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Gender and Asset Ownership:

A Guide to Collecting Individual-Level Data

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Abstract

Ownership and control over assets such as land and housing provide direct and indirect benefits to individuals and households, including a secure place to live, the means of a livelihood, protection during emergencies, and collateral for credit that can be used for investment or consumption. Unfortunately, few studies—either at the micro or macro levels—examine the gender dimensions of asset ownership. This paper sets out a framework for researchers who are interested in collecting data on individual level asset ownership and analyzing the gender asset gap. It reviews best practices in existing surveys with respect to data collection on assets at both the household and individual levels, and shows how various questions on individually owned assets can be incorporated with a minimum of effort and cost into existing multi-topic household surveys, using examples of three Living Standard Measurement Study surveys: the 1998–99 Ghana survey, the 2000 Guatemala survey, and the 1997–98 Vietnam survey questionnaires. The analysis shows that it is feasible to add a minimal set of questions to enable calculation of the gender asset gap. Adding a series of extra questions will permit a more satisfactory and nuanced analysis of asset acquisition, use, disposition, and valuation—information that is critical for policies promoting gender equality, poverty reduction, and economic growth.

This paper—a product of the Gender and Development Group, Poverty Reduction and Economic Management Network—is part of a larger effort in the department to measure and understand women's economic empowerment. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at cheryl.doss@yale.edu, cgrown@american.edu, or deere@latam.ufl.edu.

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D13 - Household Production and Intrahousehold Allocation
D7 - Analysis of Collective Decision-Making
Q15 - Land Ownership and Tenure; Land Reform; Land Use; Irrigation

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1. Introduction

It is now widely recognized that ownership and control over assets such as land and housing provide direct and indirect benefits to individuals and households, including a secure place to live, the means of a livelihood, protection during emergencies, and collateral for credit that can be used for investment or consumption. Recent studies suggest that assets are important for reducing poverty, and cushioning risk and vulnerability from natural disasters, illness, or financial crises. At the macro level, a growing literature finds that asset equality is positively correlated with economic growth. Asset inequality, combined with market failures, leads to differential productivity between the asset poor and asset rich, which creates poverty and inequality traps (Banerjee and Duflo 2003; Barham et al 1995; Barrett and Carter 2005; Birdsall and Londono 1997; Carter and Zimmerman 2000).

Unfortunately, few studies – either at the micro or macro levels– examine the gender dimensions of asset ownership. One reason why gender is not a prominent part of this literature is lack of empirical information on the distribution of wealth and property by sex. Few surveys actually collect information on individual ownership of land, housing, livestock and other productive assets. Most data on assets is collected at the household level, which gives a misleading or partial picture of individual-level ownership patterns. As a result, researchers and policy makers have only an incomplete understanding of the assets that women own, how they acquire them, and how they use them to influence decisions that affect their own and others' well-being.

The limited existing information shows that women in many countries are far less likely than men to have ownership or control of productive assets. In addition, women may not receive the benefits of assets held by men, even when they live in the same household (Deere and Doss 2006a). Government policy, social norms, intra-family arrangements, and the market determine ownership and accumulation of assets. Gender biases in each of these different institutions and practices limit women's ability to obtain and keep assets. In light of current economic and demographic trends, women face greater risk of poverty and economic vulnerability than do men, and women's lack of asset ownership exacerbates this.

This paper sets out a framework for researchers who are interested in collecting data on individual level asset ownership and analyzing the gender asset gap. The next section highlights the main policy issues and research questions that can be addressed with individual asset data. We show why collecting individual level data on asset ownership is important for understanding poverty reduction, social welfare, and economic growth as well as for constructing an indicator of countries' progress toward the Millennium Development Goal of gender equality and women's empowerment (MDG3). The third section summarizes the state of knowledge on the gender asset gap in developing countries, analyzes the legal context with respect to women's ownership of assets and discusses the channels of asset acquisition.

The fourth section reviews the best practices in existing surveys with respect to data collection on assets at both the household and individual levels. Special emphasis is given to the Living Standard Measurement Study (LSMS) household surveys, but also included in the review of data collection at the individual level are surveys conducted by the International Food Policy Research Institute (IFPRI) and the International Center for Research on Women (ICRW). The

fifth section shows how various subsets of questions on individually owned assets can be incorporated with a minimum of effort and cost into existing multi-topic household surveys, using three examples: the 1998-99 Ghana LSMS, the 2000 Guatemala LSMS, and the 1997-98 Vietnam LSMS questionnaires. This analysis shows that it is feasible to add a minimal set of questions to enable calculation of the gender asset gap, but adding a series of extra questions will permit a more satisfactory and nuanced analysis of asset acquisition, use, disposition, and valuation – information that is critical for policies promoting gender equality, poverty reduction and economic growth.

2. The Importance of the Gender Asset Gap for Policies and Programs

Individual level data on assets is obviously essential for specific programs concerned with assets, such as land redistribution or titling programs or those promoting home ownership. But individual level data on asset ownership by gender can illuminate a number of key development policy issues including the empowerment of women, poverty reduction, social protection, and the promotion of pro-poor economic growth.

Gender inequality has traditionally been measured in terms of gaps in men's and women's opportunities and outcomes. Considerable attention has been given in the literature, for example, to the gaps in men's and women's educational opportunities and schooling outcomes, to gender gaps in mortality and morbidity, to the gender wage gap, and to gaps in women's political participation and representation. Indeed, the UN and other multilateral agencies use several of these indicators for tracking progress toward the Millennium Development Goal of gender equality and women's empowerment. Yet, the gender asset gap arguably provides a much firmer basis for understanding gender economic inequality and women's empowerment than just a focus on income or wages and may be a more powerful indictor of progress than others toward MDG3. Besides being a measure of opportunities (i.e., through the ability to generate income or additional wealth) or outcomes (net wealth), ownership of assets is critically important to women's bargaining power and hence their economic empowerment.

Asset ownership influences the "fallback" position of each spouse in negotiations over key household and family decisions and hence the exit options available to each (Quisumbing and Hallman 2006, Doss 1996). A number of surveys from South Asia found that women who owned land had greater say in household decision-making than women without land (Mason 1998, Allendorf 2007, Agarwal 1998, 2002a). In Colombia, Friedemann-Sanchez (2006) found that women use property and social assets to negotiate for the right to work, control their own income, move freely, and live without spousal violence.

The recognition of the gender asset gap as a critical indicator of women's empowerment has influenced several recent policy initiatives. The UN Millennium Project Task Force on Gender Equality and Women's Empowerment (Grown et al. 2005) recommends that countries and international aid agencies use a measure of the gender asset gap, such as the incidence of asset ownership by men or women, as an indicator of progress toward MDG3.[1] At a minimum, having information on the magnitude of the gender asset gap (whether measured as the incidence of asset ownership by men or women or the gap in their net worth) will help policymakers assess the extent to which MDG3 is being met, as well as provide a more precise indication of the

distribution of the gender asset gap both globally and in specific countries. However, to understand progress toward women's empowerment, it will also be important to complement information on the incidence of individual asset ownership with information on decision-making in key domains, including consumption, savings, investment and production.

Beyond empowering women, productive assets play an important role in reducing poverty. A key element in poverty reduction is strengthening the ability of households and individuals to respond to aggregate shocks, such as droughts or floods, as well as idiosyncratic shocks, such as illness or divorce. The possession of assets helps households and individuals to cope with vulnerability and avoid impoverishment (Hulme and McKay 2005; Hulme and Shepherd 2003). The absence of effective public social protection programs that is characteristic of low and even middle-income countries puts a premium on assets that can be converted to cash (Hulme and Shepherd 2003). When people have more assets, they experience less vulnerability and insecurity in the face of risks; conversely, the more assets are eroded, the greater is people's vulnerability (Moser 2007).

Governments and NGOs frequently intervene in moments of crises to help households cope with economic shocks. In considering how to protect assets, such as livestock in a drought, individual level information would be important to ensure that programs and policies protect the assets of both women and men. As will be discussed below, men and women often own different types of assets, and it is important to understand which assets are sold first in response to economic shocks, how decisions are made about which assets to sell, and how such distress sales affect both intrahousehold dynamics and household and individual production capability in the long run.

Shocks at the individual or household level, such as the illness of a household member or loss of employment, also often result in asset sales. For women, one of the most important sources of economic vulnerability is the threat of divorce or the death of her husband. Indeed, household dissolution – whether due to divorce, separation, or death – is increasingly common. In many countries, widowhood and divorce are associated with female poverty (Dreze and Srinivasan 1997; D'Souza 2000, Fuwa 2000). The rise of HIV/AIDS, coupled with limited economic opportunities, puts many widows and their children at risk of destitution (Alibur and Walker 2006; Drimie 2002; Muchunguzi 2002). To the extent that assets provide economic security and a safety net, it is important to understand how property is distributed upon household dissolution and which individual members are better positioned to cope with the changes in household status. Furthermore, to understand the vulnerability of women, and thus to be able to develop social protection policies for them, it is critical to know what assets belong to them individually.

Until recently, most analysis of poverty and social well-being focused on households. However, individual level information is critical for understanding individual welfare and well-being. A burgeoning literature shows that household welfare is not equivalent to the welfare of the individuals within it (Haddad and Kanbur 1990, Haddad, Hoddinott, and Alderman 1997, Duflo and Udry 2004, Sen 1990, and Folbre 1997). Simply collecting information on total household assets and dividing the total by the number of adults in the household presumes that each individual has equal access to household wealth and will benefit equitably from the fruits of that wealth. And it implicitly assumes that the ownership and control over assets within the

household will not affect decision-making and outcomes. As numerous studies have shown, this is clearly not the case.

A large body of evidence shows that men and women use income in different ways (Haddad et al. 1997; Lundberg et al. 1997), and a growing body of evidence suggests that men and women also use wealth in different ways. A few studies have shown that household expenditures differ depending on the assets brought to marriage by each spouse (Fafchamps and Quisumbing 2005; Quisumbing and Maluccio 2003) and that the current asset distribution by sex affects household expenditure patterns on food, health, education and household services (Thomas 1999; Katz and Chamorro 2003; Doss 2006a; Quisumbing et al. 2004). Women's asset ownership may increase the anthropometric status of children (Duflo 2000), the incidence of prenatal care (Beegle et al. 2001), and children's schooling (Katz and Chamorro 2003; Doss 2006b); it may also reduce domestic violence (ICRW 2006; Panda and Agarwal 2005; Friedemann-Sánchez 2006, Srinivasan and Bedi 2007). Because of these social welfare effects, it is important to have individual level information on assets in order to help policymakers find ways to assist women's acquisition of and control over key assets.

Most economists agree that economic growth is key to poverty reduction, and there is currently discussion in the literature for how to make growth pro-poor. It has been shown that an unequal distribution of assets, especially land, can hinder economic growth (Deininger and Squire 1996). Birdsall and Londono (1997: 23) conclude that a better distribution of assets to include the poor would not only increase their incomes, but would increase aggregate growth. Although the authors do not consider the gender dimensions of this relationship, feminist researchers contend that assets in the hands of women may also increase aggregate growth (Agarwal 1994).

Finally, in most modern legal systems property rights are granted to individuals, not to households. Legal marital regimes, inheritance laws, and customs and social norms all define property rights between spouses. Analyses of "household wealth" ignore the fundamental institutional issues governing individual property rights. Individual level information is important for reform of key laws that underpin social institutions, including divorce, inheritance, and family law more broadly.

3. The Current State of Knowledge

3.1. Evidence on the Gender Asset Gap

Assets are "stocks of financial, human, natural or social resources that can be acquired, developed, improved and transferred across generations. They generate flows, as well as additional stock" (The Ford Foundation 2002: 4). The framework we use here encompasses only physical and financial assets.[2] We focus on these assets because they can be used for productive purposes or because they represent a store of value that can be turned into cash when needed. That is, they constitute the conventional measure of wealth and form the basis for most estimates of the national distribution of wealth. Throughout the paper we divide these assets into six categories for purposes of exposition: land; livestock; housing; non-farm business assets; financial assets (savings, pensions, stocks and bonds); and other physical assets such as consumer durables (stoves, refrigerators, furniture, televisions, radios, etc.), farm equipment,

vehicles (cars, bicycles, trucks), real estate, and culturally specific valued items such as jewelry or cloth.

Land, housing, business enterprises, and financial assets can be used to generate income and wealth. Some consumer durables can also be used to generate income, especially for women, which is why it is important to collect information on them as well. A refrigerator, for instance, may be used to chill water for sale and cooking pots may be used to make food items for sale. Financial assets, investments in real estate and, in certain circumstances, jewelry or cloth are important stores of value and can be converted into cash in times of emergency or crisis. The type of productive assets that men and women own varies both across time and across countries, depending on gendered social norms and the legal framework (discussed below).

Very few studies collect information on the full set of physical and financial assets. The few that collect data on assets at the individual level usually focus on a limited number of assets, rather than the full range of material and financial assets listed above. Few studies examine whether assets are owned individually or jointly, how assets were acquired, what is their current value, and the rights that individuals have over each type of asset. Yet, all of this information is important for policies to reduce poverty, provide social safety nets, and improve individual well-being. The available information on the magnitude of the gender asset gap for each type of asset is summarized below.

Housing. Although a house may be the most important asset in urban and peri-urban areas, little work has been done on the gendered patterns of home ownership within and across countries[3]. Rarely do surveys ask which household member(s) own the dwelling and/or who has title to the house.[4] Analysis of LSMS surveys for Nicaragua, Panama and Paraguay that do ask these questions indicate that rates of homeownership are quite high nationally, with slightly over three-quarter's of households owning their own homes. In Nicaragua in 2001, 47.1 percent of the homeowners were women and 52.9 percent were men (Authors' calculations, ENMV Nicaragua 2001). The questionnaires for Panama and Paraguay asked the ownership question only of those households that had a formal document (57.6 percent and 51.5 percent of the total homeowners, respectively). Of those who were titled homeowners, in Panama 50.2 percent were women and 49.8 percent were men. In contrast, in Paraguay, only 35.2 of the titled homeowners were women while 64.8 percent were men (Authors' calculations, ENV, Panama 2003; MECOVI, Paraguay 2000-01). In all three countries women constituted a larger share of homeowners in urban as opposed to rural areas. These Latin American data suggest the wide regional disparity that may exist in the gender asset gap. Unfortunately, none of these data sets allow the gender asset gap to be measured in terms of differences in the value of the homes owned by men and women (e.g., the gender wealth gap).

A 2004 survey by ICRW in two Indian states found that of 402 women surveyed in Kerala, about 36 percent owned immovable property; of these, 16 percent owned a house only, 5 percent owned land only, and 15 percent owned both house and land; in West Bengal, of 450 women surveyed, 35 percent owned property and, of these, nearly 47 percent owned a house only, 36 percent owned land only, and 9 percent owned both. Among the 450 women surveyed from three sites in Sri Lanka, 30 percent reporting owning some form of property; of these, nearly 54 percent owned a house only, 32 percent owned land only, and 13 percent owned both. In all of

these case studies, women were more likely to own a house than to own land. This survey suggests the importance of inquiring separately into the ownership of the home and the plot of land upon which it sits, in addition to agricultural land.

Land Ownership. Most data on asset distribution by sex in developing countries refers mainly to land, which is not surprising since in developing countries land is the most important component of wealth, especially in rural areas. Generally, women are less likely to own land than men and women's plots are likely to be smaller and of poorer quality than men's.[5]

Research in Latin America shows that the gender asset gap in land is substantial. In the various national rural household surveys undertaken in the early 2000s, the share of landowners who are female ranged from only 11 percent (Brazil) to a high of 27 percent (Paraguay) (Deere and León 2003).[6] Women are not only less likely to own land than men, but female landowners tend to own less land than men.

The data on land ownership in Africa is more difficult to interpret, since much land in Africa is held collectively and/or is untitled.[7] In Southern and Eastern Africa, for example, the amount of rural land that is privately owned ranges from five percent in Lesotho to 67.5 percent in South Africa (Walker 2003). The categories of private, communal, and state-owned land include a range of overlapping rights to land that adds layers of complexity to any analysis of land "ownership."[8] Nonetheless, the data suggest a sizeable gender gap in land ownership in Africa. In Uganda only seven percent of women own land themselves (Rugadya et al. 2005). In Cameroon, where women do more than 75 percent of the agricultural work, it is estimated that women hold fewer than 10 percent of land certificates (Mason and Carlsson 2004). Doss (2006b) found that women owned land in only 10 percent of Ghanaian households while men owned land in 16-23 percent, depending on the year of the survey. A UNICEF/IFPRI/UDS (2001) survey of households in Savelugu and Nanton Districts in Ghana found that among households with farms, men's land ownership was far greater than women's: in 72.3 percent of households, men individually owned a farm while women only individually owned a farm in 47.7 percent of households. An FAO study (1997) found that for a number of countries, women were less likely to have any landholdings and when they did have land, the mean value of men's holdings was almost three times the mean value of women's holdings.

Far less data exist on the gender asset gap in land in Asia. A 2001 household survey in Pakistan found that women owned less than 3 percent of the plots, even though 67 percent of the sampled villages reported that women had a right to inherit land (Mason and Carlsson 2004).[9] According to the 2001 Population Census in Nepal, only about 11 percent of women own land and among those, around 90 percent own less than one acre (Malla 2000).

