



*Collecting individual level asset data for  
gender analysis of poverty and rural employment*

Cheryl Doss  
Yale University, USA

Caren Grown  
American University, USA

Carmen Diana Deere  
University of Florida, USA

Paper presented at the FAO-IFAD-ILO Workshop on Gaps, trends and  
current research in gender dimensions of agricultural and rural employment:  
differentiated pathways out of poverty  
Rome, 31 March - 2 April 2009



*This paper represents work in progress and is circulated for discussion and comment. Views and opinions expressed here are those of the authors, and do not represent official positions or endorsement of the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD), or the International Labour Office (ILO).*

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### **Abstract**

Ownership and control over assets such as land and housing provide multiple benefits to individuals and households, including a secure place to live, livelihoods, protection during emergencies, and collateral. Many studies demonstrate the important relationship between asset ownership, poverty reduction, and growth. Unfortunately, few studies – either at the micro or macro levels– examine the gender dimensions of asset ownership. And without information on the gender dimensions of asset ownership, it is difficult to determine the impact of the gender distribution of assets on rural employment and opportunities for women to move out of poverty.

To allow for a gender analysis of assets, data would have to be collected at the individual level, rather than only at the household level. While individual-level income data is now routinely collected, assets are still typically assumed to be owned collectively by household members. In addition, because men and women often own different assets and acquire them through different channels, it is critical to collect data on a full range of assets. This paper discusses the best practices on data collection of assets at the individual level. In particular, it focuses on how to collect and analyze this data to understand ownership and how the control over assets impacts women’s opportunities, especially in rural areas. Implementing these best practices for data collection can yield answers to important policy questions. Individual level information is important for reform of key laws, especially those on divorce and inheritance. One of the key sources of vulnerability for many women is the dissolution of their household. Women’s ability to retain ownership and control over assets when the household dissolves not only affects their vulnerability, but also their bargaining power during marriage. Individual level data on assets is essential for specific programs aimed at asset accumulation, such as land redistribution or titling programs or those promoting home ownership. But it can also illuminate other key development policy issues such as the empowerment of women, poverty reduction, social protection, and the promotion of pro-poor economic growth. Adding very few additional questions to survey data could allow researchers and policymakers to calculate the gender-asset gap, to understand better the patterns of asset accumulation and use, and to develop policies that recognize the relationships between household formation and dissolution and asset accumulation and poverty. While some data is being collected by individual small-sample surveys and this data has been of great importance in demonstrating the potential impacts of analyses of the gender distribution of assets, this data is not available at national levels. Our analysis of survey instruments shows that it is possible, and often relatively simple, to collect at least the basic individual level asset data. It is critical that we begin to do so in large, multi-purpose household surveys in order to be able to document and demonstrate the magnitudes of these effects to policy makers and to be able to develop effective strategies for women’s rural employment.

## 1. Introduction

Many studies demonstrate the important relationship between asset ownership, poverty reduction, and growth. Ownership and control over assets such as land and housing provide multiple benefits to individuals and households, including a secure place to live, livelihoods, protection during emergencies, and collateral. Productive assets – such as land or housing - are especially important for rural people, who frequently rely on a combination of agricultural production and self-employment to obtain their livelihoods.<sup>1</sup>

Unfortunately, few studies – either at the micro or macro levels– examine the gender dimensions of asset ownership. Existing information is limited, but available evidence suggests that rural women are less likely than men to have ownership or control over 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). Gender biases in a range of institutions, including government, communities, families, and the market, limit women’s ability to obtain assets and use them productively.

A key element to reducing poverty is strengthening the ability of households and individuals to respond to aggregate shocks, such as droughts or other weather related events, as well as idiosyncratic shocks, such as illness or divorce. For women, one of the greatest sources of vulnerability is the potential dissolution of their household, through divorce or the death of their husband. Asset ownership provides one important means to cope with vulnerability and to avoid impoverishment (Hulme and McKay 2005; Hulme and Shepherd 2003; Moser, 2007). The ability to retain assets in the face of shocks may differ for men and women.

Most economists agree that economic growth is key to poverty reduction, and how to make growth pro-poor is a focus of much of the current literature. The proposition that an unequal distribution of assets, especially land, can hinder economic growth has generally been accepted (Deininger and Squire 1996). Birdsall and Londoño (1997: 23), for example, conclude that a better distribution of assets to include the poor would not only increase their incomes, but would increase aggregate growth. Although these 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).

