidden assets were very small (Table 5.4). The incidence of hidden physical assets in all three countries were estimated to be less than 2% except for financial assets and liabilities. The highest incidence of reported hidden financial assets was recorded in Georgia at around 12%. Meanwhile, Mongolia demonstrated the highest proportion of hidden financial liabilities at 4.8% for men and 4.3% for women. As financial assets and liabilities are physically not visible, it is expected that some household members may be less aware of such ownership. In contrast, ownership of physical assets such as agricultural land and other real estate, which

were more noticeable may be difficult to hide. While the intention of the questions on hidden assets was to capture all assets, it was not clear as to what extent the hidden assets can potentially be identified.

## 5.2.5 Assessment of Feasibility of Interviewing Household Members Selected for Interview

The average time spent for fielding a household questionnaire was more or less the same in the three countries at around 12 minutes. In general, the time taken was slightly longer in rural than in urban households, except in Cavite, Philippines where the opposite was observed. On the other hand, completing an individual questionnaire took much longer, due to its complexity and length. The average time for interviewing an adult individual differs in the pilot countries at 22 minutes in Mongolia, 23 minutes in Cavite, Philippines and 30 minutes in Georgia (Table 5.5).

The survey protocols required that the primary respondent is the most knowledgeable about household assets as identified by the household. Table 5.6 shows the distribution of primary respondents by relationship to household head. The majority of the primary respondents of the pilot survey were either

Table 5.4: Incidence of Self-Reported Hidden Assets by Sex

Country	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
<b>Georgia</b>							
	Agricultural land	1,309	1,331	2	2	0.2	0.2
	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
<b>Mongolia</b>							
	Agricultural land	237	85	4	0	1.7	0.0
	Other real estate	417	329	3	0	0.7	0.0
	Financial assets	602	798	29	71	4.8	8.9
	Financial liability	1,005	1,141	5	9	0.5	0.8
<b>Cavite, Philippines</b>							
	Agricultural land	83	71	1	1	1.2	1.4
	Other real estate	88	99	0	1	0.0	1.0
	Financial assets	266	414	19	35	7.1	8.5
	Financial liability	248	391	12	17	4.8	4.3

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

**Table 5.5: Average Time Spent for Interviewing a Household (minutes)**

Countries	Average Time Spent for Interviewing a Household					
	Household			Individual		
	Urban	Rural	Total	Urban	Rural	Total
Georgia	11.8	14.0	12.8	28.3	29.7	29.5
Mongolia	11.6	12.8	12.1	19.9	23.0	21.5
Cavite, Philippines	13.4	11.7	12.7	22.3	22.6	22.6

Source: Asian Development Bank estimates from Evidence and Data for Gender Equality pilot surveys.

**Table 5.6: Distribution of Primary Respondents, by Relationship with Head of Household**

Relationship to the Head of Household	Primary Respondents					
	Georgia		Mongolia		Cavite, Philippines	
	Men	Women	Men	Women	Men	Women
Head	86.9	52.3	94.2	27.6	95.4	45.8
Spouse	0.2	36.8	0.5	64.9	0.7	51.4
Son/daughter	11.5	4.2	4.4	4.3	3.2	2.2
Parents	0.1	0.3	0.3	2.3	0.2	0.1
Grandchildren	0.7	0.3	0.1	0.0	0.0	0.0
Sibling (of head or spouse)	0.4	0.4	0.3	0.7	0.1	0.1
Other relatives	0.3	5.8	0.2	0.2	0.1	0.4
Non-relatives	0.0	0.0	0.0	0.1	0.1	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

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

**Table 5.7: Distribution of Sample Households with Principal Couple**

Country and Location	Total Number of Interviewed Households	Households with Principal Couple (%)	Households Interviewed (%)		
			Both Members of Principal Couple	One Member of Principal Couple	Neither Member of Principal Couple
<b>Georgia</b>					
Total	2,783	61.0	84.0	16.0	0.0
Rural	1,288	63.8	87.0	13.0	0.0
Urban	1,495	58.6	81.3	18.7	0.0
<b>Mongolia</b>					
Total	2,962	71.3	77.6	22.1	0.4
Rural	1,089	75.2	80.6	18.9	0.5
Urban	1,873	69.0	75.6	24.1	0.3
<b>Cavite, Philippines</b>					
Total	1,536	73.8	86.6	12.8	0.6
Rural	608	75.0	88.6	11.0	0.4
Urban	928	73.1	85.3	14.0	0.7

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

heads of household or their spouse. Out of every 10 men primary respondents, about 8 to 9 were the head or the spouse of the head of the household in both Georgia and Mongolia. Almost all of the primary respondents in Cavite, Philippines were the head or the spouse of the head of the household.

The survey was also designed to capture sufficient number of households with a principal couple in order to observe perception on ownership and control of assets from men and women in the household. Table 5.7 presents the distribution of surveyed households with a principal couple and

in what percentage of these households were both members of the principal couple were interviewed. The distribution of sample households having a principal couple by status of interview of respondents indicated that the survey was successful in getting a sufficient number of households with principal couple—about 74% in Cavite, Philippines; 71% in Mongolia; and 61% in Georgia. The proportion was higher in the rural than in the urban areas. Both members of the principal couple were interviewed in 87% of the households in Cavite, Philippines; 78% in Mongolia; and 84% in Georgia, and the proportions were, again, higher in the rural than in the urban areas.

Table 5.8: Distribution of Sample Households Interviewed by Strata

Country and Strata	Number of sample HH interviewed	HH with at least 1 eligible adult member interviewed (%)	HH in which all eligible adult members were interviewed (%)	HH in which all eligible adult members were interviewed simultaneously (%)
<b>Georgia</b>				
HH with 3 or more adults	1,399	100.0	75.3	56.5
HH with 2 or fewer adults	1,384	100.0	89.5	47.8
<b>Mongolia</b>				
HH with 3 or more adults	1,341	99.8	39.0	26.5
HH with 2 or fewer adults	1,621	99.8	79.0	33.6
<b>Cavite, Philippines</b>				
HH with 3 or more adults	790	99.9	76.2	31.8
HH with 2 or fewer adults	746	100.0	91.2	47.9

HH = household.

Source: Asian Development Bank estimates from Evidence and Data for Gender Equality pilot surveys.

In less than 1% of households, none of the members of principal couple could be surveyed in Mongolia and Cavite, Philippines. This situation was not observed in Georgia.