Livestock. Livestock everywhere are an important source of income and means of wealth accumulation. A general pattern is for men to own large livestock and particularly, work animals, while women own smaller livestock and yard animals. In Nicaragua, for instance, in 73 percent of the households the cattle was owned by men, in 13.5 percent by women, and in only 13.7 percent were they jointly owned. Men were even more likely to own the household's other work animals, such as horses, donkeys and mules. In most households women owned the pigs

and poultry (Authors' calculations, ENMV, Nicaragua 2001). Limited data makes it difficult to report on the incidence of livestock ownership by sex for most countries.

Non-Farm Business Assets. Business assets usually provide a stream of income, which provides security to the owners. Micro-finance programs throughout the world have focused on increasing women's access to business capital, so that they can purchase business assets. Not withstanding the large amount of research internationally on micro-enterprises and the informal sector businesses, little of this research has focused on whether there is a gender gap in business assets. In Ghana, Doss (2006b) found that although women are more likely than men to own business assets, the mean value of business assets owned by men is much higher than that owned by women.

Recent data for Central America show contrasting patterns. In Nicaragua it was more likely that the household business was owned by women (in 55.5 percent of the households with businesses) than men (43.6 percent) or jointly (0.9 percent). In contrast, in Panama, it was more likely that the household business was owned and/or managed by men (59.2) than by women (29.7 percent); in 11.1 percent of the households both men and women had businesses. This latter survey did not allow for the possibility of joint ownership of the business (Authors' calculations, ENMV Nicaragua 2001 and ENV Panama 2003). It would be important to further analyze such data to discern the differences in the type of businesses owned and specific assets controlled as well as the value of businesses by gender.

Other Physical Assets. Men and women often own different assets, related to either gender-specific income generating activities or gender-differentiated means of displaying status and storing wealth. With respect to transport vehicles, an analysis of data from a UNICEF/IFPRI, UDS (2001) survey in Savelugu and Nanton Districts in Ghana shows that men are far more likely than women to own bicycles, cars, motorcycles or canoes. For example, 72 percent of men owned a bicycle compared to 0.7 percent of women. Women, by contrast, are far more likely to own bowls and *makolles*, means of production for their own income-generating activities.

Antonopoulos and Floro's (2005) analysis of survey data on low-income married couples in Bangkok, Thailand, revealed that, whereas men were more likely to own transport vehicles, women were more likely to own jewelry, an important and relatively liquid means of wealth accumulation in Asia. Little empirical information is available to calculate the gender gap in consumer durables, vehicles or culturally specific assets such as jewelry or cloth at a national level.

Financial Assets. Relatively little is known about gendered patterns of financial asset accumulation in developing countries. Antonopoulos and Floro's study (2005) of low-income households in Bangkok found that a higher proportion of women than men owned individual financial assets but the mean value reported was similar. Using LSMS data from Ghana for 1998-99, Doss (2006b) found that among households with savings, more men than women had formal savings accounts (19 percent compared to 12 percent).

Changes in the composition of wealth in the course of economic development may have important gender implications. In the US and UK, an important factor in facilitating women's ownership of assets in the late nineteenth and twentieth centuries was the transition from land and real estate as the primary form of asset accumulation to financial assets as the main means of wealth holding (Keister 2000, Shammas et al. 1987).

For developed countries there is more research on the gender gap in pensions than on the gender gap in other types of assets, primarily because pensions are almost always owned individually, even if a spouse may have some claim to it.[10] In developed countries, pensions are employer-provided. Men are more likely to hold jobs that provide access to pensions; among those with pensions, average pensions are larger for men than for women. In developing countries, government employment is often the primary source of pensions, but little research has been done on gender outcomes. Internationally, state pensions that are not based on earnings may be more gender equitable than other forms.[11]

3.2. The Context for Asset Ownership: The Legal Framework

National constitutions, civil codes and legislation shape the policy context of women's *de jure* property rights. While most countries no longer deny women ownership rights over assets, many national laws are still inconsistent with international legal frameworks, including the Convention for the Elimination of all Forms of Discrimination Against Women (CEDAW) to which most countries are signatories.[12]

The framework that determines women's property rights – particularly of married women - is the combination of legal marital and inheritance regimes, sometimes referred to as family law. The legal marital regime defines the property rules governing assets acquired prior to or during the marriage. Legal marital regimes can be differentiated as to whether: i) the assets acquired prior to marriage *remain* individually owned or are pooled to form community property during the marriage; ii) the assets acquired during the marriage (through wages, salary, rent, interest, etc.) are in fact joint assets or owned individually by the person generating the income; and iii) the assets inherited during the marriage belong to the individual or the married couple. The right to marital assets extends beyond the marriage and determines what happens to the assets upon the dissolution of the marriage through divorce or the death of a spouse.

Legal marital regimes can be classified into three broad categories: separation of property, full community property, and partial community property. Under the separation of property regime, husbands and wives do not jointly own assets and incomes. Any assets that one spouse brings to the marriage and any income generated and assets accumulated during the marriage remain his or her individual property. When the marriage dissolves, either through divorce or the death of one spouse, there is no property to divide. Each spouse or his or her heirs retains his or her individually owned property.

Under the full community property regime, all assets and income become jointly owned, regardless of when or how they were acquired. Neither spouse owns any individual property. Under the partial community property regime, all assets and income acquired after the marriage are pooled and treated as community or jointly owned property, but the assets acquired prior to

the marriage and those acquired by inheritance (before or during the marriage) are owned individually. Under either the full or partial community property regime, when a marriage dissolves, all community property is divided equally between the spouses or between the surviving spouse and the heirs of the deceased.[13]

Although in many countries, couples may elect which marital regime will prevail, most couples are married under the legal default regime (i.e., that which governs if nothing is declared). Since women tend to inherit less and are less able to acquire assets on their own, they tend to fare better under full and partial community property regimes (Deere and León 2003; Deere and Doss 2006a). These regimes implicitly acknowledge women's contribution to the household, whether through monetary earnings or through unpaid household labor. On the other hand, a woman's individually owned assets are protected under separation of property regimes, and husbands will typically have less legal control over them.

Whereas marital regimes define the ownership of property within a household, inheritance regimes often determine how likely it is women will be able to accumulate assets during their lifetimes as compared to men. Laws on succession in most countries define the rules governing intestate (when there is no will), and provide for testamentary rights. Further, different norms apply depending on one's kinship relation to the deceased, whether a spouse, child, parent, sibling or other relative (and, for intestate, to different degrees of kinship). In order to understand individual well-being following the death of a spouse, it is important to distinguish between the inheritance rights of spouses/widows and those of sons and daughters.

With respect to intestate, the most important piece of information is who is included in the first order of succession (those who automatically inherit the patrimony of the deceased). Those in the second (and third or fourth) order inherit only if none of those in the first (or subsequent) order are deceased. Children tend to be in the first order of succession, but an important differentiating characteristic is whether children of both sexes are treated equally.[14] There is more heterogeneity cross-culturally regarding who else, besides children, are in the first order, particularly whether wives and/or parents are included, and whether all those in the first order of succession receive equal inheritance shares.

The tendency historically has been for spouses to be included in the first order (but with a share not necessarily equal to that of one child) in legal systems characterized by separation of property marital regimes. The tendency over the course of the twentieth century (in concert with the rise of the companionate marriage) particularly after the passage of CEDAW, has been to elevate the position of wives to the first or second from the third or fourth order under intestate.

With respect to wills, legal systems can be further distinguished between those that provide for full versus restricted testamentary freedom. The latter include systems that stipulate "forced" or "necessary" heirs, e.g., those who cannot be disinherited by a will. This restricted portion of an individual's patrimony may range from 50 to 80 percent, with individuals only being able to will freely from 20 to 50 percent of their estate.[15]

As noted above, many countries have reformed their marital and inheritance laws to eliminate explicit gender biases. Around the world, recent constitutions have explicitly prohibited gender-

based discrimination. The most far-reaching reforms are in family law. In the past men were considered to be the legal household heads, but most recent civil codes – especially those in Latin America - now provide for the "dual headed" household, stipulating gender equality in household representation and in the management of community property. As Table 1 shows, in the selected countries reviewed, legal gender equality is generally the mode, although practice is often stubbornly resistant to legal reforms.

Women's property rights are much stronger in Latin America than in other regions, since under the inherited colonial legal system (itself derived from Roman law), women had a juridical personality and could own, inherit and bequeath property. Several Latin American and some African countries also have recently reformed (or are in the process of reforming) their land legislation in support of gender equality. In Latin America, four countries now require the state to title or adjudicate land jointly to couples rather than in the name of the household head, and three countries give priority to female household heads in land titling or adjudication programs, while others have experimented with such measures in specific projects.

There has been a general tendency in Latin America for civil code reform to improve the situation of widows and widowers. In six countries, widows are now in the first order of inheritance under intestate, with a right to an equal share as a child to their spouses' estate. In nine countries, spouses are entitled to a "marital share," which is conditional on either the widow's impoverishment or the relative value of the two spouses' patrimonies; if the deceased husband's patrimony is sufficiently greater than that of the widow (once the communal property has been divided in half), the widow is entitled to up to one-quarter of his estate. Otherwise, she is in the second order of inheritance and inherits from her deceased spouse only if there are no living children. In most countries, the spouse shares the second order with the deceased's parents.

Table 1. Status of Legislation on Women's Rights to Land, Housing, and Other Property in Selected Countries, 2005.

	Latin America			Africa				Asia		
	Chile	**Ecuador**	**Guatemala**	**Ghana**	**Egypt**	**South Africa**	**Uganda**	**India**	**Sri Lanka**	**Vietnam**
Gender-based discrimination is prohibited	S: Yes	S: Yes	S: Yes	S: Yes, with exceptions	S: C: No	S: Yes	S: Yes	S: Yes	S: Yes	S: Yes
Women's equal right to own land and housing	S: Yes	S: Yes	S: Yes	S: Yes C: No	S: No	S: Yes	C: Yes	S: Yes	S: Yes	S: Yes
Gender equality in household representation and management	S: No	S: 1989	S: 1998	S: No C: No	S: No	S: No C: No	S: No C: No	S: No	S: Yes	S: Yes
Land Legislation: Joint titling of land required	No	No (Land titling project only)	Yes	No	No	No	No	No	No	S: No
Land Registration: Priority to female household heads	Yes (Land titling project only)	No	1999 (among refugees only)	No	No	No	No	No	No	Yes (Land titling projects only)
Default marital regime	Partial community property	Partial community property	Partial community property	S: Separation of property C: Husband owns property acquired while married	Separation of property	Full community property	Full community property	Depends on religious / ethnic group.	Depends on religious / ethnic group.[a]	Full community property
Widow's inheritance rights under intestate	Guaranteed 1/4 of spouse's estate	Only a marital share in 1st order; otherwise 2nd order	Only a marital share in 1st order; otherwise 2nd Order	S: Yes	S: Yes	S: Yes in the absence of descendents C: No	S: 1st order	S: 1st order	S: Yes in the absence of descendents	S: 1st order, half
Daughters & sons have equal inheritance rights	Yes	Yes	Yes	S: Yes C: lineage property	S: Yes but unequal Shares	No: Primogeniture	No: Primogeniture	S: Yes	Depends on religious / ethnic group[a]	Yes

Key: S= Statutory Law, C=Customary Law

Note: If a date is indicated, it reflects the year that legislation was passed changing the answer from no to yes.

Sources: Deere and León (2001); Deere (2007); COHRE (2004 and 2006); Benschop (2002); Agarwal (2002b); Ramachandran (2006); Fujita (2006); Rugadya et al. (2005); Tripp (2004)

a. Sri Lanka has four legal systems. The General Law is applicable to population unless covered by one of three personal laws: Kandyan which governs the Kandyan Sinhalese, Thesawalamai, which governs the Tamils, and Muslim, which mostly follow the Hanafi school.

Reform is also underway in other regions. India, for instance, recently passed an amendment to the Hindu Succession Act of 1956, which remedies gender inequalities in the inheritance of agricultural land and joint family property, as well as giving widows rights to inherit the deceased property if they remarry (Agarwal 2006). There are also active efforts in countries in sub-Saharan Africa, including Uganda, Kenya, and Ghana to reform inheritance laws. For instance, in Ghana, the Intestate Succession Law of 1985 stipulated that wives could receive 3/16 share of family farms, with 9/16 going to children, 1/8 to surviving parents, and 1/8 being allocated according to custom (COHRE 2004). This has been interpreted to mean that all wives share the 3/16 of the family farm. The Intestate Succession Act in South Africa, which allows surviving spouses to inherit the entire intestate estate if they have no descendents, was amended in 2002 to allow multiple spouses to inherit equal shares. The various provisions of the Act determine the shares of descendents regardless of gender (COHRE 2004).

Another important aspect of the legal framework, but one which has been relatively understudied in general, and in particular with respect to its gender dimensions, is the taxation of assets. The likelihood of whether inheritance versus *intervivos* transfers prevail (and whether sons, daughters or spouses are privileged in wealth transmission), particularly in middle and high income countries, may depend on the relative treatment of inheritance versus gifts in national tax codes.

3.3. Channels of Asset Acquisition

The diversity of legal marital/inheritance frameworks and practice makes generalization difficult, but this section attempts to summarize broadly the channels of asset acquisition across regions. Given the limited empirical information, we focus primarily on the acquisition of land and housing. Men and women acquire these two types of assets in different ways, including through marriage and inheritance. But land and housing can also be obtained through gifts and transfers, purchased in the market with savings or credit, or transferred by the state through land reform or housing programs, resettlement schemes for displaced people and antipoverty programs. Research shows that these channels of land ownership may each have gender biases; for example, in Latin America there is male preference in inheritance, male privilege in marriage, gender inequality in the land market, and male bias in state programs of land distribution (Deere and León 2001).

Marriage. One of the most important channels through which women in many countries acquire assets is through marriage. In Sub-Saharan Africa, marriage is the most common way for women to gain access to land, and their rights to land may be either use rights or permanent rights. In other regions, such as Latin America, other channels appear more important for women's asset acquisition, although much research remains to be done on asset accumulation through marriage.

Inheritance. Inheritance is the most important channel of land acquisition for women in both Latin America and South Asia. In Latin America women become landowners mainly through inheritance while men are much more likely to acquire land through purchases in land markets (see Table 2). Although Latin America has the most favorable legal traditions and egalitarian gender inheritance norms of all developing regions, inheritance of land has historically been skewed toward men (Deere and León 2001). Gender gaps in inheritance of land have narrowed

recently, with increasing legal literacy, smaller families, migration of both sons and daughters, fragmentation of land and the growing unprofitability of peasant agriculture.

Table 2. Form of Acquisition of Land Ownership by sex in six Latin American countries (percent)

	Inheritance	Community	State	Market	Other	Total	Sample size
Brazil							
Women	54.2	--	0.6	37.4	7.8	100	4,345
Men	22.0	--	1.0	73.1	3.9	100	34,593
Chile							
Women	84.1	--	1.9	8.1	5.9	100	271
Men	65.4	--	2.7	25.1	6.8	100	411
Ecuador							
Women	42.5	—	5.0	44.9	7.6	100	497
Men	34.5	—	6.5	43.3	15.6	100	1,593
Mexico							
Women	81.1	1.8	5.3	8.1	3.7	100	512
Men	44.7	14.8	19.6	12.0	8.9	100	2,547
Nicaragua							
Women	57.0	—	10.0	33.0	—	100	125
Men	32.0	—	16.0	52.0	—	100	656
Peru							
Women	75.2	1.9	5.2	16.4	1.3	100	310
Men	48.7	6.3	12.4	26.6	6.0	110	1,512
Couples	37.3	1.6	7.7	52.6	0.8	100	247

Note: Distribution by gender is in each case is statistically significant at the 99 percent level of confidence
Source: Deere and León (2003), based on data cited therein.

Land is also primarily acquired through inheritance in South Asia, which in most places is passed through the male line (although there are areas where ancestral property is passed through the female line; see Agarwal 2002a).[16] During the late twentieth century women's organizations teamed up with lawyers and social reformers to advocate for more gender-equitable inheritance laws, but women are still disadvantaged.[17] In India Hindu women's inheritance in tenancy land depends on state-level tenure laws. Most northwestern states specify an order of inheritance that strongly favors men, and these inequalities cannot be challenged on constitutional grounds. Muslim women continue to be disadvantaged in the share of family property they inherit. In Sri Lanka, which has the most favorable inheritance laws in the region, the General Law offers equal inheritance of parental property to women and men, allows for widows to inherit all of the deceased husband's property in the absence of descendants, and gives married women complete rights to acquire and dispose of their individually owned property.[18]

Inheritance practices throughout the Middle East and North Africa region are based largely on *Shari'a* law, which grants wives and daughters the right to inherit and defines the shares that go to them. Generally, upon the death of a husband, widows inherit one quarter of the estate if there are no children and one-eighth if there are children. Among children, males receive twice as much as females. The extent to which these rules are implemented, however, varies widely across countries (COHRE 2006).