Understanding women’s asset ownership means collecting information on assets at the individual level. Individual level data on assets are important for at least five reasons. First, the limited available evidence suggests that the patterns of ownership, acquisition, and use of assets vary by gender, which has implications for the level and growth of household income, as well as the ability of a household to cope with economic shocks. Second, individual level data on asset ownership is needed to understand the relationship among assets in generating employment opportunities. For example, in order to productively use land, one may also need agricultural equipment, livestock, and credit. One set of assets may also serve as collateral to borrow to increase the productivity of other assets. Third, individual level asset data will encourage better program design. Understanding the security of women’s tenure to land, for example, will reduce the risk of designing programs that increase agricultural productivity at the cost of women losing their rights to the land. Fourth, this data is needed to explore the impact of development

programs and processes on women's asset ownership over time, in order to know whether the gender asset gap is increasing or decreasing and whether women are losing or gaining property rights relative to men. Finally, individual level data on asset ownership will allow better comparisons across regions and countries. Without consistent measures of the incidence of women's assets ownership, the household distribution of productive assets, and/or the gender-asset gap, international comparisons cannot reliably be made.

This paper discusses best practices for data collection on assets at the household and individual levels. In particular, it focuses on how to collect and analyze this data to understand not only access and ownership patterns but also how the control over assets impacts women's opportunities, especially in rural areas. It provides a menu of options for statistical agencies and survey designers that range from identifying a minimal set of questions that can be incorporated into a multi-purpose household questionnaire to implementing a full-scale asset survey.

This paper draws on an earlier analysis by the authors of 72 Living Standard Measurement Study (LSMS) household surveys, 13 survey instruments developed by the International Food Policy Research Institute (IFPRI), five developed by the International Center for Research on Women (ICRW), and ten others.<sup>2</sup> That analysis found that while most LSMS surveys collect household-level data on the incidence of ownership of consumer durables (including vehicles), housing, land and livestock, fewer collect data on farm equipment, business assets, and savings. Moreover, questions about valuation were skimpy and used different methods for establishing asset values, making comparisons across datasets problematic. In general, few LSMS surveys collected data on asset ownership at the individual level. Without this individual level data, gender analysis cannot be done. The earlier analysis recommended that, at a minimum, surveys should ask who owns each major asset and allow for multiple owners of a given asset. In most multi-purpose surveys, this requires only adding few additional questions about each asset. But these questions are key to understanding rural employment opportunities for women.

The LSMS surveys are the only ones which we reviewed which are nationally representative. The other surveys, conducted by a range of organizations, especially IFPRI and ICRW, are small-scale surveys collected for a particular purpose. Yet, they provide insights on how this data could be collected, especially in stand-alone specially designed projects. Analyses of these surveys demonstrate the importance of understanding assets at the individual level (Quisumbing and Hallman 2006).

There are a number of challenges to collecting individual-level asset data. First, there are conceptual difficulties in sorting out asset ownership within married couples. Legal marital regimes vary widely across countries (and even within some countries) and these determine the rights of spouses to assets brought to marriage and accumulated while married. In addition, the social norms and customs may not conform to the legal rules.

Second, because men and women often own different assets and acquire them through different channels, it is critical to collect data on a full range of assets. Many studies have focused on just one type of asset, such as land, examining how land is distributed between men and women. But, for example, parents may provide boys and girls with different assets

(Quisumbing, et al., 2004); thus, examining only one type may provide a misleading picture of the gender distribution of asset ownership and the role that different assets play in poverty reduction or household income growth.

Third, the rights over many assets are complex and not just simply a matter of titling or formal ownership. For example, women may have the right to farm land without also having formal ownership. Or they may formally own the land, but social norms may dictate that they cannot make any decisions regarding its use. Thus, it is important to disentangle the bundle of rights over land – including those regarding about decision-making, uses of the land, control the proceeds of specific products, and other issues - as well as its formal ownership. Finally, it is important to collect data on the various social relationships – within households and communities - that structure individual access to and control over specific assets. Thus, data must be collected on both males and females within households, and from key others in communities (e.g., village chiefs) to be able to disentangle the social context of rights and responsibilities regarding asset ownership and control.