Table 5.8 presents the distribution of sample households interviewed by strata. The majority of the households interviewed had at least one eligible adult member. Out of every 10 sample households interviewed, about 5–6 with all eligible adult members were interviewed simultaneously in Georgia as compared to only 3 in Mongolia. This shows that there are challenges in being able to interview all eligible males and females selected for interview. Simultaneous interviews are also very difficult in the field due to non-availability of all household members at the same time. Interviews not conducted simultaneously and independently are likely to be influenced if the respondents interviewed earlier will share the outcome of the interview with those who are interviewed later.

### 5.3 Conclusion and Ways Forward

The global EDGE project was a response to the need for addressing data and methodological gaps in the collection of sex-disaggregated data. The Methodological Experiment on Measuring Asset Ownership from a Gender Perspective (MEXA), implemented under EDGE, aimed to provide a comparative assessment of different approaches to

respondent selection, as part of a household survey experiment on individual-level asset ownership and control, and specifically to give insights for further methodological surveys in pilot countries. The experience from these pilot undertakings demonstrated while such initiative is challenging, it is feasible to collect high quality data on ownership of assets at the individual level with a carefully designed survey around a standardized framework. The experience from the pilot surveys in the three countries provided rich inputs for the development of UN Methodological Guidelines on the Production of Statistics on Asset Ownership from a Gender Perspective. While methodological improvements will be an ongoing process, these surveys also provided benchmark estimates for the pilot countries. The extent of gender gaps varies by country and by asset type in each country but inequalities are generally higher for core assets such as dwelling, agricultural land, and other real estate. The surveys also provide evidence on how men and women acquire assets, if these assets are owned exclusively or jointly with spouse/partner or other household members, and how social norms, customs, and marital regimes play a role in determining acquisition of assets differently for men and women. ADB pilot countries' experience would be most useful for those countries interested in conducting a stand-alone survey. The lessons gained also could serve as reference for further improvements that should be considered in planning and designing of the survey and for collecting data for the SDG 5.a.1 indicator.

Based on the results and experience of the pilot EDGE survey, it is recommended that NSOs interested in studying the gender gaps in incidence of assets, wealth, and analysis of intra-household dynamics of ownership and control of assets collect self-reported information (as opposed to proxy reporting) from household surveys by interviewing one or more randomly selected adult household members. The interview protocol requires interviews to be conducted separately and simultaneously or consecutively to prevent any biases due to information sharing among the respondents. Before the start of fieldwork, it is important to have developed a well-designed advocacy plan to inform all the households of the survey and to create willingness, support, and cooperation during survey implementation. The EDGE survey instruments should also be customized and translated into the local context. Rigorous training of the survey staff at all stages of survey implementation is critical for a successful operation.

There are other important factors discussed in the UN Guidelines<sup>33</sup> that propose different methods of data collection depending upon the objectives of each country interested in implementing such a study. These guidelines provide the much needed information to the countries who plan to collect asset ownership-related indicators. Stand-alone surveys, are more costly than the option to append a few questions or a module to an ongoing survey. If a country is only interested in the prevalence

of asset ownership, a minimum set of questions can be appended to an existing household survey. If a country plans to generate indicators on both ownership prevalence and intrahousehold dynamics, either a stand-alone survey can be conducted or a module can be appended to an existing household survey. If the objective of the data collection is to estimate gender asset gap, information on households and individuals is limited to the roster of household members and information on assets is restricted to asset ownership (reported or documented) and ownership rights. If the objective, however, is to also generate a gender wealth gap in addition to a gender asset gap, information on the roster of assets, characteristics of assets including value and modes of asset acquisition should also be collected. On the other hand, if the intention is to calculate gender asset gap, gender wealth gap, as well as conduct intra-household analysis, additional questions on the use and control of assets by individuals is needed.

For such an undertaking to be institutionalized in NSOs' regular statistical activities, there should be a commitment between the producers and users of data in ensuring the production of regular, timely, and quality data on asset ownership with gender perspective. The NSOs should also engage its stakeholders—policy makers, researchers, and development partners—to fully utilize the data for the advancement of gender equality in the economic sphere.

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<sup>33</sup> More detailed recommendations are discussed in the UN Guidelines on Producing Statistics on Assets Ownership from a Gender Perspective from Household Surveys (forthcoming).

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\* ADB recognizes “Bangalore” as Bengaluru.



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**ADB-EDGE PILOT SURVEY ON MEASURING ASSET OWNERSHIP AND  
ENTREPRENEURSHIP FROM A GENDER PERSPECTIVE**

**HOUSEHOLD QUESTIONNAIRE**

NAME

CODE

1. STRATUM:				
2. DISTRICT:				
3. COUNTY:				
4. SUB-COUNTY:				
5. PARISH:				
6. ENUMERATION AREA:				
7. SECOND STAGE-STRATUM:(1= THREE OR MORE ADULT MEMBERS HHOLDS, 2= REMAINING HHOLDS)				
8. HOUSEHOLD SERIAL NO.:				
9. SAMPLE NO.:				
10. IS THIS A REPLACEMENT HOUSEHOLD? YES = 1, NO = 2				
11. REASON FOR REPLACEMENT:		ORIGINAL HOUSEHOLD NO RESPONDENT AVAILABLE.....1 ORIGINAL HOUSEHOLD NOT INTERVIEWED, REFUSAL.....2 OTHER, SPECIFY.....3		
12. NAME OF PRIMARY RESPONDENT				
13. PERSON ID CODE OF PRIMARY RESPONDENT				
14. NAME OF PRIMARY RESPONDENT'S SPOUSE (IF APPLICABLE)				
15. PERSON ID CODE OF PRIMARY RESPONDENT'S SPOUSE (IF APPLICABLE)				
16. NAME OF HOUSEHOLD HEAD:				
17. PERSON ID CODE OF HOUSEHOLD HEAD				
18. LOCATION ADDRESS OF HOUSEHOLD:				
19. GPS COORDINATES OF DWELLING:				
	N=1    S=2	D	M	
LAT	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
LONG	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
20. MAIN LANGUAGE SPOKEN AT HOME:		<i>See Codesheet</i>		
21. LANGUAGE OF INTERVIEW:		<i>See Codesheet</i>		
22. TOTAL NUMBER OF INDIVIDUAL QUESTIONNAIRES ATTACHED:				
<b>PUT A CROSS (X) IN BLANK BOXES. NO BOX SHOULD BE LEFT BLANK.</b>		PERSON    PERSON    PERSON NO. 1    NO. 2    NO. 3		
23. PERSON ID CODES OF RESPONDENTS TO THE INDIVIDUAL QUESTIONNAIRES:		<input type="text"/>	<input type="text"/>	<input type="text"/>
24. INTERVIEW STATUS CODE OF RESPONDENTS TO THE INDIVIDUAL QUESTIONNAIRES:		<input type="text"/>	<input type="text"/>	<input type="text"/>
COMPLETED.....1		NOT INTERVIEWED.....3		
PARTIALLY COMPLETED.....2				
25. REASON FOR NOT INTERVIEWED				
DIDN'T WANT TO SPEND TIME/ BUSY.....1		ILLNESS (i.e mentally or physically		
DISLIKE OF GOVERNMENT.....2		incapacitated or with speech or		
INVASION OF PRIVACY.....3		hearing impairment).....5		
DON'T WANT TO BE BOTHERED .....4		TEMPORARILY AWAY.....6		
		OTHER.....7		
26. MANNER IN WHICH INDIVIDUAL INTERVIEWS CONDUCTED				
SIMULTANEOUSLY.....1		<input type="text"/>		
SEQUENTIALLY.....2				
SIMULTANEOUSLY AND SEQUENTIALLY.....3				
OTHER .....4				