Gifts and Transfers. Gifts and transfers take many forms. They may include portions or an advance of an inheritance that is received while the benefactor is still alive. They may be payments in kind for work that has been done; this is especially common in terms of land that is transferred to a family member who has worked it. Gifts and transfers may also be part of ceremonial practices, such as those that take place around the birth or marriage of a child.

Two forms of transfers that may give women some access to assets are dower and dowry. These practices complicate the analysis of the specific property rights associated with inheritance since they overlap with marital and inheritance regimes. Dowry is a payment usually given by the bride's parents to the bride, to the groom, or to the groom's family. If it is given to the bride, it may be an important source of assets for her. Dowry may be treated as part of the daughter's inheritance. Dower is a payment given by the groom or his family to the bride. It may be given at the time of marriage or when the marriage is dissolved. For example, under the separation of property regime in 18th century England, the dower gave a widow the use or income rights over one-third of her husband's real property. Traditional Islamic marriage contracts required the groom to provide his bride a dower at the time of marriage and also included the possibility of a second form of dower, which was to be paid in the event of divorce or widowhood. These various types of dower provide some assets to the woman and justify the separation of property marital regime. Dower and dowry continue to be practiced in South Asia and Africa.

Land markets. Evidence from many parts of the world shows that land markets have been a weaker means of transferring property to women than inheritance. In Latin America, for instance, Deere and León (2003) note that land markets are not gender-neutral; men are more likely than women to participate successfully as buyers. This is undoubtedly related to the different possibilities for men and women to save out of current income, which is itself related to the gender division of labor and unequal labor market opportunities and outcomes.

Evidence from ethnographic work also suggests that due to the gender division of labor (where women are not considered to be agriculturalists) discrimination against women in land markets is prevalent in many parts of Latin America. Deere (1990) found that in hacienda land sales in Peru in the 1950s and 1960s, women tended to buy smaller parcels and to pay higher prices than men for land of similar size and quality, reflecting women's lower bargaining power. Some landowners refused outright to sell to women. Moreover, inequalities in labor and credit markets also produce gender-biased disparities in land markets. The case studies profiled in Deere and León (2001) demonstrate that explicit, well-enforced public policies are needed to help women participate effectively in land markets.

Women potentially could gain from land sales through the market. Agarwal (2002a) describes how, in parts of South Asia, groups of landless women have used subsidized credit provided by the government to lease or purchase land in groups and cultivate it jointly. Through such collective ventures, and with external financial support, land markets could become an important supplementary channel through which women acquire land, even if not the primary one. However, this has not yet happened on a large scale.

In Africa, there has been a move towards increased privatization and titling of land. Lastarria-Cornhiel (1997) has found that privatization of land in many countries has resulted in titles being transferred to male "heads" of households, to powerful groups, or to corporate or other entities and that women have lost rights they once had. Women suffer systematic disadvantages in the market because their opportunities to buy land are limited. In some places, however, small elite groups of professional or wealthy women have gained secure freehold ownership rights in land (Walker 2003).

Government-initiated land reforms and resettlement schemes. Although government land redistribution programs provide an opportunity to equalize property rights between men and women, this happens infrequently. In India, Agarwal (2002a: 8) concludes that, "irrespective of the program under which the transfers occur, typically the land is allotted almost exclusively to males, even in communities which traditionally practiced matrilineal inheritance, such as the Garos of northeast India." In Sri Lanka, Agarwal (1994) reports that in the Mahaweli scheme, 86 percent of the land allocated by the government went to men; of the land granted to women, only two independently managed their land. A counter example is provided by Vietnam, which recently piloted a program to re-title land jointly in the names of both husband and wife (Mason and Carlsson 2004).

A survey of couples in Zimbabwe found that 98 percent of resettlement area permits given for farming and grazing land were held by husbands, with only 2 percent held by wives (Ikdahl et al. 2005). Women lose their rights to stay on the resettlement scheme once they are divorced but there is some indication that they are allowed to remain if widowed. In Ethiopia's recent land titling process, in contrast, women have been given access to formal land titles. As of October 2004, there were 721,978 registered land holdings. Of these, nearly 30 percent were registered to women, 33 percent to men, and 39 percent were jointly registered. The remaining land was registered as communal or belonging to an NGO or government organization (Teklu 2005).

In Latin America the major land reforms of the 1950 to 1990 period failed to address women's land rights. The share of female beneficiaries rarely exceeded eleven percent. Hence, as Table 2 shows, of current landowners, men are more likely than women to have received land via state redistribution of land. Although most agrarian reform laws were gender neutral, the legal beneficiaries were household heads, defined culturally as the husband. In the reforms of land legislation in the 1980s and 1990s, this situation began to change, as a number of countries began giving priority to female households heads as a form of affirmative action to make up for past discrimination or requiring that land distributed or titled by the state be adjudicated and/or titled in the name of the couple (see Table 1). As a result, in some countries (Colombia and Nicaragua) the share of women beneficiaries of such efforts resulted in their constituting over one-third of the total beneficiaries (Deere and León 2001).

4. Best Practices in Collecting Data on Assets

This section reviews the 'state of the art' with respect to data collection on assets in recent household surveys. We first discuss data collection on assets at the household level in the Living Standard Measurement Study surveys (LSMS). We then turn to our primary concern, the collection of data on assets at the individual level, reviewing the LSMS as well as other

household questionnaires from a variety of sources to discern the best practices. To understand gendered patterns of asset ownership, it is important to know both the incidence of asset ownership (the proportion of men and women who own a particular asset) and the relative value of the assets owned by men and women. Both incidence and values provide measures of the degree of gender inequality in a given context. Incidence, as a measure of the likelihood of ownership, best captures gender roles and what is considered culturally appropriate for women to own in a given context. However, the relative value of assets owned by men and women is a stronger measure of gender disparities in opportunities and outcomes, and therefore perhaps a more telling indicator of women's economic power in a given context.

4.1. Collecting Asset Data at the Household Level

The LSMS have been developed and promoted by the World Bank worldwide. These multi-purpose questionnaires generally include modules on income and expenditure, and often also include questions regarding asset ownership at the household level. Indeed, they have been used by researchers to estimate the distribution of wealth at the national level in many developing countries (Davies et al. 2006).

For the purposes of this overview, we reviewed some 72 LSMS and quasi-LSMS household questionnaires utilized in Latin America and the Caribbean, Asia and the Pacific, sub-Saharan Africa, the Middle East and North Africa, and Europe and Central Asia.[19] As Table 3 shows, most of these LSMS questionnaires collect data on the incidence of ownership of consumer durables (including vehicles), housing, land and livestock. Fewer collect data on the ownership of farm equipment, non-agricultural business assets, and savings.

Of the various asset categories, data on financial assets is the most incomplete. While 56 percent of the surveys in our sample collected information on savings, relatively few collect household data on ownership of financial instruments such as stocks and bonds. Most (88 percent) collect data on whether an individual in the household received pension income during the previous month or year, but the data on pension income does not tell us much about the incidence and value of pension wealth. For example, the different types and sources of pension income are rarely delineated, so it is difficult to differentiate pension income streams from contributory schemes and those from a government entitlement. In addition, while one may be able to calculate the incidence of pension income among those who have retired, no information is provided on those who are still working, contributing to a pension, and accumulating pension assets.

Similarly, the data on rent, interest, and/or dividends tells us about incidence only if a stream of income is currently generated from the relevant asset; such income data does not provide much insight into its value. And this data is not always in a form that is sufficiently disaggregated to allow the researcher to easily tie it to household ownership of a given asset.

Table 3 suggests some regional differences in the coverage of household asset data in the LSMS. The questionnaires examined for Latin America and the Caribbean, which represent just over half of our sample, tend to do a poorer job in soliciting data on household ownership of land, livestock and businesses assets than those utilized in other regions of the world.[20]

With respect to the valuation of assets, more information is available on the incidence of asset ownership at the household level than on the value of the household's assets. Even within the LSMS questionnaires, a number of different approaches are used, which makes it difficult to compare information collected from different surveys.

Table 3: Incidence of Questions on Assets, Household Level – LSMS questionnaires

Asset	Latin America & the Caribbean		sub-Saharan Africa		Asia & The Pacific		Europe & Central Asia		Middle East & North America		Total	
	#	% of total	#	% of total	#	% of total	#	% of total	#	% of total	#	% of total
Land	26	68%	10	100%	7	88%	13	100%	3	100%	59	82%
Livestock	25	66%	9	90%	8	100%	13	100%	3	100%	58	81%
Housing	36	95%	10	100%	8	100%	13	100%	2	67%	69	96%
Business												
-Farm Equip.	18	47%	7	70%	7	88%	11	85%	3	100%	46	64%
-Non-Agric.	11	29%	8	80%	4	50%	10	77%	3	100%	36	50%
Financial												
-Savings	19	50%	9	90%	5	63%	7	54%	1	33%	41	57%
-Stocks	11	29%	2	20%	2	25%	3	23%	0		18	25%
-Pension income	36	95%	8	80%	6	75%	10	77%	3	100%	63	88%
-Rent, interest & Dividends	38	100%	7	70%	5	63%	11	85%	3	100%	64	89%
Other Physical												
-Consumer durables	38	100%	9	90%	8	100%	13	100%	3	100%	71	99%
-Vehicles	35	92%	8	80%	8	100%	13	100%	3	100%	67	93%
-Other (real estate, jewelry)	24	63%	7	70%	7	88%	12	92%	3	100%	53	74%
Total	38	100%	10	100%	8	100%	13	100%	3	100%	72	100%

Sources: Authors' calculations based on surveys reported in references for Tables A1-A2. Latin America & Caribbean includes LSMS and quasi-LSMS household surveys.

Only some questionnaires ask the reservation price-- the price at which that asset could be sold, given its current state of use, disrepair or improvement. Others ask the potential replacement price if a similar asset were to be purchased today. Some questionnaires ask both questions. The worst-case scenario is where the respondent is allowed to choose which method to use, but which method was chosen is not identified. Another problem is that sometimes the actual purchase price and the hypothetical replacement price are asked in the same column, conflating figures related to two different time periods; moreover, the year of the purchase of the asset is not always included. We can only speculate on whether asking the potential reservation versus replacement price would be the most accurate approach (although we favor the reservation price); surely these hypotheticals are culturally sensitive questions.

The standard practice of most surveys is to value assets at the prevailing average market value for a given region. This practice, however, has its pitfalls since it is difficult to take into account the quality of the asset in any but the most general terms (e.g., irrigated versus non-irrigated land). Hence, the need to fall back on the interviewee's estimated reservation price or potential replacement price to take into account land quality and improvements or an accurate rendering of the value of a household's animal stock or farm equipment. The worse practice, from our point of view, is asking a respondent what the average value of a given asset might be without any referent.[21]

Many of the LSMS questionnaires also collect market data on assets bought or sold within the past twelve months. While important, this only provides data on a limited subset of assets owned by the household. Some surveys collect data on the monthly rental income from assets such as land, work animals, farm equipment or housing; many also ask for how much one could rent an asset or have to pay in rent, such as for housing. This information is potentially useful for calculating the incidence of asset ownership, but is of limited value in estimating wealth.

Relatively few of the LSMS questionnaires reviewed here asked the reservation or potential replacement price of the household's dwelling. It was more common to ask the value of the monthly mortgage payment, which is also not a very good measure of housing wealth, particularly if not accompanied by the original purchase price, year of purchase, and length of mortgage. The inconsistencies characterizing the current valuation of assets at the household level make it difficult to use this data to estimate national or global distributions of wealth.

A major challenge in the collection of asset data is distinguishing between use rights versus ownership rights, particularly where property rights are complex. Collecting information on land ownership is particularly challenging, since as noted earlier, land tenure systems vary tremendously across countries and even within countries. What it means to "own" a plot of land, or a house, depends on the specific context. Land questions should, therefore, be context specific. Nonetheless, it is important to understand the claims that individuals and households have over the land and how secure these rights are. Thus, questions should include information on whether the land is owned, whether it is titled, and what rights the owner has over the land. A few LSMS questionnaires do this at the household level. For example, the 1998-99 Ghana questionnaire asks whether the land is titled and whether the owner can sell and/or use the land for security or collateral, which allows an analyst to test how the different forms of land tenure impact outcomes.

Valuation of land sometimes presents another challenge. Beyond the inconsistencies noted above, several of the surveys from Africa ask whether or not the land can be sold and then ask the value of the land, but only if it can be sold. This poses challenges for valuing land that is owned, but cannot be sold. In these cases, collecting data on the potential rental value of land allows land values to be estimated indirectly.

Another challenge is differentiating ownership rights between the land and house. In some places, particularly in urban areas, the house and the land on which it sits may be owned separately. The surveys for Guyana (1999), Haiti (2001) and Jamaica (2001) ask about ownership of the house and housing plot separately, although most surveys do not.

4.2. Best Practices in Collecting Asset Ownership Data at the Individual Level

In this section we examine the incidence of questions on individual asset ownership with attention to how this information is elicited. We complement the review of the LSMS questionnaires with a review of household surveys undertaken by the International Food Policy Research Institute (IFPRI), the International Center for Research on Women (ICRW), ORC-Macro, and other institutions. Data on the LSMS questionnaires is summarized in Table 4 below and Appendix Tables A2-A3. Appendix Table A4 presents data on the IFPRI surveys, Table A5 presents data on ICRW surveys, and Table A6 presents data on surveys implemented by other institutions. This discussion is organized by asset category, followed by a review of other variables that are important for a gender analysis of asset ownership and control.

While most LSMS questionnaires collect information on at least some household assets, as Table 4 shows far fewer collect information on asset ownership at the individual level.[22] Nonetheless some progress has been made, particularly in Latin America, with respect to soliciting data at the individual level on land and housing ownership. These cases demonstrate that at least it is possible to collect individual level information.

Table 4: Incidence of Questions on Assets, Individual Level – LSMS questionnaires

Asset	Latin America & the Caribbean		sub-Saharan Africa		Asia & the Pacific		Europe & Central Asia		Middle East & North America		Total	
	#	% of total	#	% of total	#	% of total	#	% of total	#	% of total	#	% of total
Land	7	18%	2	20%	1	13%	1	8%	1	33%	12	17%
Livestock	3	8%	0		1	13%	0		0		4	6%
Housing	10	26%	0		3	36%	2	15%	0		15	21%
Business												
-Non-Agric.	3	8%	3	43%	1	13%	3	23%	0		10	14%
-Farm Equip.	1	3%	0		0		0		0		1	1%
Financial												
-Savings	0		1	14%	0		0		0		1	1%
Other Physical												
-Consumer durables	2	5%	0		0		0		0		2	3%
-Other (real estate, jewelry)	0		0		1	13%	0		0		1	1%
Total	38	100%	7	100%	8	100%	13	100%	3	100%	72	100%

Sources: See Table A2 for countries included. Authors' calculations based on surveys reported in references.

Land. A gender analysis requires individual-level data on land access, ownership, titling and management at the plot level and by sex. We need to know who owns the land and whose name is actually on the title. In addition, to understand the full impact of ownership, it is important to know who manages the plots of land as ownership and management may differ. None of the LSMS questionnaires reviewed here captures all of this information at the individual level.

Moreover, many do not distinguish access from ownership, although both are important. And, many questionnaires collect other details on the land that is farmed, rather than the land that is owned, thus providing useful information on agricultural practices but less on asset ownership.

Only 17 percent of the LSMS questionnaires that we reviewed asked questions regarding individual ownership of land (Table 4), while 82 percent did so at the household level (Table 3). The best practice is those questionnaires that solicit information at the individual level by plot, allowing for more than one owner (such as the 1993 Tanzania questionnaire). Several of the questionnaires that elicit data on individual and joint ownership limit this question to those who have a document or a land title, such as the LSMS employed in Nicaragua and Honduras (see Table A3). By phrasing the ownership question in terms of "in whose name is the title document," these questionnaires are inefficient, not collecting land ownership data by sex for untitled land or for which there is no formal document.[23] Another problem is that some of these questionnaires, such as for Nicaragua (1998) only elicit information for one potential owner, thus obscuring the possibility of joint ownership by spouses.

Moreover, while in most of these cases data on titled land are collected at the plot level (and reported as individual or jointly owned), for Paraguay (2000-01) they are only available at the farm enterprise level. This means that in the Paraguayan case one cannot distinguish if the farm is owned jointly in its entirety, or consists of multiple parcels owned by different individuals.[24] Collecting data at the level of the farm enterprise rather than by plot also precludes the construction of a dependent variable for women's ownership of land as a share of total household land owned.[25]

Only seven of the LSMS questionnaires reviewed here investigate who manages the plot. Where asked, it is in terms of who is the most knowledgeable or manages the plot. Rarely are specific questions asked about decision-making (Table A2). One exception is Ghana (1991-92), which asks, "Who decides what crops to grow? Who decides what purchased inputs to use? And, who kept the revenue from sales of the produce?" The Afghanistan (2007) survey asks, "If any of the land is to be sold, who in your household makes the decision?" and contains response codes for the woman herself, the head of the household deciding alone, the head deciding in consultation with the spouse or woman concerned, and other combinations of decision-makers. The survey from Cote d'Ivoire (1988) asks one question about decision-making, whether individual household members can sell land, but does not ask any individual ownership or other questions to enable researchers to interpret the answers.