The following sections discuss the approach to data collection of assets at the individual level recommended by Doss, Grown, and Deere (2008), based on their earlier analysis of best practices in multi-topic and stand alone asset surveys. It is intended as an outline of the questions that should be addressed in a module specifically constructed to capture the gender dimensions of asset ownership and control at the individual as well as household level. The discussion is organized by type of asset: land, housing, livestock, financial assets, and other physical assets. Each section discusses why it is important to collect data on each of these assets at the individual level and concludes with recommendations regarding the minimal information necessary for sex-disaggregated incidence analysis and supplementary questions that are useful for broader socio-economic analysis. The minimum and supplementary questions are those that could be added to existing LSMS and other multipurpose surveys at minimal cost.

## **2. Data Collection on Asset Ownership and Control**

The first step in a module designed to collect information on assets is to collect an inventory of all household assets from one member of the household. The second step is to ask each adult household member about his or her specific rights to each of these assets and to any other assets not listed in the initial inventory. Surveying all adult members of the household allows for matching assets across household members in order to disentangle individual and joint rights and ensures that no asset is missed in the survey. The third step is to ask at least two adult members of the household – male and female—additional questions about each specific type of asset.

## *Land*

Land is clearly the most important productive asset in rural areas. Data on land is most frequently available at the household level, which restricts comparisons of land ownership to male and female-headed households, not ownership by individual men and women.<sup>3</sup> Because land issues are complicated, it is important for an asset module to collect data not just on formal ownership but on the range of rights to land and how those are allocated to different household members. For rural people to move out of poverty through agriculture, they do not necessarily have to have formal ownership of land. Indeed, tenure security is the important factor, and, in many places, tenure security is not simply dependent on formal ownership, e.g., having a deed or title. Thus it is important to interrogate the range of rights that individuals have over land, including the right to make decisions regarding the use of the land and allocation of the proceeds from land and labor, and how this differs for men and women.

Increases in agricultural productivity are necessary to move rural people out of poverty. Yet, the relationships between agricultural productivity and tenure security are complex. Tenure security may be needed in order for people to be willing to invest in new technologies and management techniques. At the same time new technologies and techniques may increase the value of land (due to its increased potential productivity) and result in farmers with less secure tenure losing their access to the land. While most researchers examine this from the perspective of household tenure security, it is also important to look at individual tenure security. Examples of projects designed to benefit women farmers but which resulted in women losing their claims to the land once new technologies were introduced are well documented in the literature.<sup>4</sup> (von Braun and Webb, 1989; CITE). This suggests that it is critical to understand how women obtain tenure security and, when necessary, to find ways to strengthen women's claims to land before projects are implemented. This will encourage women to invest in their land and to keep the benefits from the investments.

It is important to sequence questions on use rights before questions on ownership rights, since reversing the order may mean that important information is lost. By beginning with use rights, it is then possible to move on to more specific questions about actual ownership. Data is needed both to analyze individual-level land ownership patterns and to help to address these more complex issues of individual-level rights over land.

The best practice among the surveys we reviewed is to ask each household member about each plot of land that is owned or farmed by anyone in the household. The individual should then be asked whether s/he has the right to farm each plot and then whether s/he can sell, bequeath, mortgage, rent it out, or loan it out. This basic information at the individual level is critical to understanding how individual land rights impact rural employment and poverty.

If the individual claims to have some rights over the land, then further questions can be added to allow for a more detailed gender analysis. These additional questions include when the individual obtained rights to the land and how s/he acquired these rights. Information on timing of the acquisition of land is important to understand how the marital and inheritance regimes impact access to land. Men and women often acquire land through different channels. For

example, in Latin America, although men are more likely than women to inherit land, the most important channel of land acquisition for women is through inheritance (Deere and León, 2003). These different channels may impart different claims over the land and provide different levels of tenure security and may also impact the uses to which the land can be put.

A next set of questions can be added about each plot to determine the uses to which the land is put and decision making over the land. Who makes the decisions over what crops are grown and how, and who provides the labor? Who decides on what share of the harvest is to be sold and keeps the revenue from sales? These questions provide the necessary information to understand who controls and manages the land, e.g., the bundle of rights over the land. For the implementation of many agricultural policies, it is critical to know both who owns the land and who makes the decisions regarding production. While frequently these may be the same person, in many instances it will be different household members. Questions regarding who makes production and investment decisions are important for understanding both women's bargaining power and household welfare. They are also crucial for analyses of men's and women's agricultural productivity.