27. HOUSEHOLD SIZE AND NUMBER OF ADULT MEMBERS FOR 'INTERVIEWED' HOUSEHOLDS'

HOUSEHOLD SIZE		NUMBER OF ADULT MEMBERS (18 OR ABOVE) IN THE HOUSEHOLD	
		Listing	Enumeration
Listing	Enumeration	Listing	Enumeration
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

**MODULE 1B: STAFF DETAILS**

1. CODE OF ENUMERATOR:			
2. NAME OF ENUMERATOR:			
3. DATE OF INTERVIEW START (DD/MM/YYYY):	/ /		
4. TIME OF INTERVIEW START (HH:MM):			:
(INTERVIEWER ► MODULE 2A)			

5. CODE OF SUPERVISOR:			
6. NAME OF SUPERVISOR:			
7. HOUSEHOLD QUESTIONNAIRES INSPECTION BY SUPERVISOR DATE (DD/MM/YYYY):	/ /		
(SUPERVISOR ► Q9)			

8. REMARKS BY ENUMERATOR

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9. REMARKS BY SUPERVISOR

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Read the following statement of purpose confidently, and then give time for the respondent to ask questions.

The [NSO] is conducting a survey of households across [Country] to better understand asset ownership and entrepreneurship in the country.

The findings from the survey will provide important information to the Government for developing policies and programs to improve the lives of men and women in [Country].

Your household was selected as one of those to which the survey questions will be asked. You were not selected for any specific reason. Rather, your household was selected randomly from a list of all households in this village.

All information your household provides is strictly confidential. It will not be shared with any other government agency, and it will only be used for statistical purposes by the [NSO] or under its supervision. To ensure that the most accurate information is collected, it is very important that we interview the specific household member selected for the interview and that we interview him or her alone, without family or neighbours present. If, during the interview, any family members or neighbours come within hearing distance of the interview, please ask them kindly to come back later after the interview has been completed.

Please spare some time to answer the questions. We thank you in advance for your time.

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**MODULE 2B: HOUSEHOLD DWELLING CHARACTERISTICS**

<p><b>220.</b></p> <p>What type of material is mainly used for construction of the roof of this household's dwelling?</p> <p>IRON SHEETS.....1          TILES.....2          ASBESTOS.....3          CONCRETE.....4          TINS.....5          WOOD.....6          MUD AND POLES.....7          BRICK.....8          MASONRY.....9          TIN/IRON SHEETS.....96          OTHER, SPECIFY.....96</p>	<p><b>221.</b></p> <p>What type of material is mainly used for construction of the wall of this dwelling?</p> <p>CONCRETE STONES.....1          CEMENT STOCKS.....2          BURNT STABILIZED BRICKS.....3          UNBURNT BRICKS WITH CEMENT.....4          UNBURNT BRICKS WITH MUD.....5          WOOD.....6          MUD AND POLES.....7          BRICK.....8          MASONRY.....9          TIN/IRON SHEETS.....96          OTHER, SPECIFY.....96</p>	<p><b>222.</b></p> <p>What type of material is mainly used for construction of the floor?</p> <p>EARTH.....1          RAMMED EARTH.....2          CEMENT SCREED.....3          CONCRETE.....4          TILES.....5          BRICK.....6          MASONRY.....7          MUD.....8          MASONRY.....9          OTHER, SPECIFY.....96</p>	<p><b>223.</b></p> <p>What type of toilet is mainly used in your household?</p> <p>FLUSH TOILET.....1          VIP LATRINE.....2          COVERED PIT LATRINE WITH A SLAB.....3          COVERED PIT LATRINE WITH A SLAB.....4          UNCOVERED PIT LATRINE WITH A SLAB.....5          UNCOVERED PIT LATRINE WITHOUT A SLAB.....6          ECOSAN (COMPOST TOILET).....7          NO FACILITY, BUSH, POLYTHENE BAGS, BUCKET, ETC.....8          OTHER, SPECIFY.....96</p>	<p><b>224.</b></p> <p>What is your household's main source of electricity?</p> <p>NONE.....1          GENERATOR.....2          INVERTER.....3          ELECTRICITY FROM POWER SUPPLIER.....4          SOLAR PANEL.....5          OTHER, SPECIFY.....96</p>	<p><b>225.</b></p> <p>What is the main source of drinking water in your household?</p> <p>PIPE OR PUMP INDOORS.....1          PIPE OR PUMP OUTDOORS.....2          PUBLIC STANDPIPE/TAP.....3          BOREHOLES/TUBEWELL/MECHANICAL WELL.....4          NEIGHBORING HOUSEHOLD.....5          WATER VENDOR (CLEAN WATER).....6          CLOSED WELL.....7          OPEN WELL.....8          RIVER, LAKE OR CREEK.....9          RAINWATER.....10          MANSUA (SCIELO/DRUM/PLASTIC).....10          OTHER, SPECIFY.....96</p>
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**END OF HOUSEHOLD QUESTIONNAIRE**

**226. ENUMERATOR:** ENTER RESPONSE CODE FOR COMPLETION STATUS OF HOUSEHOLD QUESTIONNAIRE

COMPLETED.....1  **▶**  
 NOT INTERVIEWED.....2  **▶**END

(Reason for not interviewed should be explained to the right)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**227. ENUMERATOR:** RECORD PERSON ID CODE OF MEMBER WHO SERVED AS THE RESPONDENT FOR HOUSEHOLD QUESTIONNAIRE.