The implicit assumption in most surveys is that ownership is equivalent to management (which is not always the case), or that irrespective of individual plot ownership, the household head manages the land. In other words, that which needs to be investigated in a gender analysis is assumed away. Only a handful of questionnaires, Ghana (1991-92), Honduras (2004) and Nicaragua (1998, 2001, and 2005) collect individual data on *both* plot ownership and management, allowing this relationship to be investigated by gender (see Table A2). The results from the Nicaragua 2001 survey are instructive. Although women are the sole landowner in 16.3 percent of the households, they are considered to be the most knowledgeable person about its agricultural activities in only 8.3 percent of these households and they make the agricultural decisions in only 8.5 percent these households (authors' calculations, ENVI Nicaragua 2001).

The IFPRI questionnaires for Bangladesh, Ghana, the Philippines, and Sumatra, as well as the KIDS survey from South Africa[26] investigate who owns each plot of land by sex (Table A4). However, they do not inquire whether the land is jointly owned. Neither are they concerned with whose names are on the titles for the individual plots, since they only ask whether the household has a title to each plot. Information is thus lost on whether men or women are more likely to have a title to their plot of land and thus secure access. These surveys also gave little attention to farm management by gender.

The best practice is that followed in the ICRW questionnaires where individual and joint ownership by sex was investigated at the plot level (Sri Lanka, Kerala, and West Bengal) (Table A5). Moreover, some of these surveys elicited information on the meaning of ownership rights, asking questions, for example, about the rights of use and disposition of the plot, as well as on how land was acquired at the individual level (Kerala, West Bengal). However, ICRW did not gather information on either titling or plot management. In addition, a major limitation is that this survey was administered only to women and thus yields no information that can be used to calculate the gender asset gap.

Livestock. Of the LSMS reviewed here, only three collect individual ownership data on farm animals (see Table A2), with most treating all livestock as the presumed property of the "household," or its head rather than of the individuals within it. Again, a gender analysis requires data on who owns and manages livestock at the individual level, but none of the LSMS provide both pieces of data. The Mexico (2002) and Ghana (2005-06, 1998-98) questionnaires are the only ones that solicit individual level data on the management of livestock, but fail to ask about who owns the various animals. Afghanistan (2007) asks who decides to sell the livestock, giving the same response options as for sales of land, but does not ask about ownership of the animals.

The IFPRI questionnaires for Bangladesh, Ethiopia and the Philippines also collected ownership data by individuals for each type of livestock (Table A4), but failed to collect management data as well, with the implicit assumption that those who own the animals also manage them. The survey data collected through the USAID PARIMA project, which specifically examines pastoralist households, also asks individual level questions on livestock ownership (Table A6). The surveyors interviewed the household head about all of the livestock owned by anyone within the household. They then interviewed the

wife (or a randomly selected wife in polygamous households) and one randomly selected other adult member of the household about their own animals. Thus, this survey collected both household and individual level ownership data on a subset of household members.

Housing. Similar to land, information on who owns the house, whether it is individually or jointly owned, whether it is titled and to whom, and what the ownership rights over the house consist of is important for gender equality, poverty reduction, and social protection policies. Yet, only 21 percent of the LSMS questionnaires that we reviewed asked questions regarding individual ownership of housing (Table 4), while 96 percent did so at the household level (Table 3).

Of the LSMS questionnaires, those for Nicaragua (various years) represent the best practice, inquiring as to individual and joint ownership of housing. The surveys for Panama (1997; 2003), Paraguay (2000-01) and Argentina (2001), among others, lose information, since they ask the ownership question only if someone has a title for the house (Table A3). The Uzbekistan (2005) and Bosnia-Herzegovina (2001) questionnaires go one step further, querying who holds title to the house and whether that member can sell the dwelling if she or he wanted to. The Vietnam (1991-92 and 1997-1998) surveys permit the individual ID code to be filled in for the question, "To which member does this dwelling belong?" The 1997-98) survey also includes a set of id codes for joint ownership. Both Vietnam surveys also ask how the dwelling was acquired.

The IFPRI questionnaire for the Philippines and those of the ICRW for Kerala, Sri Lanka, South Africa and West Bengal gather information on housing ownership by individual and joint ownership but do not ask whether those individuals have a title.

Business assets. Business assets could include both farm equipment utilized as part of the agricultural enterprise and assets used in non-agricultural enterprises. They are typically handled separately in the questionnaires. Here we will discuss only non-farm enterprises.

With respect to non-agricultural enterprises, information is needed on both the owner(s) and on the managers of the business. The LSMS questionnaires for Albania (2005), Ghana (1991-92, 1998-99) and Nicaragua (1998; 2001) were the only ones of this genre to solicit information on both of these variables (Table A2). Most unfortunate is where ownership and management are conflated: the Panama (2003) and Ecuador (1998; 1998-99) questionnaires asked, "Who is the owner or manager?" The Peru (2002; 2003) questionnaires asked individuals if they owned a non-agricultural business and the equipment used in the business; it then assumed that this business was managed by that person and asked if it were registered. Others collected information on non-agricultural business assets by either the person responsible for business activities (Ecuador (1998, 1998-99, Bosnia-Herzegovina 2004) or the best-informed person (Kosovo 2000), but not by owner. The South Africa LSMS (1993) collected information on up to three individuals self-employed in non-farm activities and asked the total value of the equipment used to do their jobs.

The KIDS (1998) questionnaire (Table A6) stands out in its coverage of individual and joint ownership of both farm equipment and non-agricultural business assets. However, it failed to solicit information on management of the enterprise. The 2000 Indonesia Family Life Survey (IFLS) (2000) asks specifically which householder owns the business.

None of these surveys ask about the individual level ownership of the business assets. To ascribe any individual level ownership, one would have to assume that the owner of the business is also the owner of the business assets. This may not necessarily be true.

Savings. The LSMS are generally deficient in collecting individual data on financial assets. Yet, this data should be relatively easy to collect. Savings accounts are likely to be held in the name of one individual, although they are also jointly held. But only the Ghana LSMS questionnaire (1998-1999) collected data on individual ownership of bank accounts; other questionnaires sometimes collected flow data, on who in the household made a deposit in the preceding year.

The IFPRI questionnaire for the Philippines represents the best practice, with information on savings accounts collected for both individuals and joint ownership. However, no information was collected on other types of financial assets (such as stocks and bonds) or pensions; perhaps these were not considered relevant to the population being surveyed.

Another form of savings would be through pension systems. Many of the LSMS survey collect individual level data on non-labor income, including income from pensions. But they do not collect data on whether or not an individual has a claim to a pension. There is not any way to determine the value of the pension assets for individuals from the data that is collected. In particular, we have no information on people who are contributing to pensions, but are not receiving income from them at the time of the survey.

Other physical assets. While the great majority of the LSMS questionnaires reviewed asked about household ownership of consumer durables, including vehicles, few collected this data at the individual level. Data on individual ownership of consumer durables was only systematically solicited in Nicaragua and jewelry in Afghanistan.[27]

The best practice is the KIDS questionnaire in South Africa, which collected data for a lengthy list of consumer durables, vehicles and valued items that may serve as a store of wealth (or savings) such as jewelry. They asked which individual owned the assets and included a code for whether or not the asset was jointly owned, although the joint owners were not listed. The Indonesia Family Life Survey questionnaire (2000) asked which householder owned the asset in their section on consumer durables (including vehicles and jewelry.) The IFPRI questionnaire for the Philippines also collected data by individual and joint ownership for consumer durables and vehicles.

The separate women's module in the more recent Demographic and Health Surveys (DHS) includes questions about whether the respondent owns land, the dwelling she lives in, any other dwelling, jewelry, or livestock. It distinguishes between whether she owns

them individually or separately and whether she could sell them with anyone else's permission. It also asks whether she has a savings account, either individually or jointly and whether she operates the account herself, signing checks or withdrawing money. The strength of this module is that it collects information about incidence, decision-making (except for savings), and channels of asset acquisition, but it does not collect information on asset values. Moreover, given its focus on women, the survey cannot be used to calculate the gender asset gap.

Only one LSMS questionnaire reviewed here, Nicaragua (1998), collected individual level data on the ownership of farm equipment; the Mexican (2002) and Uzbekistan (2005) questionnaires collected data only on decision-making.

4.3 Best Practices: Processes of Asset Accumulation

In addition to data on the six broad categories of assets, a comprehensive analysis of individual net wealth by gender requires information on the processes of asset accumulation. Particularly important is data on credit and debt, and on how and when assets are acquired or lost.

Credit, as used here refers to money loaned out, whereas debt is what is borrowed. While most questionnaires ask about money that household members borrow, few ask about money lent out and who has lent it. It is important to collect data on which individual or individuals incurred the debt and are responsible for repaying it. A good model on the collection of this information at the individual level is provided in the LSMS for Paraguay (2000-01) and the IFPRI questionnaire for Ethiopia. Detailed modules on credit and debt with disaggregated data can also be found in some of the other surveys cited in Table A6.

Few of the LSMS inquire systematically about how assets are acquired. For instance, while several Latin American questionnaires solicit information about access to land at the household level, only Haiti (2001) does so at the individual level. The survey for Tanzania (1993) collects data on land acquisition at both the household and individual level. The LSMS surveys for Afghanistan (2007) and Vietnam (1993, 1997) inquire about the form of individual acquisition of housing. Data on the source of individual assets is important to discern the relative importance of inheritance and other gifting practices at marriage versus individual savings by gender.

Particularly useful for a gender analysis of asset ownership is data on the assets owned by the husband and wife prior to marriage. Good models are provided by the IFPRI questionnaire for Ethiopia and the KIDS questionnaire for South Africa, which collected this data by type of asset and source of acquisition. This data is important for understanding the timing of gender inequalities in asset ownership among spouses--before or after marriage-- and for discerning whether marriage helps women accumulate assets. Questions on asset acquisition need to be complemented by additional information on the prevailing marital regime to understand what might legally happen to the assets women bring to marriage: do they remain her assets, become joint assets of the

couple, or become her husband's property? And if legally such assets remain the property of the wife, to what extent can she manage these independently during the marriage? The IFPRI survey in the Philippines collected data on individual land owned by each spouse at the time of marriage. It also collected useful information on the total land owned by the parents at this time, allowing analysis of whether sons or daughters were favored by early inheritance of land.

The ICRW surveys in West Bengal and Kerala also ask about assets brought to the marriage by wives. For each type of asset, the survey asks whether that asset was acquired before marriage, immediately after marriage, or a few years after marriage. The survey asks a number of specific questions about dowry, including whether the in-laws demanded it, whether it was considered sufficient, and whether the assets/cash brought to the marriage were purchased or earned by the wife herself.

As noted above, several LSMS questionnaires solicit data on how land was acquired, thus providing data on inheritance of land. Others only provide very fragmented information on inheritance, collecting data only on whether the head or spouse inherited land during the year prior to the survey. The IFPRI questionnaires greatly improve on them. The survey for Indonesia collected data on inheritance by individuals for land, housing and livestock. The IFPRI questionnaire for Ghana was innovative in that it collected data on land inheritance by individuals and asked about the rules of inheritance. The KIDS questionnaire for South Africa also collected data on all assets that individuals inherited at any point in time.

Of the other surveys reviewed in Table A6, it is worth noting that those undertaken by the University of Wisconsin and partners in Nicaragua and Honduras collected data (for titled land) on whether land was inherited and from whom at the individual level, as well as on whom has inherited land from them.

The IFPRI questionnaire for Ghana was also innovative in asking which assets individuals retained after the dissolution of a marriage. Several of these IFPRI surveys also delved into the purchase and sale of assets in a dynamic context (Table A4). The questionnaire for the Philippines included questions about who made the decision to dispose of an asset.

Worth mentioning as well is the ICRW questionnaire for Uganda, which explored the significance of property rights for women in terms of their ownership of land, crops, animals and other property. The ICRW questionnaires for Kerala and South Africa also explored decision-making.

4.4. Summary

Of the LSMS questionnaires reviewed here, none provide individual data on all of the six broad asset categories; the Nicaraguan LSMS for 2001 was the most complete. The most progress has been made in the collection of data on individual ownership of housing and land, although the manner of collecting this information remains deficient. Individual

ownership data on savings accounts and consumer durables is not difficult to collect and coverage could be improved greatly with relatively minimal effort. More challenging will be the collection of individual data on livestock and non-agricultural enterprises, which are often activities in which multiple household members participate and where it is more difficult to disentangle individual ownership rights and practices. While difficult, the collection of information on pension wealth in addition to pension income should be prioritized.

Of the other multi-topic household surveys, the KIDS questionnaire and the IFPRI household survey for the Philippines are by far the most complete, collecting individual, and in most cases, joint ownership data for five of the six broad categories of assets (Table A3). The questionnaire for the Philippines stands out for its individual data on livestock; the South Africa KIDS survey, for its data on non-agricultural business assets. It should be noted that even the best practices reviewed herein are generally still insufficient for a detailed gender analysis of asset ownership.

5. Incorporating Individual Level Asset Questions into Existing LSMS Questionnaires

A number of the questions that are needed to both identify the gender asset gap and do gender analysis are already integrated in LSMS questionnaires. Yet, no questionnaire asks consistently about all assets, and most questions on assets do not disaggregate by individual. Instead of adding a separate individual level asset module to a survey, which might result in redundancies, it is possible to incorporate selected questions into existing questionnaires and vastly increase the amount of gender-disaggregated data available for analysis.

We demonstrate how this could be done within three different LSMS questionnaires: the 2000 Guatemala questionnaire, the 1997-98 Vietnam questionnaire and the 1998-99 Ghana questionnaire.[28] It may be useful for readers to reference the actual questionnaires when they read this section.

These examples demonstrate that it is very easy to add some simple questions to identify individual level ownership of many of the assets. Sometimes, just the coding would need to be changed to identify the individual level owner. Other times, an additional question or two is needed. Table 5 shows the minimum information that is needed to add to each questionnaire for determining the gender asset gap. Additional questions would be needed for the more nuanced analyses of acquisition and rights over the assets. None of these three surveys, for example, include questions on extraordinary losses, conflict over assets, marital and inheritance regimes, and knowledge of property rights.

Table 5: Minimum Questions for Multi-Topic Household Surveys

	Tenancy Status	Ownership	Value
Housing (for each dwelling)	Form of tenancy: Owned outright Owned but mortgaged Rented Right of usufruct Other	Who owns this dwelling? ID codes Whose name is on the title? ID codes	For how much could this dwelling be sold day?
Land (for each plot)	Form of tenancy: Owned outright Owned but mortgaged Rented Right of usufruct Other	Who owns the plot? ID codes Whose name is on the title? ID codes	For how much could this plot be sold today?
Livestock (for each type of animal)		Who owns (each group of animals)? ID codes	For how much could you sell a mature animal of this type at current prices?
Non-Farm Business Assets (for each business enterprise)		Who owns this business? ID codes	What is the value of the assets owned by the business if sold today?
Savings (for all savings accounts in a formal or informal institution)		Whose name is on the account? ID codes	What is the current balance in this savings account?
Other Physical Assets (for major consumer durables, agricultural equipment)		Who owns this asset? ID codes	For how much could you sell this asset today?

5.1 Housing

Minimal information needed. The minimal information that is needed for a gender analysis in the housing module is information on tenancy status, individual-level ownership, and the value of the dwelling. These questions can be easily incorporated into existing LSMS surveys.

None of the three questionnaires reviewed ask appropriate individual ownership questions. Yet, in all three it would be very simple to add "who in the household owns the dwelling," leaving space for more than one individual to be listed as a co-owner, or to restructure the question slightly to improve the quality of the information collected (i.e., rather than only coding if the dwelling is owner-operated, specifying by whom).

In the Vietnam survey, information is obtained on the dwelling and then, if a household member owns the whole or part of the dwelling, the respondent is asked which member

owns the dwelling. Because only one ID can be entered, it does not allow for joint ownership by spouses or those in a consensual union. It does ask questions about who else outside of the household may be joint owners, such as parents, grandparents, or siblings, but it does not have information on joint ownership if both people are household members. Thus, we recommend adding space for a second ID to allow recognition of joint ownership by spouses or those in a consensual union.[29]

The Guatemala questionnaire asks if the household holds a document of ownership; if so, it asks which household members' names are on the documents. Thus, it gives individual level data but only if the household has documents. If someone in the household owns the dwelling but no documents are held, it is not possible to determine which household member is the owner, thus losing valuable information. Thus, we recommend simply switching the order of these questions, asking which household member owns the dwelling before the question about documentation of ownership.

The measure of value that is most useful for comparative estimates of wealth across surveys is that of the potential sales value. Of these three questionnaires, only that for Vietnam asks this question.[30] In the Guatemala questionnaire, the valuation question is posited in terms of how much the household would have to pay for rent on a monthly basis for a similar dwelling. The Ghana questionnaire does not ask about the value of the dwelling at all.

The Vietnam questionnaire asks whether anyone in the household has any other dwelling, but does not follow up with any individual level ownership questions. For the valuation of these additional dwellings, it only asks about the money received from renting these. We recommend including a question in all surveys about the individual owner(s) and the value of any additional dwellings.