Regardless of which of these additional questions are included in the module, the final part of the land section should ask about tenure security of each plot. This section is where questions about land titles should be introduced, such as whether there is an ownership document and whose name(s) are on it, allowing for multiple owners. Indicators of the individual's perception of land security may be obtained by asking whether or not s/he expects to have access to the land the following year and in five years time. Respondents may also be asked whether they can be evicted from the land. These questions about security of tenure are particularly important in contexts where land rights are in flux. An additional way to determine tenure security is to ask respondents whether they have lost access to land in the past five years. This provides a simple measure of whether they have experienced changes in their access to land and provides a retrospective measure of tenure security.

For some purposes, such as to calculate the gender-asset gap, it is necessary to ask about the value of the land. The best practice here is to ask about the potential sales price and the potential rental income of each plot.

Most agricultural censuses and LSMS surveys include a question regarding the tenure of the farm. With time and resource constraints, the minimum question that we recommend be added to the census is, in the case of owner-operated farms, "who owns the farm", allowing for the possibility of multiple owners. In multi-purpose household surveys this question should be asked at the parcel level and should allow sufficient space for the identification numbers of at least two household members to be reported. This ownership question should always precede the question on whether an ownership document (and what kind) exists for the parcel, since otherwise valuable information is lost. Time and resources permitting, other questions can easily be included in the agricultural module of multi-purpose surveys about the form of acquisition of land.

## ***Housing***

Housing provides a place to live and often a place to work. Secure tenure over housing reduces vulnerability and ownership of housing reduces the likelihood of falling into poverty. There are large variations in tenure patterns for housing, including differing rights of individual household members to a particular dwelling.

The productive nature of housing may be especially true for rural women who frequently operate small businesses out of their homes, selling items such as cooked or processed food. Women's vulnerability and ability to earn a livelihood may depend on secure access to housing. Depending on tenure and family arrangements, women may lose their homes when their household dissolves. Reports of women being evicted from their homes when their husband dies of HIV/AIDS are common in parts of Southern and Eastern Africa (Human Rights Watch 2003; Alibur and Walker 2006).

In rural areas, it may be important to ask about both the house and the land upon which it is built. Ownership and rights may differ between the dwelling and the plot on which it rests. For example, people with long term leases to land may own a house that they built, even if they do not formally own the land. Similarly, squatters may own the dwelling, but not the plot of land. For simplicity in the discussion below, we refer to the house, but if the plot may be owned separately or by a different person, it should be treated as a separate asset in this section. In addition, questions should be asked regarding other dwellings (and real estate) that household members may own other than the residence; it cannot be assumed that only one dwelling unit is owned.

In a multi-purpose household survey, the minimum set of questions should focus on ownership and valuation of each dwelling owned by the members in each household. A fuller set of questions regarding housing in a stand-alone or embedded asset module should seek to establish who owns the house and what the ownership rights entail. Each adult household member should be asked about the rights that s/he has over the dwelling. Again, any questions about title or ownership deed should be asked at the end of the questions on housing, so that the interviewer can ask about the specific rights associated with ownership, regardless of whether a formal ownership document is held.

Similar to the questions about land rights, questions about housing rights include whether they can sell it, bequeath it, mortgage it, or rent it out. If individuals can exercise any of these rights, they should be asked whether they 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; do both people whose names appear on the title have to be involved in these decisions? Having information on the *de facto* rights that individual respondents have is as important as having the *de jure* rights to a particular piece of property.

If an individual claims to be an owner of the dwelling, either individually or jointly, follow up questions should explore how s/he acquired it. Typical answers would be that the house was inherited, received as a gift or transfer, purchased in the market or built. If the house

was acquired through inheritance or gift/transfer, additional questions should ask from whom it was received. If it was purchased, the respondent should be asked how the money was obtained – for example, through his or her own earnings, using the earnings of other household members, or by borrowing. And finally, if the respondent claims to have built the house, s/he should be asked who was involved in the actual building of the house. It is important to understand how the patterns of acquisition vary by gender; especially since the means of acquisition may impact the security of rights to the house.