**228. ENUMERATOR:** RECORD THE PERSON ID CODE OF INDIVIDUALS OR HOUSEHOLD MEMBERS CHOSEN FOR THE INDIVIDUAL QUESTIONNAIRE. FOLLOW INSTRUCTIONS FROM MANUAL ON SELECTION OF INDIVIDUAL QUESTIONNAIRE RESPONDENTS PUT A CROSS (X) IN BLANK BOXES. NO BOX SHOULD BE LEFT BLANK.

a) ID OF PRIMARY RESPONDENT  b) ID OF SPOUSE OF PRIMARY RESPONDENT / 2ND RESPONDENT  c) ID OF 3RD RESPONDENT

**229. ENUMERATOR:** RECORD END TIME FOR HOUSEHOLD INTERVIEW (HH:MM).  :

**ADB-EDGE PILOT SURVEY ON MEASURING ASSET OWNERSHIP AND  
ENTREPRENEURSHIP FROM A GENDER PERSPECTIVE**

**INDIVIDUAL QUESTIONNAIRE**

NAME	CODE
1. STRATUM:	
2. DISTRICT:	
3. COUNTY:	
4. SUB-COUNTY:	
5. PARISH:	
6. ENUMERATION AREA:	
7. SECOND STAGE-STRATUM:(1= THREE OR MORE ADULT MEMBERS HHOLDS, 2= REMAINING HHOLDS)	
8. HOUSEHOLD SERIAL NO.:	
9. SAMPLE NO.:	
10. PERSON ID CODE OF CHOSEN RESPONDENT:	
11. NAME OF CHOSEN RESPONDENT:	
12. INTERVIEW STATUS CODE OF CHOSEN RESPONDENT	
COMPLETED.....1                      NOT INTERVIEWED.....3 PARTIALLY COMPLETED.....2	
13 REASON FOR NOT INTERVIEWED (FOR CODE 2 OR 3 IN Q12)	
DIDN'T WANT TO SPEND TIME/ BUSY.....1                      ILLNESS (i.e mentally or physically DISLIKE OF GOVERNMENT.....2                                  incapacitated or with speech or INVASION OF PRIVACY.....3    hearing impairment).....5 DON'T WANT TO BE BOTHERED .....4                              TEMPORARILY AWAY.....6 OTHER.....7	
14. DATE OF INTERVIEW (DD/MM/YYYY)	/ /
15. TIME OF INTERVIEW START (HH:MM):	:
16. CODE OF ENUMERATOR:	
17. NAME OF ENUMERATOR:	
18. CODE OF SUPERVISOR:	
19. NAME OF SUPERVISOR:	
20. INDIVIDUAL QUESTIONNAIRES INSPECTION BY SUPERVISOR DATE (DD/MM/YYYY):	/ /
21. COMMENTS FROM SUPERVISOR	

THIS SURVEY IS BEING CONDUCTED BY [NSO].

If the respondent is different from the one completing the Household Questionnaire, please read the statement of purpose confidentially given in Module 1B, and then give time for the respondent to ask questions, before soliciting information.



**MODULE 3: DWELLING (CONTINUED)**

<p><b>306.</b> What is the tenure status of the dwelling or plot of land on which the household dwelling is located?</p> <p>CUSTOMARY.....1 LEASEHOLD.....2 FREEHOLD.....3 OTHER (SPECIFY).....96 DON'T KNOW.....98</p>	<p><b>307.</b> Is there an ownership document for the dwelling or plot of land on which the household dwelling is located?</p> <p>YES, A TITLE DEED.....1 YES, A CERTIFICATE OF CUSTOMARY OWNERSHIP.....2 YES, A CERTIFICATE OF OCCUPANCY.....3 YES, A WILL.....4 YES, A PURCHASE AGREEMENT.....5 YES, OTHER (SPECIFY)..96 NONE.....6 ▶<b>309</b> DON'T KNOW.....98 ▶<b>309</b></p>	<p><b>308.</b> Whose names are listed as owners on the ownership document for the dwelling or plot of land on which the household dwelling is located?</p> <p>LIST ALL ADULTS FROM THE HOUSEHOLD. ADD ADDITIONAL SPACE FOR LISTING IDs OF ADULT OWNERS, IF REQUIRED. IF SOMEONE FROM OUTSIDE OF THE HOUSEHOLD IS LISTED AS AN OWNER ON THE DOCUMENT, ENTER CODE '99' IN ADDITION TO IDs OF OWNERS FROM THE HOUSEHOLD.</p>										
		<table border="1"> <tr> <td data-bbox="1089 936 1133 1104">ID</td> <td data-bbox="1089 768 1133 936">ID</td> <td data-bbox="1089 600 1133 768">ID</td> <td data-bbox="1089 432 1133 600">ID</td> <td data-bbox="1089 270 1133 432">ID</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	ID	ID	ID	ID	ID					
ID	ID	ID	ID	ID								

**MODULE 3: DWELLING (CONTINUED)**

<p><b>311.</b> Do dwelling owners <b>sell</b> dwellings in or around this community?  YES, DWELLING OWNERS SELL.....1 NO SALES TRANSACTIONS...2 ▶<b>313</b> DO NOT KNOW.....98 ▶<b>313</b></p>		<p><b>312.</b> Are you informed regarding the value of recent dwelling <b>sales</b> transactions?  INFORMED OF TRANSACTIONS...1 NOT INFORMED OF TRANSACTIONS...2</p>		<p><b>313.</b> 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?  ESTIMATE VALUE IN LOCAL CURRENCY. RECORD 97 IF REFUSE TO ANSWER. RECORD 98 IF DO NOT KNOW.  IF THE ESTIMATED VALUE IS OBTAINED ▶<b>315</b> <b>97-REFUSE TO ANSWER ▶ 314</b> <b>98-DON'T KNOW ▶ 314</b></p>		<p><b>314.</b> (FOR CODE 1 IN Q301 and CODE 97 OR 98 in Q313) What would it cost to construct this dwelling today including the cost of the plot of land on which the dwelling is located?  ESTIMATE VALUE IN LOCAL CURRENCY. RECORD 97 IF REFUSE TO ANSWER. RECORD 98 IF DO NOT KNOW.</p>		<p><b>315.</b> If this dwelling were to be sold today, which household member(s) would decide how the money is used?  LIST ALL ADULTS FROM THE HOUSEHOLD. ADD ADDITIONAL SPACE FOR LISTING IDs, IF REQUIRED. IF SOMEONE FROM OUTSIDE OF THE HOUSEHOLD WOULD DECIDE, ENTER CODE "99" IN ADDITION TO IDs OF HOUSEHOLD MEMBER(S).</p>		<p><b>316.</b> CODE FOR ABILITY OF RESPONDENT TO BE INTERVIEWED ALONE. <input type="text"/>  <b>RESPONSE CODES:</b> ALONE.....1 WITH ADULT FEMALES PRESENT.....2 WITH ADULT MALES PRESENT.....3 WITH ADULTS MIXED SEX PRESENT.....4 WITH CHILDREN PRESENT.....5 WITH ADULTS MIXED SEX AND CHILDREN PRESENT..6</p> <p>(Reasons interview not administered with the respondent(s) alone should be explained in the remarks)</p>	
<p><b>309.</b> If this dwelling or plot of land on which your household dwelling exists were to be sold, which member(s) of this household would be involved in the decision <b>to sell</b>?</p>		<p><b>310.</b> Which member(s) of this household would be involved in the decision <b>to bequeath</b> this dwelling or plot of land on which your household dwelling exists?</p>		<p>For questions 309-310 LIST ALL ADULTS FROM THE HOUSEHOLD. ADD ADDITIONAL SPACE FOR LISTING IDs, IF REQUIRED. IF SOMEONE FROM OUTSIDE OF THE HOUSEHOLD HAS THIS RIGHT, ENTER CODE "99" IN ADDITION TO IDs OF HOUSEHOLD MEMBER(S).</p>		<p>ID</p>		<p>ID</p>		<p>ID</p>	
<p>ID</p>		<p>ID</p>		<p>ID</p>		<p>ID</p>		<p>ID</p>		<p>ID</p>	
<p>LOCAL CURRENCY</p>		<p>LOCAL CURRENCY</p>		<p>LOCAL CURRENCY</p>		<p>ID</p>		<p>ID</p>		<p>ID</p>	