Beyond the minimum questions. Questions about the sources and timing of acquisition enable researchers to analyze the age and gender patterns of housing acquisition, which can shed light on security of tenure. Such questions may also help identify how policies and institutions can better serve women, for instance, reforming credit policies for home ownership or allocating funds for legal literacy so that women are informed about their marital or inheritance rights. Two of the surveys already ask about acquisition of the dwelling; refinement of these questions could provide more useful data for a gender analysis of housing.[31]

The questions about acquisition of the dwelling in the Vietnam questionnaire focus at the household level. Questions include how the household acquired the dwelling, and if the household built the dwelling, whether the household received any assistance in building it. If the individual owner were identified previously, the acquisition information could be correlated with the gender of the owner. Separating the inheritance response into inheritance from owner's parents and inheritance from owner's spouse's parents would be an easy way to obtain additional information on inheritance patterns.

The Guatemala questionnaire asks whether the dwelling was already constructed, whether the household ordered it built, or whether the household members built it themselves and if so, who was involved in the construction. These questions provide useful information about how housing stock is being developed, but if the question of which household member owned the house were included, we would also be able to determine whether the pathways to housing ownership differ for men and women. In addition, since the survey asks about improvements to the dwelling, knowing the sex of the owner would provide insights into how gender and status of the individual owner affects whether and how improvements are made (with household labor, hired labor, etc.).

Since ownership is a complex concept and may or may not include all of the rights associated with private property, more detailed questions about the specific rights over the dwelling may provide important policy insights. Individuals may claim to own a dwelling for which they do not have a title or deed. And they may have rights over the dwelling without formal ownership rights. Thus, additional questions about the rights over the dwelling provide some insights into the security of tenure. These should include questions as to whether they can sell, bequeath, mortgage, or rent out the dwelling. At the individual level, we would want to know whether the respondent can make this decision individually or whether they have to consult or get permission from someone else. These questions are particularly important when the house is jointly titled; are both people whose names appear on the title involved in these decisions? Having information on the *de facto* rights of individual respondents is as important as having the *de jure* rights to a particular piece of property, which again can strengthen the effectiveness of different types of policies to promote home ownership. None of the questionnaires include these types of questions.

Thus, by adding only a few questions on ownership, value and means of acquisition, a much richer analysis of gender differences in housing can be obtained. Combined with the other data that is currently collected in these LSMS surveys, we could answer important policy questions about how men and women acquire property. In order to answer the more nuanced questions about security of tenure and women's bargaining position within the household, questions on the rights over the dwelling and the rights to the proceeds from sale would need to be added.

5.2. Land

Minimal questions. Forms of land tenure vary widely both across and within countries, making the analysis of land ownership even more complex than for housing. Simply examining the ownership of titled land ignores much of the important information about access to and control over land. Thus, the minimum information that is needed is information about the tenancy status of each plot, the ownership of the plot, and its value.

Because the context for land ownership varies across the three countries examined here, the range of questions on land vary considerably. Neither the Guatemala nor the Vietnam surveys ask about individual plot access or ownership.[32] The Ghana survey asks who the

holder of each plot is and follows up with additional questions, but does not define what it means to be the holder of the plot.[33]

Each of the three surveys begins by asking one person about all of the plots and/or agricultural activities. In the Guatemala questionnaire, the respondent is asked to list up to three plots (farms or lots) that are owned by the household. For each of these owned plots, the respondent is asked a series of questions to determine the quality of the land, including the surface area and how much is under irrigation.

The respondent is asked about how the land was acquired and what property documents are held. But no questions are asked to determine who within the household owns the land. Thus, ownership and acquisition information is only available at the household level. We recommend adding an initial question regarding which household member(s) owns the plot and a question about whose name(s) is on the property document. A second series of questions asks about land that the respondent worked but that was leased or in some other forms of usufruct. An additional question here could ask which individual household member is the leaseholder.

Both the Guatemala and the Ghana questionnaire ask appropriate questions about valuing the plots. In the Guatemala questionnaire, the respondent is asked whether he or she gave any land to someone else to work and, if so, how much was paid in rent. These questions are followed by hypothetical questions, asking how much would be received if the plot was sold today and how much would be received if the plot was leased. The value question in the Ghana LSMS is the one that we recommend: the value if the farm were to be sold now. No questions about land value are asked in the Vietnam survey.

Beyond the minimum questions. Additional questions about how land was acquired provide useful policy information and can be easily incorporated. Some questionnaires asked about how land was acquired, but adding an additional question about when it was acquired (both the date that it was acquired and whether it was acquired before or during the marriage) would be useful in understanding land acquisition patterns and the dynamics of asset accumulation. The information on whether it was obtained before or during marriage sheds light on how different marital regimes affect land ownership by women.

The Ghana survey asks some questions about the acquisition of land. It asks how the plot was obtained; the options include rented, sharecropped, used free of charge, and distributed by village/family. We would recommend making this question more specific by including whether the plot was inherited (and from whom), whether it was a gift/transfer, and whether it was purchased.

It is important for programmatic interventions to disentangle the bundle of rights associated with land, especially farmland, since ownership, secure tenure, the right to farm, decision making rights, and the rights over the output may vary across different tenure systems. But to the limited extent that these questions are asked, they are not asked in such a way to determine how these rights accrue to individuals, rather than to the

household. The information about the bundle of rights held over the land will not only provide useful data to understand asset patterns, but will also allow analyses of how the different forms of tenure status affect productivity.

The Vietnam survey asks a set of questions about whether the household has received the right to use any plot of land in the past five years through purchase, allocation, exchange or inheritance. It follows with questions on whether the household has given up any land in the past five years. By adding a question about which household member obtained or lost these rights, another dimension of land acquisition patterns could be explored.

No questions are asked in all three questionnaires about decision-making regarding the use of land. Thus, they would have to be added in order to analyze how the plots are used and who makes the decisions about each plot. These types of questions would help to identify the specific relationship between land ownership and its control, a crucially important distinction for understanding power dynamics. Depending on the context, for example, it may be that ownership of land by women does not affect household welfare outcomes; rather, it is ownership and control of that land that is required to do so.

Questions about tenure security are also not included in any of the three questionnaires. Adding questions about whether the individual expects to be farming the plot in the future would provide some information on their sense of security. A question on whether access to land has been lost would provide some information on past tenure security.

5.3. Livestock

Minimum questions. The minimum that should be asked about livestock are the questions about ownership and value of each type of animal. Thus, while it might be interesting to know about the individual ownership of each cow or goat, the minimal set of questions is who owns the cows and who owns the goats, and so forth, with the option for multiple owners, especially if there are multiple animals.

None of the three LSMS surveys collect any livestock ownership information at the individual level. They each collect some information on the value of the animals: the Guatemala survey determines value by asking the price at which you could sell all of the animals of each type today. The Vietnam survey obtains value by asking the value of all of the animals at current prices. We would encourage the questionnaire to specify the sales price: how much the respondent would receive if the animals were sold. The Ghana questionnaire asks about the value of one animal if it were sold today. [34] It also asks about any actual sales or purchases in the past year.

Beyond the minimum questions. The additional sets of questions that would be useful for more detailed analysis include acquisition and individual rights over the animals. None of the questionnaires ask about how the animals were acquired, even at the household level. Nor are there any questions about the rights over the animals or the decision-making regarding the animals and their products. In considering the rights over the animals, we would want to include not only the right to sell the animal but also to keep

(or control) the revenue from the sales. In the Guatemala and Vietnam surveys, questions are asked about the value of animal products sold, but not about which household member keeps the revenue. Adding in a question about the control over animal products and the revenue generated would provide some information about the ownership and control over livestock assets. In addition, the right to decide about whether to slaughter the animal should be included.

5.4. Nonfarm Business Assets

Minimum questions. The multi-topic surveys are generally not designed to obtain individual level data on business assets. Instead, the business is the unit of analysis, so the surveys focus on the flow of business income. The design of the questionnaires makes it less straight forward to obtain individual level asset data, but it can be done within the context of the LSMS module. The minimal information that is needed is who owns the business and the value of the business assets.

Typically, the household is asked to list up to three businesses (four, in the Vietnam survey). The Guatemala survey asks which household members worked in the business and how many hours per day they worked (regardless of whether they were paid or unpaid.) In addition, it asks who the boss is and whether or not that person is the informant for this section of the questionnaire. (It is interesting to note that the English translation of the questionnaire asks "who is the boss," while the Spanish version asks about the "dueño" or the owner.) The Vietnam survey asks the respondent whether he or she or the members of the household own the business, and if so, what percentage the household owns. The Ghana questionnaire does not ask about the owner. At a minimum, we recommend adding one question in each of these questionnaires to identify which household member(s) owns the business (allowing for individual and joint ownership).

The questionnaires usually ask about the value of business assets. In all of the LSMS surveys, it is implicitly assumed that "the business" owns all of the assets, when in fact, especially for small businesses, the assets may be owned by an individual or a set of individuals.

The Guatemala questionnaire asks about the capital and inventory of each business. This includes finished goods that have not been sold, raw materials, vehicles, furniture, machines/equipment/tools, facilities and land, office equipment, other durable goods, and other. For each category, the respondent is asked whether the assets were owned or leased, the value if these items were sold today, and whether the good is also used for other purposes or shared with other household businesses. Thus, the valuation data is appropriate for our purposes.

In the Vietnam survey, the business assets section asks whether any assets are owned by any of the four most important businesses. If yes, it asks which businesses own the assets and the value of the assets in today's prices. Again, it would be useful to specify that the value of the assets is the price at which they could be sold.

The Ghana questionnaire asks about the assets of up to three enterprises. The assumption is that the assets were purchased, since it asks when each was obtained and the purchase price. It would be useful to check if this approach is appropriate by asking how the items were acquired and allowing for the option of inheritance, gift or transfers. The value questions are appropriate, since the questionnaire asks how much each asset could be sold for today.

Beyond the minimal questions. Since it is not necessarily the case that the owner of the business also owns all of the individual assets that are part of the business, the next step would be to ask about the individual ownership of the individual business assets. This could be done by simply adding a column next to the questions about the value of the business assets.

In addition, we recommend adding questions about the acquisition of the business and the business assets. Asking how the owner acquired the business would allow policy makers to understand the patterns of business formation at the individual level, so that gender is taken into account. For detailed asset analyses, it would be useful to ask how the key business assets were acquired. In particular, it would be useful to know whether there are gender differences in the purchase or inheritance of business assets.

Questions on decision-making within the business are also not typically included in the LSMS surveys. Questions on who makes the decisions about the business and who provides the labor would allow for separation of ownership and control in analyzing the impacts of the businesses.

5.5. Other Physical Assets

Minimal questions. Other physical assets include both consumer durables and agricultural equipment. These are typically covered in separate sections of the LSMS surveys. The minimum that should be asked of major physical assets is the owner and their value. Many of the LSMS surveys ask about the value in some way, but none ask about individual or joint ownership of physical assets.

In the Guatemala questionnaire, questions about the ownership of important physical assets, including kitchen articles, personal articles and those for amusement, other household articles, and vehicles, are asked at the household level. (The questionnaire does not specify, however, who should respond to these questions, but it seems designed to be answered by only one person.) The survey asks how many the household has of the particular type of item, how old it is, whether it was acquired new, and the value of the item (the most recent item if there are multiple ones) if it were sold today. We recommend simply adding a question to identify the owner of each asset, which would be sufficient to allow calculation of individual asset ownership in this section.

Questions about agricultural equipment are included in the agricultural section of the Guatemala survey. These questions are asked at the household level: whether the household owns various pieces of agricultural equipment, how many are owned, how

many were purchased in the past 12 months, how old the most recently purchased one is, whether it is still working, whether it was received as a donation or gift, and how much it could be sold for today. Again, we recommend simply adding a question to identify the owner of these farm assets.

In the Vietnam questionnaire, the section on durable goods asks whether anyone in the household owns any items among a list of durable goods. Then for each item, it asks when it was acquired, how much was paid for it, and how much it could be sold for today. We would recommend adding a column asking the ID of the owner of the asset.

The Vietnam questionnaire gathers information on whether the household owns hand tools for agriculture, but no information about individual ownership or value. Much more detail is asked about larger farm equipment and machinery. The survey asks whether any member of the household currently owns any of a list of farm equipment, in whole or in part. Then it asks what fraction of it the household owns. Finally, it asks the total value of all types of equipment. None of this information is asked at the individual level. So although the survey provides details on the value of farm equipment assets, there is no way to ascribe the assets to particular individuals. We suggest adding, at a minimum, a question about which household member(s) owns the equipment.

The Ghana questionnaire has a detailed section on assets and durable goods. It identifies the relevant durable consumer goods, asks how long ago the items were acquired, what the purchase price was and how much they could be sold for now. We would recommend simply adding a column to identify the owner.

Agricultural equipment is treated separately in the Ghana questionnaire. The detailed section on agricultural equipment asks whether the household owns a variety of types of equipment and the value of each item. Again, at a minimum we recommend adding a question to identify the owner of each asset.

Beyond the minimal questions. None of these questionnaires ask about the method of acquisition or the rights over the assets. While the method of acquisition could provide useful information for analysis, we suspect that the questions on rights over assets are less important for consumer durables and agricultural equipment than for land, housing, and livestock.

For understanding how households respond to shocks, it would be important to understand which assets within the household are generally sold first, who they belonged to and who made the decision. If a shock or extraordinary events module was included, these questions could be incorporated into that module. But if no such additional module exists, knowing who owns these other physical assets could provide some baseline information for understanding which household members are most vulnerable to external shocks.

5.6. Financial Assets

Minimal questions. Many financial assets are held in the name of one individual, clearly identifying them as the owner. Thus, collecting individual level data on some financial assets is relatively simple. The LSMS surveys typically collect data on savings (both formal and informal), and income from retirement pensions and stocks and bonds. It would be useful to have the value of the financial asset, which, in the case of savings, may simply be the balance in the account.

In the Guatemala questionnaire, the respondent is asked whether any household member has deposited money or saved in any type of account during the past 12 months. If so, the ID of the person is listed. Although the survey does not ask about the total amount of money in the account, it does ask whether the current balance is higher, lower or equal to the average balance for the past three months. Without information about the total value of savings in the account, it is not possible to calculate net worth. We recommend, at a minimum, adding a question about the current value of the account.

The Vietnam questionnaire asks whether in the past 12 months anyone in the household earned interest on savings, stocks, or loans, and whether they received income in the form of dowry or bride price and inheritance. In addition, it asks whether anyone received income from the lease or sale of assets or a withdrawal from a savings account or the sale of stocks. These questions provide an indication of whether these items are owned, but only provide information on the flow of income from the asset, not on the value of the asset itself. The questionnaire also whether any member of the household has used any type of savings or liquid assets (savings books, government bonds, US dollars, gold, gemstones, etc.) and if so, the total balance. We recommend adding one question regarding the name of the account holder or owner of each asset.

A brief section is included in the Ghana questionnaire on savings. It asks the key questions needed for individual level analysis: the name of the account holder and the current value of the savings. We would recommend also asking whether there are any other financial assets besides savings.

Beyond the minimal questions. The financial asset that is the most challenging to identify is retirement pensions. These come in myriad forms, both as promised streams of income or as savings accounts that can be drawn down after a specific age. (Some countries call all transfer payments from the government “pensions” but our focus here is on accumulated retirement benefits.)

The LSMS surveys typically ask about pension income and this income is usually identified with the particular individual within the household who receives it. Yet, from an asset perspective – and to understand intrahousehold bargaining and also vulnerability at the household and individual levels – it is important to know whether an individual is expecting to receive a pension upon retirement. While it is difficult to capture the value of the expected pension, identifying whether or not an individual expects to receive one may shed light on some of their decisions.

5.7 Debt and Credit

Information on debt and credit is important for a full picture of an individual's net worth and hence, their financial well being. In addition, knowing which individuals obtain credit allows for a gendered analysis of the credit market and who is able to access credit.

Since loans are typically made to individuals, rather than to households, it is relatively easy to collect disaggregated information on credit, and many surveys ask the minimal questions. In the Guatemala questionnaire, the respondent is asked whether any loans were received, paid off or are being paid off by any member of the household. Space is provided for the four most important loans and the ID of the member who received, paid off or is paying off the loan. The individuals are asked whether any guarantee was made (i.e. collateral) and what documents were signed. An additional set of questions is asked about whether any household member bought food or other items on credit, and the ID number of the individual household member is registered. These questions allow some gender analysis of credit markets. Many questionnaires do not ask about food and goods purchased on credit, and it would be interesting to see if gender patterns exist in this type of credit.

The Vietnam questionnaire asks both about borrowing and lending. It asks the ID of the household member who contracted or held any loan during the past 12 months. For unpaid loans, it asks the amount that is needed to repay the loan today. Thus, it provides individual-level information on debt. In addition, it asks about whether assets were provided as collateral and what type of assets, but does not ask whose assets were provided.

Information on agricultural credit is also collected in the Vietnam survey. For each type of input, seeds/seedlings, fertilizer, and insecticides/herbicides, the respondent is asked whether the input was received on credit and from whom the credit was obtained. An additional question could ask which household member received the credit.

The Ghana questionnaire currently asks about borrowing at the individual level. If anyone in the household has any outstanding loans, the questionnaire asks about which household member obtained the loan. However, no information is available on the outstanding balance.