In order to understand the patterns of asset accumulation, additional questions can ask when the house was acquired. For women, a key factor in the security of ownership may be whether the dwelling was acquired before marriage, as part of the marriage ceremony, during the marriage or after the marriage was dissolved. This is important given that the timing of acquisition (before or after marriage) is also a crucial differentiating factor among marital regimes under civil law (Deere and Doss 2006a). Moreover, some research shows that timing of acquisition of the house/land matters for women's bargaining power (ICRW 2006).

These 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.

The best practice in the surveys we reviewed is to determine valuation is to ask the value of the dwelling if it were sold today. Since in some areas, the sales market for housing is thin and people may not know the value of the dwelling, they could also be asked how much it would cost to construct the dwelling today and how much they could receive if the dwelling were rented out. These are hypothetical questions, rather than questions based on actual transactions. In areas without markets, people are often unable to answer hypothetical questions. In these cases, information about the characteristics of the dwelling may be used as proxies to calculate the economic value of the dwelling. These characteristics may include the type of roof and flooring, the dimensions of the dwelling, and the amenities that it has, such as running water or electricity.

To understand the role of the house in productive activities, a final set of questions should be included in stand-alone or full asset modules. These focus on whether the house is utilized as a base from which to produce commodities and income and include questions on whether any part of the house is rented out, whether there is a home garden, and whether the house is used for a business. If the house is used for any of these purposes, follow up questions should ask who makes the decisions about these activities and who keeps the income that is generated. These questions will allow analysis of the ways in which home ownership, tenure security, and the rights regarding the dwelling are related to the ability to generate income, as well as to individual bargaining power.

In summary, most national population censuses include a question on housing tenure, but very few if any follow-up, in the case of owner-occupied homes, with the question of "Who in the household owns the home?" Similarly, in the case of most multi-purposes household surveys,

it would be quite easy and cost efficient to ask just this additional question—providing space for the identification numbers of at least two household members to be listed. As in the case of land, this would yield valuable information on individual and joint ownership of key assets. Multi-purpose household surveys should also solicit further information on whether a formal ownership document exists for the dwelling and in whose name(s) it is registered, and time and resources permitting, how the dwelling was acquired.

### ***Livestock***

Another important asset in rural communities is livestock. Many development projects focus on providing livestock to rural households, as both a source of income and a source of nutrition. And many of these focus on providing livestock to women.

Yet, data is rarely collected on livestock ownership at the individual level. Instead, it is assumed that livestock belongs to the household. With livestock, as with land, the rights over livestock can be quite complex. For example, a woman may have the right to obtain milk from certain animals, even if she does not formally own the animals. Again, similar to land and housing, minimum questions include individual level information on ownership and valuation of specific animals. In a full asset module it would also be important to ask about the individual-level rights and responsibilities of the owners regarding these animals.

Complete individual-level data on all livestock is relatively easy to collect when the household owns only one or two animals, but it becomes more complex when the household has larger herds of animals. For example, in a study of pastoralist households in Northern Kenya and Southern Ethiopia, the household head was asked about all of the animals that belonged to anyone in the household.<sup>5</sup> The animals are often managed together, regardless of the individual owner. Other adults were then asked about the animals that they owned individually. It turned out that in a number of households, the wife or son reported owning more animals individually than the head reported were owned by the household overall. Thus, an asset survey must be designed so that ownership of animals can be matched up across household members.

At a minimum, each adult should be asked about the ownership (joint or individual) of animals and the value of each type of animal. To obtain the value, respondents should be asked how much they would earn if one of the adult animals were to be sold. Since markets for livestock are common, it is relatively easy to obtain valuation with one question on potential sales price.

Where it is common for households to own multiple animals of each type, questions can focus on the type of animal (e.g., cows, goats, etc.), rather than on each individual animal. For each type of animal, the individual should be asked how the animals were primarily acquired. The response options should include inheritance, purchase, gift/transfer, gift at marriage, bride price, born to own animals, or born to a household member's animals. Data on how each individual animal was acquired would require much more resources, including time and effort on the part of interviewers; asking the questions about the general type of animal enables the researcher to assess generally how individuals acquired their animals and to analyze whether the form of acquisition differs across household members and by gender.