**MODULE 4: AGRICULTURAL LAND**

401. Do you or any member of your household currently **OWN** any agricultural parcels exclusively or jointly with someone else? The parcels may include those that are cultivated by your household, currently fallow, rented out or given away for nothing in return on a temporary basis. **DO NOT** include those held only through use/access rights.

YES.....1  
NO.....2 ▶ 426

402. PARCEL NAME (LIST FROM LARGEST TO SMALLEST PARCEL).	403. LOCATION & DESCRIPTION (COMPLETE THIS COLUMN FOR ALL PARCELS. THEN ASK 404)	404. Where is this [PARCEL] located?  <div style="border: 1px solid black; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">1</div> <p>WITHIN THE EA/ICL.....1 OUTSIDE EA BUT WITHIN SAME PARISH.....2 OUTSIDE PARISH BUT WITHIN THE SUB COUNTY...3 ELSEWHERE IN THE DISTRICT.....4 OTHER DISTRICT.....5</p> <p>IF THE PARCEL IS LOCATED IN THE SAME PARISH, WRITE "THE SAME CODES INDICATED IN IDENTIFICATION PARTICULARS" ON THE SPACE PROVIDED FOR DISTRICT, SUB-COUNTY, AND PARISH.</p> <div style="border: 1px solid black; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">2</div> <p>DISTRICT      SUB-COUNTY      PARISH</p>	405. What is the area of this [PARCEL]?  <b>ENUMERATOR: ASK THE RESPONDENT TO ESTIMATE THE AREA IN ACRES.</b>	406. Is this [PARCEL] the same piece of land on which the dwelling is located?  YES...1 ▶ <b>NEXT PARCEL</b> NO...2	407. What is/was the primary use of this [PARCEL] in the most recent cropping season?  OWN CULTIVATED (ANNUAL CROPS).....1 OWN CULTIVATED (PERENNIAL CROPS)...2 LIVESTOCK, GRAZING, REARING/PASTURE....3 ▶409 FALLOW.....4 ▶409 WOODLAND/FOREST...5 ▶409 SWAMP.....6 ▶409 RENTED OUT.....7 ▶409 GIVEN OUT (FREE)...8 ▶409 OTHER (SPECIFY)...96 ▶409 DON'T KNOW.....98 ▶409
			RESPONDENT ESTIMATION AREA IN ACRES		
P01					
P02					
P03					
P04					
P05					
P06					
P07					
P08					
P09					
P10					





**MODULE 4: AGRICULTURAL LAND (CONTINUED)**

P A R C E L I D	412. Which household member(s) own this [PARCEL]?		413. In what year was this [PARCEL] acquired by the owner(s)? IF > 1 OWNER, ALLOW > 1 RESPONSE. ADD ADDITIONAL SPACE FOR LISTING IDs OF ADULT OWNERS, IF REQUIRED. RECORD '98' IF DON'T KNOW.		414. How did the owner(s) acquire this [PARCEL]? Indicate the mode of acquisition (MOA). IF > 1 OWNER, ALLOW > 1 RESPONSE. ADD ADDITIONAL SPACE FOR LISTING IDs OF ADULT OWNERS, IF REQUIRED.								
	ID	ID	YEAR	ID	YEAR	ID	MOA	ID	MOA	ID	MOA	ID	MOA
P01													
P02													
P03													
P04													
P05													
P06													
P07													
P08													
P09													
P10													

THE IDS IN 412 AND 413 SHOULD CORRESPOND AND BE WRITTEN IN THE SAME ORDER.

THE IDS IN 412 AND 413 SHOULD CORRESPOND AND BE WRITTEN IN THE SAME ORDER.

- 1 PURCHASED.....
- 2 INHERITED AFTER THE DEATH OF NATAL FAMILY MEMBER.....
- 3 INHERITED AFTER THE DEATH OF MARITAL FAMILY MEMBE.....
- 4 ACQUIRED DUE TO MARITAL LAW/CUSTOM.....
- 5 ALLOCATED/GIFT FROM HOUSEHOLD MEMBER.....
- 6 ALLOCATED/GIFT FROM NON-HOUSEHOLD MEMBER.....
- 7 GOVERNMENT PROGRAM.....
- 8 ENCROACHMENT.....
- 9 OTHER (SPECIFY).....
- 96 .....
- 98 DON'T KNOW.....