None of the surveys ask whether anyone in the household has loaned out any money. The Vietnam survey solicits information on lending, but does not ask which household member provided the loan or the current amount that is owed to the respondent. (It asks about the amount that was lent, the purpose of the loan, the interest rate and collateral.) We recommend adding a question about the amount of the loan that is outstanding and which household member provided the loan.

5.8 Extraordinary Loss

Of the three questionnaires, only Guatemala has a module on extraordinary losses. While some questions discussed above could be included in the land and housing modules to understand the security of tenure, especially in the event of shocks, a specific module to obtain full information on responses to loss would be very useful.

The Guatemala questionnaire only asks the household head about responses to adverse situations. It asks whether in the last 12 months, the household has experienced any of the following problems: natural disasters (earthquake, drought, flood, storms, forest fires, etc.); adverse macroeconomic phenomenon (business closings, massive lay offs, general increase in prices, public protests); or household level shocks (loss of employment or income of any household member, bankruptcy of family business, death of a household member, abandonment by the household head, fire, criminal act, land dispute, family dispute, loss of assistance, fall in producer prices, or loss of harvest). It then asks how the household compensated for these losses. The options listed include the sale of a house or land, the sale of animals, and the sale of appliances, equipment and machines, or jewelry. For each type of adverse situation, the household was allowed to list only one response.

These questions give a good overview of the kinds of crises that households may face and the ways that they may respond. Since households frequently respond to a crisis with more than one action, it would be important to add additional columns to allow at least two responses. To understand how assets are used in a crisis, if the respondent replies that assets were sold, additional questions should be added regarding to whom the assets belonged, how much money was received in the sale, the use of the money and who decided about its use.

Among the adverse situations listed was whether the household head abandoned the household. The only households that might respond to this question are those that did not join another household (as when an abandoned mother returns to her parental home). Thus, this important response may be missed. Querying individuals about the crises that they experience would capture those events that caused individuals to join the household being surveyed and provide more information for policy analysis.

5.9 Marital and Inheritance Regimes

Understanding the marital and inheritance regimes within a particular context is important for understanding asset accumulation and disposition. The minimal questions that need to be included are first, the type of marriage law under which an individual was married and second, if married under statutory law, the specific property regime. While these will vary across countries, the former includes statutory, customary and religious law, while the latter includes full community property, partial community property and separation of property regimes. In many countries, couples are able to choose which system and/or marital regime under which to marry. Thus, such information cannot be

collected only at the community level. The rules governing marriage are crucially important in understanding the dynamics of individual asset accumulation.

All three LSMS surveys ask about marital status but not about the marital regime under which the adults in the household were married. The Guatemala questionnaire includes the most detailed questions about marital status (in the demographic module) with the choices being: consensual union, married, separated from marriage, separated from union, divorced, widow/widower or single.

Other useful demographic information concerns the parents of individual respondents. The Vietnam questionnaire collects information about each parent's education and type of work. This would be an appropriate place to add questions about the number of siblings each household member has and whether any has inherited or received property from parents or other relatives. It would also be useful to include a question about assets (especially land and housing) owned by each parent separately or jointly. These questions are useful as instruments in econometric analyses, for example, where it may be necessary to estimate the determinants of women's land rights in order to use such an estimate to measure the impact of women's land rights on household outcomes.

The Ghana questionnaire does ask whether any income from dowry or inheritance was received by the household in the past 12 months, but does not collect the more specific information needed to analyze marital and inheritance regimes.

Additional questions about inheritance patterns and expected inheritances to be received would provide some additional information that would provide insights into understanding household decisions.

5. 10. Knowledge of Property Laws

As the formal laws in many countries are changing with respect to women's rights to own and manage property, it could be useful to ask additional questions about people's knowledge of individual property rights.

The Guatemala questionnaire includes a section on social capital, asking about collective action, exclusion, and perception of welfare, but only the household head is asked to respond to these questions. This would be an appropriate place to incorporate questions about knowledge of property rights. It would be more useful, however, to ask these questions of all of the adults in the household, rather than simply the household head.

6. Conclusion

This paper has set out a systematic framework for the collection of data on individual level asset ownership. It made the case that individual level data on key assets – land, housing, non-farm businesses, financial assets, and other physical assets – is critical for country and global monitoring of progress toward MDG3 and for policies to reduce poverty, provide social protection, and promote pro-poor economic growth. We then

reviewed existing practice for collecting asset data through Living Standard Measurement Study surveys and surveys conducted by IFPRI and ICRW.

Our review showed that although most LSMS surveys collect data on the incidence of ownership of housing, land, livestock and consumer durables at the household level, gaps exist in the collection of data on the ownership of farm equipment, non-agricultural business assets and savings/financial assets. Although most surveys collect some data on the value of these assets, a number of different approaches are used, making it difficult to make inter-country comparisons. Almost none ask about decision-making or use and disposal rights over different types of assets.

Far fewer countries with an LSMS survey collect data on the various types of assets at the individual level. Only 7 countries in Latin America and 1 country each in Sub-Saharan Africa, Asia and the Pacific, Europe and Central Asia, and the Middle East and North Africa collect individual data on land ownership. Somewhat more in Latin America (10), Asia and the Pacific (2), and Europe and Central Asia (2) collect individual level ownership information on housing. Far fewer LSMS surveys collect any individual level data on non-farm business assets, financial assets, and physical assets. Although surveys conducted by other institutions (IFPRI and ICRW) collect more complete information on assets at the individual level, even they contain important limitations, missing for instance questions on some categories of assets, or focusing only on women in data collection efforts.

Finally, and perhaps most importantly, we show how existing multi-purpose household surveys can collect more systematic and consistent data on all classes of assets at the individual level. We illustrated our approach with LSMS questionnaires from Guatemala, Vietnam, and Ghana and demonstrated that in most cases it is feasible to add a minimal number of questions (2-3) in order to derive an estimate of the gender asset gap. At the very least, we recommend that survey designers add questions on individual ownership and value of each asset in order to ascertain a better measure of the degree of gender inequality in development opportunities and outcomes. Depending on the policy questions to be answered, additional questions can be added to ascertain the acquisition and depletion of assets, conflict over assets, and knowledge of property rights, which provides important information for poverty reduction, social welfare, and economic growth.

Collecting information on individual level asset ownership is both important and feasible. It will be important to field test the recommendations suggested in Section 5 to provide information to survey designers on the practical issues that arise in data collection in the field. Nonetheless that should not be an excuse for inaction. With political will and modest additional resources, data on the gender distribution of assets can become a reality in the next five years.

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APPENDIX 1

Table A1: Incidence of Asset Ownership and Valuation at Household Level - LSMS questionnaires
Latin America & the Caribbean

	Argentina (2001)	Bahamas (2001)	Bolivia (2003-2004)	Bolivia (2002)	Bolivia (2001)	Bolivia (Oct-Nov 2000; Nov-Dec 2000)
LAND				Yes	V	V
LIVESTOCK				M	M	M
HOUSING	Yes	Mortgage, R2		R2	R2, V	R2, V
BUSINESS						
- Farm Equipment					V	V
- Non-Agricultural						
FINANCIAL						
- Savings					Total deposits	Total deposits
- Pensions	Y	Y	Y	Y	Y	Y
- Other*	Y (rents, interests)	Y (rents, dividends, interests)	Y (rents, interests, dividends)	Y (rents, dividends, interests)	Y (rents, interests, dividends)	Y (rents, interests, dividends)
OTHER PHYSICAL						
- Consumer Durables	Yes	P1, V	P1	P1, P2	P1, P2	P1, P2
- Vehicles	Yes	P1, V	P1	P1, P2	P1, P2, V	P1, P2, V
- Jewelry, Real Estate etc.				P1	P1, P2, V	P1, V

Note:
Yes = the survey asks if the asset is owned by the household, but does not ask its value
V = valued at reservation price (at what price could you sell)
M = market value of item actually sold in last 12 months or x years
P1 = purchase price. In the case of financial assets, amount of investment or money allocation.
P2 = estimated price if wanted to purchase similar item today
R1 = monthly rental value. R2 = for how much could you rent.
Y = monthly or annual income
* Some surveys include information on monthly or annual rents, interest, and dividends which indicate incidence of asset ownership, but not value of asset. Sometimes this information is disaggregated, other times lumped together

Table A1: Latin America & the Caribbean (Cont…)

	Bolivia (Nov, 1999)	Bolivia (II Trim, 1999)	Brazil (1996-97)	Colombia (2002; 2003)	Colombia (2000; 2001)	Ecuador (1998-99)
LAND	V	Yes	Yes			V, M, P1, R2
LIVESTOCK	M		Yes			V, M
HOUSING	R2, V	R2	Yes (residence and ground). Mortgage, R2	Mortgage	Mortgage	Mortgage, R2
BUSINESS						
- Farm Equipment	V		Yes			V
- Non-Agricultural			V			V, P1
FINANCIAL						
- Savings	P1		P1			P1
- Pensions	Y			Y	Y	Y
- Other*	Y (rents, interests, dividends)		P1, M, Y (stocks, dividends, interests)	Y (rents, interests, dividends)	Y (rents, interests, dividends)	Y, M, P1 (rents, dividends, interests, stocks)
OTHER PHYSICAL						
- Consumer Durables	P1, V	P1	P1	Yes	Yes	P1
- Vehicles	P1, V	P1	P1			P1
- Jewelry, Real Estate etc.	P1, V	P1	M, P1			P1, M

Note:
Yes = the survey asks if the asset is owned by the household, but does not ask its value
V = valued at reservation price (at what price could you sell)
M = market value of item actually sold in last 12 months or x years
P1 = purchase price. In the case of financial assets, amount of investment or money allocation.
P2 = estimated price if wanted to purchase similar item today
R1 = monthly rental value. R2 = for how much could you rent.
Y = monthly or annual income
* Some surveys include information on monthly or annual rents, interest, and dividends which indicate incidence of asset ownership, but not value of asset. Sometimes this information is disaggregated, other times lumped together

Table A1: Latin America & the Caribbean (Cont…)

	Ecuador (1998)	El Salvador (2000; 2003)	Guatemala (2006)	Guatemala (2000)	Guyana (1999)	Haiti (2001)
LAND	V, M, P1, R2	Yes	R1, M	R1, R2, V, M, P1	Yes	Yes
LIVESTOCK	V, M	M, V	M, V	V, M	Yes	Yes
HOUSING	R2	R2, mortgage	R2	R2	Yes (dwelling and land)	Yes (dwelling and ground); R2
BUSINESS						
- Farm Equipment	V		V	V		P1
- Non-Agricultural	V, P1			V		
FINANCIAL						
- Savings	P1	P1 (from remittances)		Yes	P1	
- Pensions	Y	Y	Y	Y	Y	Y
- Other*	Y, M, P1 (rents, dividends, interests, stocks)	Y, M (rents, dividends, interests, stocks,…)	Y (rents, dividends, interests)	Y (rents, dividends)	P1, Y (stocks, royalties, dividends,…)	Y (rents, interests)
OTHER PHYSICAL						
- Consumer Durables	P1, V	P1 or V	V	V	P1 or V, M	Yes
- Vehicles	P1, V	Yes	V	V	P1 or V	Yes
- Jewelry, Real Estate etc.	P1, M	M			P1 or V, M	

Note:
Yes = the survey asks if the asset is owned by the household, but does not ask its value
V = valued at reservation price (at what price could you sell)
M = market value of item actually sold in last 12 months or x years
P1 = purchase price. In the case of financial assets, amount of investment or money allocation.
P2 = estimated price if wanted to purchase similar item today
R1 = monthly rental value. R2 = for how much could you rent.
Y = monthly or annual income
* Some surveys include information on monthly or annual rents, interest, and dividends which indicate incidence of asset ownership, but not value of asset. Sometimes this information is disaggregated, other times lumped together

Table A1: Latin America & the Caribbean (Cont…)

	Honduras (2004)	Jamaica (2003; 2004)	Jamaica (2002)	Jamaica (1999; 2000; 2001)	Jamaica (1998)	Jamaica (1992)
LAND	V, R2					
LIVESTOCK	V, M					
HOUSING	R2	Mortgage	Yes (dwelling and land). Mortgage	Yes (dwelling and land). Mortgage	Yes (dwelling and land). Mortgage, R2	
BUSINESS						
- Farm Equipment	V, R1					
- Non-Agricultural						
FINANCIAL						
- Savings						Total deposits
- Pensions	Y	Y	Y	Y	Y	Y
- Other*	Y (rents, interests)	Y (rents, dividends, interests)	Y (rents, dividends, interests)	Y (rents, dividends, interests)	Y (rents, dividends, interests)	Y, P1, M (rents, interests, shares, bonds)
OTHER PHYSICAL						
- Consumer Durables		P1 or P2	P1 or P2	P1 or P2; V	P1 or P2; V	P1 or P2; V; M
- Vehicles		P1 or P2	P1 or P2	P1 or P2; V	P1 or P2; V	P1 or P2; V; M
- Jewelry, Real Estate etc.						P1

Note:

Yes = the survey asks if the asset is owned by the household, but does not ask its value

V = valued at reservation price (at what price could you sell)

M = market value of item actually sold in last 12 months or x years

P1 = purchase price. In the case of financial assets, amount of investment or money allocation.

P2 = estimated price if wanted to purchase similar item today

R1 = monthly rental value. R2 = for how much could you rent.

Y = monthly or annual income

* Some surveys include information on monthly or annual rents, interest, and dividends which indicate incidence of asset ownership, but not value of asset. Sometimes this information is disaggregated, other times lumped together

Table A1: Latin America & the Caribbean (Cont…)

	Mexico (2002)	Nicaragua (2005)	Nicaragua (2001)		Nicaragua (1998)	Panama (2003)
LAND	Yes	P2, R1, R2	P1, P2, R1, R2, M		P1, P2, R1, R2, M	R1, R2, V, M, P1
LIVESTOCK	P1 or P2 or V; R1	V, M	V, M		V, M	V, M
HOUSING	P1 or P2 or V; R1; mortgage	R2, mortgage	R2		V, R2	R2
BUSINESS						
- Farm Equipment	P1 or P2 or V; R1; M	P1	P2		V	V
- Non-Agricultural	P1 or P2 or V; R2		P1, P2		P1, V	V
FINANCIAL						
- Savings	Total deposits				Most and least in the last 12 months	Yes
- Pensions	Y	Y	Y		Y	Y
- Other*	Y, M (interests, bonds, …)	Y (rents, dividends, interests)	Y (rents, dividends, interests)		Y (rents, dividends, interests)	Y (rents, dividends, interests)
OTHER PHYSICAL						
- Consumer Durables	P1 or P2 or V; R1	P1, P2	P1, P2 or V		P1, P2 or V	P1, M, V
- Vehicles	P1 or P2 or V; R1	P1, P2	P1, P2 or V		P1, P2 or V	P1, M, V
- Jewelry, Real Estate etc.	P1 or P2 or V; R1; M	P1	P1, M		P1, M	P1, M

Note:
Yes = the survey asks if the asset is owned by the household, but does not ask its value
V = valued at reservation price (at what price could you sell)
M = market value of item actually sold in last 12 months or x years
P1 = purchase price. In the case of financial assets, amount of investment or money allocation.
P2 = estimated price if wanted to purchase similar item today
R1 = monthly rental value. R2 = for how much could you rent.
Y = monthly or annual income
* Some surveys include information on monthly or annual rents, interest, and dividends which indicate incidence of asset ownership, but not value of asset. Sometimes this information is disaggregated, other times lumped together

Table A1: Latin America & the Caribbean (Cont…)

	Panama (1997)	Paraguay (2000-2001)	Paraguay (1997-1998)	Peru (2003)	Peru (2002)	Peru (2001)
LAND	P1, R1, R2, V, M	V, M, R1, P1	V, M, R1	Yes	Yes	Yes
LIVESTOCK	V, M	V, M, P1	V, M, P1	V, M	V, M	V, M
HOUSING	R2	Mortgage, R2 or V	Mortgage, R2 or V	Mortgage, R2	Mortgage, R2	Mortgage, R2
BUSINESS						
- Farm Equipment	V	V, R1, P1	V, R1, P1			
- Non-Agricultural	P1, V			P2	P2	
FINANCIAL						
- Savings	Total deposits and monthly P1	P1				P1
- Pensions	Y	Y	Y	Y	Y	Y
- Other*	Y (rents, dividends, interests)	Y, P1, M (rents, interests, dividends, stocks)	Y (rents, interests)	Y (rents, interests, dividends)	Y (rents, interests, dividends)	P1, M, Y (stocks, bonds, rents, interests, dividends)
OTHER PHYSICAL						
- Consumer Durables	P1, P2, M	P1, P2	P1 or P2	P1	P1 or V	P1 or V
- Vehicles	P1, P2, M	P1, P2, M	P1 or P2	P1	P1 or V	P1 or V
- Jewelry, Real Estate etc.	P1, M	P1, M		P1 or V	P1 or V	P1, M, V

Note:

Yes = the survey asks if the asset is owned by the household, but does not ask its value

V = valued at reservation price (at what price could you sell)

M = market value of item actually sold in last 12 months or x years

P1 = purchase price. In the case of financial assets, amount of investment or money allocation.