**MODULE 4: AGRICULTURAL LAND (CONTINUED)**

P A R C E L  I D	<p><b>425.</b> Which household member of 18 years old and above does not know about your ownership of this [PARCEL]? LIST UP TO 3 FROM HOUSEHOLD ROSTER.</p>			<p><b>426.</b> CODE FOR ABILITY OF RESPONDENT TO BE INTERVIEWED ALONE. <input style="width: 40px; height: 20px;" type="text"/></p> <p><u>RESPONSE CODES:</u>                  ALONE.....1                  WITH ADULT FEMALES PRESENT.....2                  WITH ADULT MALES PRESENT.....3                  WITH ADULTS MIXED SEX PRESENT.....4                  WITH CHILDREN PRESENT.....5                  WITH ADULTS MIXED SEX AND CHILDREN PRESENT..6</p>		
	ID	ID	ID	<p><i>(Reasons interview not administered with the respondent(s) alone should be explained in the remarks)</i></p>		
	P01					
	P02					
	P03					
	P04					
	P05					
	P06					
	P07					
	P08					
	P09					
P10						











**MODULE 6B: SMALL AGRICULTURAL EQUIPMENT**

E Q U I P M E N T  C O D E	E Q U I P M E N T	616. Do you or any member of your household own any [AGRICULTURAL EQUIPMENT], exclusively or jointly with someone else, regardless of whether and how it is used? READ ALL CATEGORIES	617. Which household member(s) own at least one of this [AGRICULTURAL EQUIPMENT]?	618. CODE FOR ABILITY OF RESPONDENT TO BE INTERVIEWED ALONE.
AE7	HOE	YES.....1 NO.....2 ▶ NEXT ITEM DO NOT KNOW...98 ▶ NEXT ITEM		
AE8	AXE			
AE9	PANGA			
AE10	SLASHER			
AE11	WATERING CAN			
AE12	WHEELBARROW			
AE13	PRUNING KNIFE			
AE14	PRUNING SAW			
AE15	CHAIN/HANDSAW			
AE16	SHELLER			
AE17	SPADE			
AE18	FORK HOE			
AE19	SPRAYER			
AE20	MILK CAN			
AE21	PAIL			
AE22	LANTERN			
AE23	CULTIVATOR			
AE24	WEEDER			
AE25	PLANTER			
AE26	OTHER (SPECIFY)			

**RESPONSE CODES:**

- ALONE.....1
- WITH ADULT FEMALES PRESENT.....2
- WITH ADULT MALES PRESENT.....3
- WITH ADULTS MIXED SEX PRESENT.....4
- WITH CHILDREN PRESENT.....5
- WITH ADULTS MIXED SEX AND CHILDREN PRESENT...6

(Reasons interview not administered with the respondent(s) alone should be explained in the remarks)

**MODULE 7: NON-AGRICULTURAL ENTERPRISES AND ENTERPRISE ASSETS**

Does any member of your household currently engaged in any of the following activities with the main intention of earning income?

701 ...own a non-agricultural manufacturing enterprise or provided a non-agricultural service from home or a household-owned shop, as a carwash owner, metal worker, mechanic, carpenter, tailor, barber, etc.?

YES...1  
NO....2

705 ...own a professional office or offered professional services from home as a doctor, accountant, lawyer, translator, private tutor, midwife, mason, etc?

YES...1  
NO....2

702 ...process and sell any agricultural by-products, including flour, starch, juice, beer, jam, oil, seed, bran, wine etc.?

YES...1  
NO....2

706 ...drive a household-owned taxi or pick-up truck to provide transportation or moving services?

YES...1  
NO....2

703 ...own a trading enterprise at a fixed or mobile location on a street, at home, or in a market?

YES...1  
NO....2

707 ...own a drinking place (ex. bar) or eating place (ex. restaurant)?

YES...1  
NO....2

704 ...offer any service or sold anything at a fixed or mobile location on a street, at home, or in a market, including firewood, home-made charcoal, curios, construction timber, woodpoles, traditional medicine, mats, bricks, cane furniture, weave baskets, thatch grass etc.?

YES...1  
NO....2

708 ...own any other non-agricultural enterprise not mentioned above, even if it is a small enterprise run from home or on a street?

YES...1  
NO....2

**709. ENUMERATOR: IS THERE A "1" FOR ANY OF THE QUESTIONS 701 THROUGH 708?**

YES...1  
NO....2 ▶ 748









E N T E R P R I S E  I D	727. During the past twelve months, what was the primary source of funding used to finance expansion and capital improvements or to face unexpected expenses for this [ENTERPRISE]? <b>DO NOT READ LIST</b>  DIDN'T EXPAND ENTERPRISE, MAKE CAPITAL IMPROVEMENTS OR FACE UNEXPECTED EXPENSES.....1 OWN/HOUSEHOLD'S SAVINGS.....2 FRIENDS/RELATIVES.....3 PRIVATE MONEY LENDER.....4 EMPLOYEES.....5 COMMERCIAL/DEVELOPMENT BANK..6 DEPOSIT TAKING MICROFINANCE INSTITUTIONS....7 CREDIT INSTITUTIONS.....8 TRADER/SHOP KEEPER.....9 SELP HELP GROUP.....10 NGO.....11 GOVERNMENT.....12 OTHER (SPECIFY).....96 DON'T KNOW.....98	728. During the last twelve months, did the [ENTERPRISE] apply for loans or line(s) of credit?  YES...1 NO...2 ▶730	729. Was the loan application accepted? (IF RESPONDENT APPLIED FOR MORE THAN ONE LOAN IN THE LAST 12 MONTHS, REFER TO THE <b>MOST RECENT</b> LOAN IN THE SAME TIME PERIOD).  YES..1 ▶731 NO...2 ▶731	730. What was the main reason your enterprise did not apply for a line of credit or a loan? <b>DO NOT READ LIST</b>  NO NEED FOR A LOAN-ENTERPRISE HAS SUFFICIENT CAPITAL.....1 APPLICATION PROCEDURES FOR LOANS OR LINE OF CREDIT ARE COMPLEX...2 INTEREST RATES ARE NOT FAVOURABLE.....3 COLLATERAL REQUIREMENTS FOR LOANS OR LINE OF CREDIT ARE UNATTAINABLE.....4 SIZE OF LOAN AND MATURITY ARE INSUFFICIENT.....5 DID NOT THINK IT WOULD BE APPROVED.....6 OTHER (SPECIFY).....96	731. What was the approximate monthly turnover from the [ENTERPRISE] (the total value of sales of goods or services; consider an average over the last three operational months)?  <b>LOCAL CURRENCY</b>	732. What was the approximate total monthly income earned from the [ENTERPRISE] after paying all expenses, including wages of employees, but not including any income paid to yourself and other owners (consider average of last three operational months)?  <b>LOCAL CURRENCY</b>
	E1	E2	E3	E4	E5	

**MODULE 7: NON-AGRICULTURAL ENTERPRISES AND ENTERPRISE ASSETS (CONTINUED)**

	733.	734.	735.	736.	737.	
E	Over the past three years, has the number of paid employees increased, decreased, or remained the same?	Is the [ENTERPRISE] your desired size or did you wish to grow it?	What factors have constrained the business owner's ability to increase the size of the [ENTERPRISE] to the desired size? <b>SELECT UP TO THREE RESPONSES. DO NOT READ LIST</b>	Have you ever taken part in any course or training activity, whether formal or informal, on how to start an enterprise, such as training on how to develop a business plan, assess market opportunities, identify and access start-up capital, develop business networks, etc.? <b>SELECT UP TO THREE RESPONSES.</b>	Various people may give you advice on managing your enterprise. From whom do you regularly (once or more per month) receive advice for managing your [ENTERPRISE]? <b>SELECT UP TO THREE RESPONSES. DO NOT READ LIST</b>	
N			DID NOT MAKE EFFORTS TO GROW IT.....1 LACK OF DEMAND.....2 LACK OF INPUTS.....3 LACK OF FINANCE.....4 POOR QUALITY OF SUPPLY OF ELECTRICITY AND PHONE.....5 LACK OF TRAINED EMPLOYEES.....6 COST OF HIRING NEW EMPLOYEES.....7 LEGAL REGULATIONS.....8 POOR QUALITY ROADS.....9 LACK OF MARKET INFORMATION.....10 HIGH TAX RATES.....11 LACK OF CLEAR OWNERSHIP OF LAND.....12 HIGH CRIME RATES.....13 ECONOMIC POLICY UNCERTAINTY.....14 CORRUPTION.....15 LACK OF TIME TO WORK ON THE BUSINESS DUE TO HOUSEHOLD CHORES.....16 OTHER (SPECIFY).....96 DON'T KNOW.....98	YES, AS PART OF MY REGULAR EDUCATION AT SCHOOL.....1 YES, AT MY INITIATIVE.....2 YES, AS A CONDITION FOR RECEIVING A LOAN/FOR PARTICIPATING IN A PROGRAM.....3 YES, TRAINING FROM GOVERNMENT.....4 YES, TRAINING BY NGO.....5 YES, OTHER (SPECIFY).....96 NO.....96	SPOUSE/PARTNER.....1 OTHER FAMILY MEMBERS/RELATIVES.....2 FRIENDS.....3 A PUBLIC ADVISING SERVICE (BANK, LAWYER, ACCOUNTANT).....4 OTHER (SPECIFY).....96 NONE.....95	
T						
E						
R						
P						
I						
S						
E						
I						
D						
E1						
E2						
E3						
E4						
E5						



**MODULE 7: NON-AGRICULTURAL ENTERPRISES AND ENTERPRISE ASSETS (CONTINUED)**

743.		744.		745.		746.		747.		748.	
If this [ENTERPRISE] were to be sold, which member(s) of this household would be involved in the decision to sell?		Which member(s) of this household would be involved in the decision to bequeath this [ENTERPRISE]?		ENUMERATOR: IS RESPONDENT THE OWNER/ONE OF THE OWNERS OF THE [ENTERPRISE]?		Are there any household members of 18 years old and above that do not know about your ownership of this [ENTERPRISE]?		Which household member of 18 years old and above does not know about your ownership of this [ENTERPRISE]?		CODE FOR ABILITY OF RESPONDENT TO BE INTERVIEWED ALONE.	
LIST ALL ADULTS FROM THE HOUSEHOLD ROSTER IF SOMEONE FROM OUTSIDE OF THE HOUSEHOLD HAS RIGHT TO SELL, ENTER CODE '99' IN ADDITION TO IDS OF HOUSEHOLD MEMBER(S). ADD ADDITIONAL SPACE FOR LISTING IDS, IF REQUIRED.		LIST ALL ADULTS FROM HOUSEHOLD ROSTER IF SOMEONE FROM OUTSIDE OF THE HOUSEHOLD HAS RIGHT TO BEQUEATH, ENTER CODE '99' IN ADDITION TO IDS OF HOUSEHOLD MEMBER(S). ADD ADDITIONAL SPACE FOR LISTING IDS, IF REQUIRED.		CHECK IN ACCORDANCE TO Q714		YES...1 NO...2 ▶NEXT ENTERPRISE		LIST UP TO 3 FROM HOUSEHOLD ROSTER		RESPONSE CODES: ALONE.....1 WITH ADULT FEMALES PRESENT.....2 WITH ADULT MALES PRESENT.....3 WITH ADULTS MIXED SEX PRESENT.....4 WITH CHILDREN PRESENT.....5 WITH ADULTS MIXED SEX AND CHILDREN PRESENT...6	
ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
E1											
E2											
E3											
E4											
E5											

*(Reasons interview not administered with the respondent(s) alone should be explained in the remarks)*











**MODULE 9: CONSUMER DURABLES**

D U R A B L E  C O D E	D U R A B L E	901. Do you or any member of your household own any [CONSUMER DURABLE], exclusively or jointly with someone else? <b>READ ALL CATEGORIES</b>  YES.....1 NO.....2 ▶ <b>NEXT ITEM</b> DON'T KNOW...98 ▶ <b>NEXT ITEM</b>	902. Who in your household owns at least one of this [CONSUMER DURABLE]?  LIST ALL ADULTS FROM THE HOUSEHOLD. IF OWNED BY ALL ADULT HOUSEHOLD MEMBERS THEN FILL IN THE IDs OF ALL ADULT HOUSEHOLD MEMBERS. IF JOINTLY OWNED BY SOMEONE FROM OUTSIDE OF THE HOUSEHOLD, ENTER CODE '99' IN ADDITION TO IDs OF OWNERS FROM THE HOUSEHOLD. ADD ADDITIONAL SPACE FOR LISTING IDs OF ADULT OWNERS, IF REQUIRED.	903. CODE FOR ABILITY OF RESPONDENT TO BE INTERVIEWED ALONE.  <input type="checkbox"/>  <b>RESPONSE CODES:</b> ALONE.....1 WITH ADULT FEMALES PRESENT.....2 WITH ADULT MALES PRESENT.....3 WITH ADULTS MIXED SEX PRESENT.....4 WITH CHILDREN PRESENT.....5 WITH ADULTS MIXED SEX AND CHILDREN PRESENT...6
901	Bed		ID ID ID ID ID ID	(Reasons interview not administered with the respondent(s) alone should be explained in the remarks)
902	Charcoal Stove			
903	Kerosene Stove			
904	Electric Iron			
905	Kettle			
906	Refrigerator			
907	Radio			
908	Television			
909	Cell phone			
910	Computer			
911	Bicycle			
912	Motorcycle			
913	Car			
914	Pick-up Truck			
915	Other (Specify)			