P2 = estimated price if wanted to purchase similar item today

R1 = monthly rental value. R2 = for how much could you rent.

Y = monthly or annual income

* Some surveys include information on monthly or annual rents, interest, and dividends which indicate incidence of asset ownership, but not value of asset. Sometimes this information is disaggregated, other times lumped together

Table A1: Latin America & the Caribbean (Cont…)

	Peru (2000)	Peru (1998; 1999)	Peru (1997)
LAND		Yes	
LIVESTOCK		V, M	
HOUSING	Mortgage, R2	Mortgage, R2	Mortgage, R2
BUSINESS			
- Farm Equipment			
- Non-Agricultural			
FINANCIAL			
- Savings	P1	P1	
- Pensions	Y	Y	Y
- Other*	P1, M, Y (stocks, bonds, rents, interests, dividends)	P1, M, Y (stocks, bonds, rents, interests, dividends)	Y (rents, interests, dividends)
OTHER PHYSICAL			
- Consumer Durables	P1	P1	P1
- Vehicles	P1	P1	P1
- Jewelry, Real Estate etc.	M, P1 or V	M, P1 or V	P1 or V

Note:
Yes = the survey asks if the asset is owned by the household, but does not ask its value
V = valued at reservation price (at what price could you sell)
M = market value of item actually sold in last 12 months or x years
P1 = purchase price. In the case of financial assets, amount of investment or money allocation.
P2 = estimated price if wanted to purchase similar item today
R1 = monthly rental value. R2 = for how much could you rent.
Y = monthly or annual income
* Some surveys include information on monthly or annual rents, interest, and dividends which indicate incidence of asset ownership, but not value of asset. Sometimes this information is disaggregated, other times lumped together

Table A1: Sub-Saharan Africa
(Cont…)

	Cote D'Ivoire (1985)	Cote D'Ivoire (1988)	Ghana (1988-89)	Ghana (1991-92)	Ghana (1998-99)	Ghana (2005-06)	Malawi (2004)	Tanzania (1993)	Tanzania-Kagera (2004)	So. Africa (1993)
LAND	M, P1, R1, V	M, P1, R1	M, P2, R1	M, P1, R1	M, P1, R1	Yes	V	Yes	R1, V	V, M
LIVESTOCK	M, P1, V	M, P1, V	M, P1, V	M, P1, V	M, P1, R1, V		V	M, P	M, V	M
HOUSING	R1	R1, R2, V	R1, R2, V	R1	R1	R1	R, V	R2	R1, V	V
BUSINESS										
- Farm Equipment	M, P1, R1, V	M, P1, R1, V	M, P1, R1, V	P1	P1, R1, V				R1, V	V, P
- Non-Agricultural	P1, V	P1, V	M, P1, V	M, P1, V	P1, V	P1, V			V	V
FINANCIAL										
- Savings	Y	Y	P1	P1	P1			Yes	Y	Y (interest)
- Pensions	Y	Y	Y	Y	Y				Y	Y
- Other*	P1, Y	Y, P1	P1, Y	Y	P1, Y				P1, V	Y
OTHER PHYSICAL										
- Consumer Durables	P1, V	P1, V	P1, V	P1	P1		V	Yes	V	Yes
- Vehicles	P1, V	P1, V	P1, V	P1	P1		V		V	Yes
- Jewelry, etc.	P1	P1	M	P1	P1				V, Y	Yes

Note:
Yes = the survey asks if the asset is owned by the household, but does not ask its value.
M = market value of item actually sold in last 12 months or x years.
P1 = purchase price. In the case of financial assets, amount of investment or money allocation.
P2 = estimated price if wanted to purchase similar item today.
R1 = monthly rental value. R2 = for how much could you rent.
V = valued at reservation price (at what price could you sell).
Y = monthly or annual income.
* Some surveys include information on monthly or annual rents, interest, and dividends which indicate incidence of asset ownership, but not value of asset. Sometimes this information is disaggregated, other times lumped together

Table A1: Middle East & North Africa (Cont…)

	Iraq (2006)	Morocco (1998-1999)	Tunisia (?)
LAND	Yes	Yes	R1, V
LIVESTOCK	M	M, P1, V	M, P1
HOUSING	P1, V	R1, V	P1 (second home), R1 (mortgage)
BUSINESS			
- Farm Equipment	P1	M, P1, R1	P1, R1, V
- Non-Agricultural	Yes	M, P1, V	P1
FINANCIAL			
- Savings		P1	
- Pensions	P1, Y	Y	P1
- Other*	P1, Y	Y	P1
OTHER PHYSICAL			
Consumer Durables	P1, V	P1	P1
- Vehicles	P1	P1	P1
- Jewelry, Real Estate, etc.	M, P1	V	P1

Note:
Yes = the survey asks if the asset is owned by the household, but does not ask its value.
M = market value of item actually sold in last 12 months or x years.
P1 = purchase price. In the case of financial assets, amount of investment or money allocation.
P2 = estimated price if wanted to purchase similar item today.
R1 = monthly rental value. R2 = for how much could you rent.
V = valued at reservation price (at what price could you sell).
Y = monthly or annual income.
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Table A1: East Asia & the Pacific (Cont…)

	China (1995)	East Timor (2001)	Papua New Guinea (1996)	Vietnam (1992-1993)	Vietnam (1997-98)
LAND	R1, R2	V		M, R1	M, R2
LIVESTOCK	M, V	M, V	Yes	M, P1, V	M, P1, V
HOUSING	P1, V	R1, R2	P1, R1	R1, V	R1, V
BUSINESS					
- Farm Equipment	M, P1, V	R1	P1	M, P1, R2, V	M, P1, R2, V
- Non-Agricultural	P1, V			V	V
FINANCIAL					
- Savings	Y	P1		P1	P1
- Pensions	Y	Y		Y	Y
- Other*	P1, Y	P1, V, Y	Y	P1, Y	P1, Y
OTHER PHYSICAL					
- Consumer Durables	P1, P2	P1, V	P1, V	M, P1, V	M, P1, V
- Vehicles	P1, P2	V	P1, V	M, P1, V	M, P1, V
- Jewelry, Real Estate, etc.	P1	M, V	P1, V	M, V	M, V

Note:

Yes = the survey asks if the asset is owned by the household, but does not ask its value.

M = market value of item actually sold in last 12 months or x years.

P1 = purchase price. In the case of financial assets, amount of investment or money allocation.

P2 = estimated price if wanted to purchase similar item today.

R1 = monthly rental value. R2 = for how much could you rent.

V = valued at reservation price (at what price could you sell).

Y = monthly or annual income.

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Table A1: South Asia
(Cont…)

	Afghanistan (2007)	India- Uttar Pradesh & Bihar (1997-1998)	Nepal (2002-2003)	Nepal (2003-2004)	Pakistan (1991)
LAND	Yes	Yes	M, P1, V	M, P1, P2, R1	M, P2, R1, V
LIVESTOCK	M, V	P2	M, P1	M, P1, P2, V	M, P1, R1, V
HOUSING	P2, R1	Yes	P, R1	P2, R1, R2, V	R1, R2, V
BUSINESS					
- Farm Equipment		P2	M, P1, V	M, P1, V	M, P1, P2, R1
- Non-Agricultural			M	V	M, P1, V
FINANCIAL					
- Savings		Y	M, V	V, Y	P1
- Pensions		Y	M, V	V, Y	Y
- Other*	Y			P 1 (stocks), Y (dividends)	M, P1, Y
OTHER PHYSICAL					
- Consumer Durables	P1, V	Yes	V	P1, V	P1, P2
- Vehicles	P1, V	Yes	V	P1, V	P1, P2
- Jewelry, Real Estate, etc.	V		V	P1, V	M, P1, P2, R1, V

Note:
Yes = the survey asks if the asset is owned by the household, but does not ask its value.
M = market value of item actually sold in last 12 months or x years.
P1 = purchase price. In the case of financial assets, amount of investment or money allocation.
P2 = estimated price if wanted to purchase similar item today.
R1 = monthly rental value. R2 = for how much could you rent.
V = valued at reservation price (at what price could you sell).
Y = monthly or annual income.
* Some surveys include information on monthly or annual rents, interest, and dividends which indicate incidence of asset ownership, but not value of asset. Sometimes this information is disaggregated, other times lumped together

Table A1: Europe & Central Asia
(Cont…)

	Albania (2004)	Armenia (1996)	Azerbaijan (1995)	Bosnia-Herzegovina (2001)	Bulgaria (2001)	Kazakhstan (1995)	Kosovo (2000)
LAND	Yes	Yes	M (land rented out)	R1, V	V	Yes	R1, V
LIVESTOCK	Yes	M	V	M, V	M, P1	M, V	M, V
HOUSING	P1, R1	Yes	R1 (mortgage), R2	P1, R1, R2	R1, R2, V	V	Yes
BUSINESS							
- Farm Equipment	Yes	P1	V	V	V		R1, V
- Non-Agricultural	Yes			Yes	V	V, Y	V
FINANCIAL							
- Savings		Y			P1	Y	
- Pensions	Y	Y	Y		Y	Y	
- Other*	P1, Y	Y	M		P1, Y	P1, V, Y	Y
OTHER PHYSICAL							
- Consumer Durables	V	P1	P1	V	V	M, P2	V
- Vehicles	V	P1	Yes	V	V	M, P2	V
- Jewelry, etc.	P1	M, P1			V	M, P2	V

Note:
Yes = the survey asks if the asset is owned by the household, but does not ask its value.
M = market value of item actually sold in last 12 months or x years.
P1 = purchase price. In the case of financial assets, amount of investment or money allocation.
P2 = estimated price if wanted to purchase similar item today.
R1 = monthly rental value. R2 = for how much could you rent.
V = valued at reservation price (at what price could you sell).
Y = monthly or annual income.
* Some surveys include information on monthly or annual rents, interest, and dividends which indicate incidence of asset ownership, but not value of asset. Sometimes this information is disaggregated, other times lumped together

Table A1: Europe & Central Asia
(Cont…)

	Kyrgyzstan (1998)	Romania (1994)	Russia (1992)	Serbia (2007)	Tajikistan (1999)	Uzbekistan (2005)
LAND	M, R1	R1	R1	M, V	R1, R2, V	Yes
LIVESTOCK	M, P1, V	M	M	M, V	M, V	M, P1
HOUSING	R1, R2, V	R1, V	P1, V	R1	R1, R2, V	R1, R2, V
BUSINESS						
- Farm Equipment	M, P1, R1, R2	M, P1, V	R1	R2, V	M, P1, R2, V	M, P1
- Non-Agricultural	P1, V	P1	Yes			V
FINANCIAL						
- Savings	P1	P1	P1	P1		
- Pensions	Y	Y	Y	Y	Y	Yes
- Other*	P1, R1, V, Y	Y	P1, Y	P1	Y	
OTHER PHYSICAL						
- Consumer Durables	M, P1, V	V	P1	V	P1	V
- Vehicles	M, P1, V	P1	P1	V	Yes	V
- Jewelry, etc.	M, P1, V	P1	M (jewelry), P1	M, V	P1	V

Note:
Yes = the survey asks if the asset is owned by the household, but does not ask its value.
M = market value of item actually sold in last 12 months or x years.
P1 = purchase price. In the case of financial assets, amount of investment or money allocation.
P2 = estimated price if wanted to purchase similar item today.
R1 = monthly rental value. R2 = for how much could you rent.
V = valued at reservation price (at what price could you sell).
Y = monthly or annual income.
* Some surveys include information on monthly or annual rents, interest, and dividends which indicate incidence of asset ownership, but not value of asset. Sometimes this information is disaggregated, other times lumped together

Table A2: LSMS Surveys with Questions on Individual Ownership and Decision-Making

Asset	Individual Ownership		Individual Decision-making	
LAND	**Afghanistan (2007)** Bosnia-Herzegovina (2001) El Salvador (2000 & 2003) Haiti (2001) **Honduras** (2004) Mexico (2002) Iraq (2006)	**Nicaragua** (1998; 2001; 2005) Paraguay (2000-01) Tanzania (1993) **Ghana (1991-92)**	**Afghanistan (2007)** **Honduras** (2004) **Nicaragua** (1998; 2001; 2005)	**Ghana (1991-92)** East Timor (2001) Cote d'Ivoire (1998)
LIVESTOCK	**Afghanistan (2007)**	Honduras (2004) Nicaragua (1998; 2001)	**Afghanistan (2007)** Mexico (2002) Ghana (1998-98)	
HOUSING	**Afghanistan (2007)** Argentina (2001) **Bosnia-Herzegovina (2001**) El Salvador (2000 & 2003) Guatemala (2000) Honduras (2004)	Nicaragua (1998; 2001; 2005) Panama (1997; 2003) Paraguay (2000-01) **Uzbekistan (2005)** Vietnam (1993) Vietnam (1997-1998)	**Afghanistan (2007)** **Bosnia-Herzegovina (2001**) Mexico (2002) **Uzbekistan (2005)**	
BUSINESS				
- Non-Agric.	**Albania (2005)** Guatemala (2000) Kazakhstan (1995) **Nicaragua (1998; 2001)**	Russia (1992) South Africa (1993) Vietnam (1997-1998) **Ghana (1991-92; 1998-1999)**	Ecuador (1998; 1998- 99) Mexico (2002) **Nicaragua (2001)** Panama (2003) Peru (2002; 2003)	**Albania (2005)** Bosnia-Herzegovina (2001) **Ghana (1991-92; 1998-1999)** Uzbekistan (2005)
- Farm Equip.	Nicaragua (1998)		Mexico (2002)	Uzbekistan (2005)
FINANCIAL				
- Savings	Ghana (1998-99)			
OTHER PHYSICAL ASSETS				
- Consumer durables	Nicaragua (1998; 2001)		Ecuador (1998-99); Mexico (2002)	
- Jewelry	**Afghanistan (2007)**		**Afghanistan (2007)**	

Notes: Questionnaires for countries in bold ask questions on both ownership and decision-making (or who is the most knowledgeable). Where the years for a given country are noted with an "&" (as in Peru 1998 & 1999), these are identical and are considered as one observation; where the years are separated by a semi-colon (as in Peru 2001; 2002; 2003), these refer to surveys were the questionnaires differ and are counted as separate observations.
Sources: Authors' calculations based on worksheets for surveys reported in references.

Table A3: Asset Ownership by Sex (best practices, in descending order) – LSMS questionnaires

LAND	Two most important owners by plot: Tanzania (1993) Individual ownership of plot: Bosnia-Herzegovina (2004), Ghana (1998-98), Iraq (2006) Individual & jt. ownership for plots with a document: Nicaragua (2005) Individual & jt. ownership for titled land only, by plots: Honduras (2004)
LIVESTOCK	Individual & jt. ownership: Nicaragua (2001) Female and male owners: Honduras (2004)
HOUSING	Individual & jt. ownership: Nicaragua (2005) Individual ownership: Vietnam (1997, 1993), El Salvador (2003), Afghanistan (2007), Uzbekistan (2005) Individual ownership, who holds title: Bosnia-Herzegovina (2004) Individual & jt. ownership for titled house only: Paraguay (2000-01), Argentina (2001), Panama (2003), Honduras (2004), Guatemala (2000)
BUSINESS ASSETS - Farm Equipment - Non-Ag Business	 Individual ownership: Nicaragua (1998) Individual & jt. ownership: Nicaragua (2001) Individual ownership: Albania (2005); So. Africa (1993); Guatemala (2000); Kazakhstan (1995); Nicaragua (2001)
FINANCIAL ASSETS - Savings	 Individual who holds account: Ghana (1991-1992, 1998-99)
OTHER PHYSICAL ASSETS - Consumer Durables	Individual ownership: Nicaragua (1998; 2001)

Sources for Table A3: See Table A1.

Note: The number of surveys reported here is less than the total that collect data on individual ownership of assets, reported in Table 4, since only the best practices are highlighted. Also, for simplicity, only the most recent survey with the best practice is noted.