**MODULE 11: LIABILITIES**

1101. Do you or any member of your household owe money to anyone or any institution?		1103. What was main purpose for seeking the loan? DO NOT READ LIST		1104. ENUMERATOR: IF THE LOAN WAS DRAWN FOR A NON-AGRICULTURAL ENTERPRISE, ENTER THE ENTERPRISE ID FROM MODULE 7.		1105. Which household member(s) borrowed the money?		1106. What is the remaining amount to be repaid on the loan (principal + interest)? ESTIMATE IN LOCAL CURRENCY. RECORD 97 IF REFUSE TO ANSWER. RECORD 98 IF DO NOT KNOW.	
		YES.....1 NO.....2 ▶ 1110 REFUSES TO RESPOND.....97 ▶ 1110 DON'T KNOW.....98 ▶ 1110				LIST ALL ADULTS FROM THE HOUSEHOLD. ROSTER, IF THE MONEY BORROWED JOINTLY WITH SOMEONE FROM OUTSIDE OF THE HOUSEHOLD, ENTER 99 IN ADDITION TO IDS OF BORROWERS FROM THE HOUSEHOLD. ADD ADDITIONAL SPACE FOR LISTING IDS, IF REQUIRED.			
LN1	WRITTEN DESCRIPTION	CODE	ENTERPRISE ID	ID	ID	ID	ID	ID	LOCAL CURRENCY
LN1	ANOTHER HOUSEHOLD MEMBER.....1 FRIENDS/RELATIVES.....2 STATE MONEY LENDER.....3 COMMERCIAL/DEVELOPMENT BANK.....4 DEPOSIT TAKING.....5 MICROFINANCE INSTITUTIONS.....6 FARMSHOP.....7 TRADER/SHOP KEEPER.....8 SELF HELP GROUP.....9 NGO.....10 GOVERNMENT.....11 OTHER (SPECIFY).....96 DON'T KNOW.....99								
LN2									
LN3									
LN4									
LN1	1107. ENUMERATOR: IS RESPONDENT A SOLE/JOINT BORROWER OF THIS MONEY? CHECK IN ACCORDANCE TO Q1105 YES.....1 NO.....2 ▶NEXT ITEM								
LN2									
LN3									
LN4									
LN1	1108. Are there any household members of 18 years and above that do not know about your ownership of this [LOAN]? YES.....1 NO.....2 ▶NEXT ITEM								
LN2									
LN3									
LN4									
LN1	1109. Which household member of 18 years and above does not know about your ownership of this [LOAN]? LIST UP TO 3 FROM HOUSEHOLD ROSTER 1110. CODE FOR ABILITY OF RESPONDENT TO BE INTERVIEWED ALONE. RESPONSE CODES: ALONE.....1 WITH ADULT FEMALES PRESENT.....2 WITH ADULT MALES PRESENT.....3 WITH ADULTS MIXED SEX PRESENT.....4 WITH CHILDREN PRESENT.....5 WITH ADULTS MIXED SEX AND CHILDREN PRESENT.....6								
LN2									
LN3									
LN4									

(Reasons interview not administered with the respondent(s) alone should be explained in the remarks)

**MODULE 12: VALUABLES**

<b>V A L U A B L E  C O D E</b>	<b>V A L U A B L E  N A M E</b>	<b>1201.</b> Do you or any member of your household own any [VALUABLE], exclusively or jointly with someone else? READ ALL CATEGORIES	<b>1202.</b> Who in your household owns at least one of this [VALUABLE]?  LIST ALL ADULTS FROM THE HOUSEHOLD. IF OWNED BY ALL ADULT HOUSEHOLD MEMBERS THEN FILL IN THE IDs OF ALL ADULT HOUSEHOLD MEMBERS. ADD ADDITIONAL SPACE FOR LISTING IDs OF ADULT OWNERS, IF REQUIRED.				<b>1203.</b> CODE FOR ABILITY OF RESPONDENT TO BE INTERVIEWED ALONE. <input type="checkbox"/>  <b>RESPONSE CODES:</b> ALONE.....1 WITH ADULT FEMALES PRESENT.....2 WITH ADULT MALES PRESENT.....3 WITH ADULTS MIXED SEX PRESENT.....4 WITH CHILDREN PRESENT.....5 WITH ADULTS MIXED SEX AND CHILDREN PRESENT..6  (Reasons interview not administered with the respondent(s) alone should be explained in the remarks)	
		YES.....1 NO.....2 ► NEXT ITEM DON'T KNOW.98 ► NEXT ITEM	ID	ID	ID	ID		
		101	Jewelry					
		102	Semi-precious and precious metals					
		103	Semi-precious and precious stones					
		104	Paintings					
105	Other, Specify							

<b>MODULE 13: END OF QUESTIONNAIRE</b>	
<b>1301. ENUMERATOR:</b> ENTER RESPONSE CODE FOR COMPLETION STATUS OF INDIVIDUAL QUESTIONNAIRE:	<input type="checkbox"/>
COMPLETED.....1 ▶1303	
PARTIALLY COMPLETED.....2	
NOT INTERVIEWED.....3	
<b>1302. ENUMERATOR:</b> REASON FOR PARTIALLY DONE OR NOT INTERVIEWED SHOULD BE EXPLAINED BELOW	
.....	
.....	
.....	
<b>1303. ENUMERATOR:</b> INDICATE THE NUMBER OF CALL BACKS YOU MADE TO THE HOUSEHOLD, IF ANY, IN ORDER TO INTERVIEW RESPONDENT:	<input type="checkbox"/>
<b>1304. ENUMERATOR:</b> RECORD END TIME FOR INDIVIDUAL INTERVIEW (HH : MM):	<input type="checkbox"/> : <input type="checkbox"/>
<b>1305. ENUMERATOR:</b> RECORD END DATE FOR INDIVIDUAL INTERVIEW (DD/MM/YYYY)	<input type="text"/> / <input type="text"/> / <input type="text"/>
<b>ANY FURTHER COMMENTS:</b>	



## **Measuring Asset Ownership and Entrepreneurship from a Gender Perspective** *Methodology and Results of Pilot Surveys in Georgia, Mongolia, and the Philippines*

Amid increasing demand for systematically collected statistics on asset ownership and control, the absence of standard guidelines and methods has constrained the collection and production of basic data. To fill this methodological gap, the Asian Development Bank, in collaboration with development partners, supports the efforts initiated under the global initiative Evidence and Data for Gender Equality, which aims to standardize methods of data collection for comparable sex-disaggregated data, and advocate for mainstreaming gender statistics on entrepreneurship and asset ownership. Documenting pilot surveys from three countries, this report outlines the importance of sex-disaggregated data on asset ownership and entrepreneurship and describes the intricacies and methodological challenges of producing these data through household surveys.

### **About the Asian Development Bank**

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to a large share of the world's poor. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