Table A4: Asset Ownership by Sex (best practices, in descending order) – IFPRI Questionnaires

LAND	Individual owner by plot, type and value, decisions regarding management of plot: Malawi 1995 Individual owner by plot, type and value: Malawi 2000-2002 Individual owner by plot: Bangladesh, Ghana 2001, Sumatra, Philippines Who acquired plot: Ethiopia
LIVESTOCK	Individual owner by type of animal, purchase and sales of livestock, use and value of livestock products, who controls sales from livestock products: Malawi 1995 Individual owner by type of animal, purchase and sales of livestock, use and value of livestock products: Egypt 1997 and 1999, Malawi 2000-2002 Individual owner by type of animal: Ghana 2001, Bangladesh, Ethiopia, Philippines
HOUSING	Individual & jt. ownership: Philippines, Malawi 1995, Malawi 2000-2002
BUSINESS ASSETS	
- Farm Equipment	Individual & jt. ownership: Philippines, Malawi 1995
- Non-Ag Business	Individual & jt. ownership: None
SAVINGS AND OTHER FINANCIAL ASSETS	
- Savings	Individual & jt. ownership: Philippines
OTHER PHYSICAL ASSETS	
- Consumer Durables	Individual & jt. ownership: Malawi 1995, Philippines, Ghana 2001
- Vehicles	Individual & jt. ownership: Malawi 1995, Philippines, Ghana 2001
- Jewelry/cloth, etc.	Individual & jt. ownership: Malawi 1995
CREDIT/DEBT	Individual loans, how many loans, amount, use, repayment, who in household decided that you borrow, discussion with head/spouse, which hh member responsible for loan repayment: Malawi 1995 Individual: Malawi 2000-2002, Ethiopia, Ghana 2001 Who was primary borrower? Egypt 1997-1997, Urban Accra 1997 Collateral used to secure loan: Urban Accra 1997 Loans owed to you, how many, loan type, amount, characteristics of borrower, repayment: Malawi 1995 Loans owed to you: Urban Accra 1997
ASSETS BROUGHT TO MARRIAGE	Type, value, when transferred, by husband & wife: Malawi 2000-2002 Type by husband & wife: Guatemala, Individual land, livestock, house, savings, other owned at time of marriage: Malawi 2000-2002, Philippines Parents land owned at time of marriage: Indonesia
INHERITANCE	Land, house, livestock by individual: Indonesia, Malawi 2000-2002 Land by individual and from whom: Ghana Inheritance rules: Ghana Land plot by individual: Sumatra
OTHER	Sale of assets since last round of survey, sales price, who decided to sell, why sold, who borrowed if credit was needed: Malawi 1995 Purchase/sale of assets since last round of survey: Bangladesh, Malawi 1995, Malawi 2000-2002 Who decided what and whether to plant: Malawi 1995, Malawi 2000-2002 Assets retained by individual after dissolution of marriage: Ghana Property owned or ever owned by women: Sumatra Who made decision to dispose of an asset: Philippines

Sources for Table A4:

- Ghana: Savelugu-Nanton Household Survey Dataset, 2001. Washington, D.C. International Food Policy Research Institute (IFPRI) Household- and Community-level Surveys. 2005.
- Egypt integrated household survey, 1997-1999 Washington, D.C. International Food Policy Research Institute (IFPRI) and the Ministry of Agriculture and Land Reclamation, and Ministry of Trade and Supply, Egypt
- Ethiopia rural household survey dataset (ERHS), 1989-1997 Washington, D.C. International Food Policy Research Institute (IFPRI)
- Kenya land tenure, agricultural productivity and the environment: Suba and Laikipia Districts, 2001 Household and community level surveys Washington, D.C. International Food Policy Research Institute (IFPRI)
- Bangladesh: commercial vegetable and polyculture fish production -- their impacts on income, household resource allocation, and nutrition, 1996-1997 Washington, D.C. International Food Policy Research Institute (IFPRI)
- Bangladesh: Baseline data of SHAHAR Project, CARE-Bangladesh, 2000 -- slum areas of Tongi and Jessore municipalities Washington, D.C. International Food Policy Research Institute (IFPRI)
- Guatemala: strengthening and evaluation of the Hogares Comunitarios Program in Guatemala City, 1999 Washington, D.C. International Food Policy Research Institute (IFPRI)
- Ghana: Accra urban food and nutrition security, 1997 Washington, D.C. International Food Policy Research Institute (IFPRI)
- Malawi financial markets and household food security 1995 Washington, D.C. International Food Policy Research Institute (IFPRI) and Bunda College of Agriculture, University of Malawi.
- Pakistan panel survey, 1986-1991 Washington, D.C. International Food Policy Research Institute (IFPRI)
- Indonesia: Property Rights and Forest Resource Management Survey, 1997 Washington, DC: IFPRI
- Philippines: Income and Expenditure survey, 1998, Iloilo and Central Luzon, IFPRI/Tokyo Metropolitan University
- Indonesia: Intensive Household Survey, Jambi, Sumatra, 1996-97, Washington, DC: IFPRI

Table A5: Asset Ownership by Sex (best practices, in descending order) - ICRW questionnaires

LAND	Individual & jt. ownership by plot: So. Africa , Sri Lanka, Kerala, West Bengal, Uganda
LIVESTOCK	
HOUSING	Individual & jt. ownership: Sri Lanka, So. Africa, West Bengal, Kerala
BUSINESS ASSETS	
SAVINGS AND OTHER FINANCIAL ASSETS	
OTHER PHYSICAL ASSETS	Individual & jt. property of immovables: Kerala Other individual & jt. property: West Bengal
CREDIT/DEBT	
ASSETS BROUGHT TO MARRIAGE	Type, source for wife: Sri Lanka Type, source by sex: West Bengal, Kerala
INHERITANCE	
OTHER	Asked about form of acquisition of land & housing, as well as property rights: Kerala, West Bengal Asked about other property, animals, crops and significance of property rights: Uganda Asked about decision-making: So. Africa

Source for Table A5: ICRW (Author's communications)

Table A6: Asset Ownership by Sex (Incidence and best practices, in descending order) – Other Questionnaires

LAND	Individual owner by plot & titled plot: Peru (2004) Individual owner by plot, only when titled: Nicaragua (2000), Honduras (2001) Husband, wife & one other adult: Kenya & Ethiopia (2004) By head and spouse: Ecuador (200x)
LIVESTOCK	Husband, wife & one other adult: Kenya & Ethiopia (2004)
HOUSING	Individual & jt. ownership: Honduras (2001) Husband, wife & one other adult: Kenya & Ethiopia (2004) By head and spouse: Ecuador (200x)
BUSINESS ASSETS	
- Farm Equipment	Husband, wife & one other adult: Kenya & Ethiopia (2004)
- Non-Ag Business	Individual & jt. ownership: Nicaragua (2000), Honduras (2001) Husband, wife & one other adult: Kenya & Ethiopia (2004) By head and spouse: Ecuador (200x) Which householders own the business: Indonesia (2000)
SAVINGS AND OTHER FINANCIAL ASSETS	
- Savings	Individual: Honduras (2001) Husband, wife & one other adult: Kenya & Ethiopia (2004) Head and spouse: Ecuador (200x)
- Pension Income	Individual income from: Nicaragua (2000), Honduras (2001), Peru (2004)
- Rent, Interest & Dividends	Individual income from: Nicaragua (2000), Peru (2004)
OTHER PHYSICAL ASSETS	
- Consumer Durables	By householder: Indonesia (2000) Husband, Wife & one other adult: Kenya & Ethiopia (2004) By head and spouse: Ecuador (200x) By householder: Indonesia (2000) Husband, Wife & one other adult: Kenya & Ethiopia (2004)
- Vehicles	By head and spouse: Ecuador (200x) By householder: Indonesia (2000) By head and spouse: Ecuador (200x)
- Jewelry/cloth	
CREDIT/DEBT	By individual: Nicaragua (2000), Honduras (2001), Peru (2004) Head, wife & one other adult: Kenya & Ethiopia (2004) By head and spouse: Ecuador (200x)
ASSETS BROUGHT TO MARRIAGE	Details on assets brought to marriage: South Africa (1998) Assets owned just prior to latest wedding: Indonesia (2000) Land only, by individual: Peru (2004)
INHERITANCE	If titled, know who inherited land and from whom; also, who inherited from them: Nicaragua (2000) and Honduras (2001) Know if in current year (& in 1995) inherited cash: Nicaragua (2000) Who inherited land from head & spouse: Peru (2004)

Sources for Table A6:

Bolivia, Ecuador, the Philippines, and Thailand (2002) - "Urban Poor Homebased Workers Survey (UPHWS)." Lourdes Beneria, Maria Floro, John Messier, Aphitchaya Nguanbanchong, Anant Pichetpongsa, and Susanna Schaller. American University and Cornell University, Washington DC and Ithaca, New York.

Honduras (2001) – Comunidad Económica Europea, Banco Mundial, Universidad de Wisconsin and ESA Consultores. *Estudio de las Dinámicas de la Economía Rural.*

Indonesia (2000) *Indonesia Family Life Survey*. Rand Corporation, Santa Monica, California.

Kenya & Ethiopia (2004) – Codebook for Data Collected Under the Improving Pastoral Risk Management on East African Rangelands (PARIMA) Project. Christopher Barrett, Getachew Gebru, John McPeak, Andrew Mude, Jaqueline Vanderpuye-Orgle, and Amare Yirbecho. Cornell University, Ithaca, New York.

Nicaragua (2000) – FIDEG and Universidad de Wisconsin. *Estudio de las Dinámicas de la Economía Rural.*

Peru (2004) - PETT (Programa Especial de Titulación de la Tierra) survey of land titling beneficiares carried out by GRADE, Lima.

South Africa: KwaZulu-Natal Income Dynamics Study (KIDS), 1993-1998 Durban, South Africa: University of KwaZulu-Natal in cooperation with the University of Wisconsin, Madison and the International Food Policy Research Institute (IFPRI)

Notes

[1] Currently, the lack of data makes it difficult to operationalize this recommendation, but as we show below, by adding a minimum number of questions to routine national-level household surveys, the development of a reliable gender asset gap indicator is feasible in the short to medium term.
[2] Some researchers define assets much more broadly than this and include forms of human capital, such as health and education, children, time, and social status, as assets. See Moser (2007) for a comprehensive review of these broader approaches. Our interest here is on physical and financial assets only.
[3] Especially for women, a house may be an important asset. Besides being a source of income (whether by renting rooms or as a locale for an income-generating activity), home ownership provides a measure of security for a woman and her children that other assets may not provide (ICRW 2006).
[4] Friedemann-Sanchez (2006) examines the gendered patterns of housing and lot ownership by floriculture workers in Columbia, and Datta (2006) examines the impact of jointly titling housing in former squatter communities in India.
[5] Deere and Doss (2006b) review this literature.
[6] A word of caution needs to be issued regarding such comparisons. Survey questionnaires do not always allow the same indicator to be calculated The data for Latin America cover different indicators, such as the incidence of plot ownership by sex vs. whom in the household is the primary landowner. Few allow calculation of the division by sex of total land owned.
[7] Further complicating the picture is that in some areas, particularly in some communities in Africa, individuals may not own land, but they may own the crops that are grown on a particular plot of land. The crops on that plot may be an individual's asset, but this often cannot be discerned from a survey that asks only about land tenure or title. Similarly, trees may be important assets owned by people in some areas, but the recognized owners of the trees may not formally own the land.
[8] For example, the Botswana Tribal Land Act includes and distinguishes between the rights of avail and of way, and the rights to occupy, use, have access to, transact, and exclude (Adams 2003). For Ghana, Goldstein and Udry (2005: 5) note, "Individual claims over land overlap. Who ends up farming a specific plot is the outcome of a complex, sometimes contentious, process of negotiation… The act of cultivating a given plot may – or may not – be associated as well with the right to the produce of trees on the land, the right to lend the plot to a family member, the right to rent out the land, the right to make improvements, or the right to pass cultivation rights to one's heirs."
[9] See Tinker and Summerfield (1999) for additional information on the gender distribution of property rights in parts of China, Lao PDR, and Viet Nam.
[10] See, for example, Johnson (1999) and Shaw and Hill (2001) on the US and Warren (2006) on the UK.
[11] New Zealand and South Africa are two countries with such pensions.
[12] See Deere and León (2001), chapter 4, for the significance of CEDAW with respect to the attainment of women's property rights, particularly for married women.
[13] See Deere and Doss (2006a and 2006b) and Deere and León (2005) for brief historical summaries of how these regimes developed in different parts of the world. In broad strokes, the separation of property regime governs in most Islamic countries as well as in those countries of the common law tradition, including most former British colonies. Full and partial community property regimes are associated with those countries whose legal systems are derived from Roman law, specifically Southern Europe and Latin America.
[14] Under legal systems derived from Roman law all children are treated equally. In contrast, Islamic law has a noted bias towards sons, with daughter generally inheriting only one-half the share of sons. Another important differentiating characteristic historically has been primogeniture, where the eldest son inherits all or the majority of a parent's estate.
[15] In most cases the forced heirs are those who are in the first order of inheritance under intestate succession. In some case, however, as in some Latin American countries, spouses may be included in the first order under intestate, but not be a forced heir under testamentary law.
[16] Matrilineal inheritance, for example, can be found in northern and central Kerala, in south India and Meghalaya, in the northeast (Agarwal 1994), and in parts of Sri Lanka.
[17] The Hindu Succession Act of 1956 made sons, daughters and widows equal claimants in a man's separate property and in his share in the joint family property and gave women full control over the land they inherited. The Muslim Personal Law Shariat Application Act of 1937 also enhanced Muslim women's property rights compared with those prevailing under custom (Agarwal 2002b).
[18] The General Law is applicable to the entire population unless covered by one of three personal laws.

[19] Many more multiple-purpose survey questionnaires were reviewed, particularly for Latin America. Table 3 reports only those that the World Bank considers to be LSMS or quasi-LSMS questionnaires. These 72 units of observation correspond to more than 72 surveys since when the same questionnaire was applied in multiple years it is considered as only one unit.

[20] For Latin America and the Caribbean, beyond the 38 LSMS and quasi-LSMS questionnaires reported in Table 3, we examined another 63 questionnaires from multi-topic national-level surveys, which were either labor force surveys or household income and expenditure surveys. Overall, the LSMS questionnaires did a much more complete job of covering household asset ownership than did the others, particularly with respect to land, livestock, business assets, savings, and consumer durables.

[21] In Table A1, such general questions on the value of assets have been included under the reservation price, although it would have been preferable to identify this method of valuation separately.

[22] The LSMS in many countries have begun to collect individual-level data on pension income and rent, interest and dividends. But, this does not tell us much about wealth and the overall gender asset gap, for all the problems noted earlier, particularly that they represent flow rather than stock data. The incidence of such individual-level data is thus not reported in Table 4.

[23] In Paraguay, in the 2000-01 LSMS 37 percent of the farm enterprises do not have a land title, eliminating the collection of gender-disaggregated data on over one-third of the farms (Deere, Durán, Mardon and Masterson 2005b: 4-6).

[24] The Paraguayan survey precludes, for example, an analysis of the extent to which reported land ownership patterns conform to the dominant marital regime in this country of partial community property. See Deere, Duran, Mardon and Masterson (2005b).

[25] To avoid confusion, we use the term 'farm enterprise' to refer to a unit made up of multiple plots or small farms. We will use the terms plots and farms interchangeably as they appear in the questionnaires.

[26] The 1998 KwaZulu Income Dynamics Study was a follow up to the 1993 LSMS survey, but was conducted by the University of KwaZuluNatal in cooperation with the University of Wisconsin and IFPRI.

[27] A number of surveys solicited individual level data for consumer durables that were sold or purchased in the previous year (a flow, rather than stock concept).

[28] The questionnaires are all available on the LSMS website (www.worldbank.org/lsms).

[29] The Ghana questionnaire does not currently include sufficient information to analyze the individual level ownership of the dwelling. The questionnaire asks about the occupancy status of the house. It does not ask questions about ownership beyond including "owned" as one option for answering the question about present occupancy status. Thus, at a minimum, we would recommend adding a question regarding which household member owns the house, whether there is a title deed, and if so, which household member(s) names are on it.

[30] The Vietnam questionnaire does not specify whether it is the price at which they could sell it or the price that they would have to pay to purchase it.

[31] In the Guatemala survey, the initial questions ask about the tenancy status of the dwelling in combination with its form of acquisition: whether it is owned and totally paid; owned and currently being paid off; whether it was an inheritance or gift; the right of possession; whether it was rented, transferred or loaned; or held in another form. This question combines ownership with method of acquisition but does not ask who owns, inherited, or received the dwelling. We recommend asking one question about the tenancy status (owned outright; owned but mortgaged; rented; right of possession; or other). If the dwelling is owned, the next question should ask which household member(s) owns the dwelling. A separate question should ask how the dwelling was acquired: inherited; gift/transfer; purchased; or built.

[32] Although the government remains the single owner of land in Vietnam, the Land Law of 1993 gave significant long-term use rights to households: the right to inherit, transfer, exchange, lease and mortgage their land-use rights. The law initiated an extensive titling program in Vietnam, and by the year 2000, nearly 11 million land titles (or Land Use Certificates as they are called) had been issued to rural households (Do and Iyer 2007). Each household in a commune received an average of 10-12 small plots. Yet, surprisingly, the Vietnam LSMS does not ask specific questions on whether land is owned or whether a title deed is held and by whom. Two questions could be added regarding which individual household member owns the land and holds a title deed.

[33] The Ghana questionnaire asks for the holder of each plot. Assuming that the holder is the person with the rights to the land, some individual-level analysis can be done with the data from these questions. Nonetheless, we would recommend clarifying ownership rights. Instead of asking whether the household owns the farm, we recommend asking which household member(s) own the farm. The questionnaire currently asks whether the land is owned, with or without a deed, or not owned. If a deed is held, we recommend asking whose name(s) are on the deed. And

instead of asking whether the "household" has the right to sell or use it as collateral, we recommend asking whether the individual holder has these rights. We also recommend including the right to bequeath the land, as well as the right to sell or use it as collateral. Thus, the questionnaire contains a suitable framework for individual level questions, but additional questions are needed to clarify individual level ownership.

[34] The Ghana questionnaire asks about the value of sales of milk, other dairy products, eggs, hides/wool/skin in the section on other agricultural income. It is not disaggregated by type of animal or by owner