Finally, as with land and housing, it is important not only to know about formal ownership, but also about each individual's rights over the animals. Providing a woman with a cow may have less impact if she is not allowed by custom to make the decisions regarding the care of the animal nor to keep the proceeds from the sale of milk. Respondents should be asked whether they can sell, bequeath, rent out, lend out, or slaughter animals. If they answer yes to any of these questions, they should be asked whether they can make the decision independently or need to consult or obtain permission from someone else. In addition, respondents should be asked who takes care of the animals and who keeps the revenue from sales of the animals, meat or milk. Again, these questions about rights and responsibilities provide for a much more nuanced understanding of what it means to own livestock and allow analysis of how the different aspects of livestock ownership affect women's and household income.

While individual-level data on the ownership of categories of livestock would be too onerous to collect in a national agricultural census, it can be successfully collected in the agricultural module of multi-purpose household surveys, including whether the various types of animals are generally individually or jointly owned by different family members (Deere, Alvarado and Twyman 2009). Questions regarding rights over animals and their acquisition are more properly incorporated in a stand-alone or specific embedded asset module.

### ***Non-farm businesses***

As agricultural productivity increases, the importance of non-farm businesses in the rural sector will also increase. Understanding what is needed to succeed in this sector, and how it differs by gender, will be crucial to implementing effective development programs.

Data collection on non-farm businesses must address a number of issues. First, it is important to get data on business assets. Even in places where women may be widely engaged in small businesses, often they have fewer assets or assets of lesser value than do similar businesses run by men. For example, in Ghana women are more likely than men to own business assets, but the mean value of assets held by men is much larger (Doss 2006).

Second, it is critical to know whether the manager of the business is the same as the owner of the business assets, and who makes the decisions about the business operations. The manager may not be the owner of the business and have different decision-making rights over the business assets.

Poor households often operate more than one business in order to meet livelihood needs, and it is therefore important to ask about all businesses operated by household members, including those that may be small and have few assets, especially since these are the ones more likely to be owned by women. Surveys which simply ask the household head about the business enterprises that contribute the most to household income may ignore the myriad of small-scale activities that generate income for women.

A number of the LSMS surveys currently ask detailed questions regarding the household's main two or three businesses. It would be very easy to add two additional questions regarding who in the household is the owner of the assets as well as who manages each business.

### ***Other Physical Assets***

A full-scale asset survey needs to collect information on ownership of other physical assets such as agricultural equipment and installations, as well as assets that are used for both production and consumption. Especially for women, the line between assets used for production and those used for consumption may be blurry. Kitchen items, ranging from pots and pans to a refrigerator, may be used for the preparation of food for both household consumption and for sale. Thus, it is important to ask questions not only about assets that might be viewed as productive assets, but also to ask about the other assets such as consumer durables, including appliances and vehicles. In addition, assets that are a store of wealth for women, such as jewelry, may provide them with additional security to allow them to invest in other productive assets, so it would be important to include items in a questionnaire such as jewelry, ceremonial cloth or other valuable items. For each asset owned, the respondent should be asked whether s/he owns it individually or jointly with another household member, how and when s/he acquired the item and whether s/he can sell it, give it away, or bequeath it to someone. Valuation should be obtained by asking how much the individual would receive for the item if it were sold today. To understand the role of assets in rural employment, respondents should be asked whether the asset is used to generate income.

Most multi-purpose household surveys include questions regarding household ownership of a series of consumer durables. It would be relatively easy to include an additional column in order to capture the identification number(s) of who in the household owns the item, whether individually or jointly.

### ***Financial Assets***

While credit is often viewed as necessary for moving out of poverty, especially in rural areas where agricultural and self-employment predominates, it is important to consider financial assets more broadly. Data on savings, credit and debt are needed to understand the pathways in and out of rural employment and poverty.

Financial assets include savings accounts, stocks, bonds, other financial instruments, and pensions. Savings accounts may include both formal and informal savings, such as banks, post office savings, savings and credit associations, rotating credit associations, cash savings (in local or foreign currencies), and others. At a minimum, respondents should be asked whether they have any of these forms of savings, whether it is theirs individually or owned jointly with another household member, and the current total value. If the savings are held in a formal

account, a question should ask whose name is on the account. In a full asset survey, additional questions can be added to understand how savings are accumulated; for instance, whether savings accounts are created out of the individual's or their spouse's earnings or whether they consist of funds that were inherited.

Pensions are almost always acquired by an individual, rather than a household. Broadly speaking there are two forms of pensions. Pensions may be in the form of an individual savings account, paid into by either the respondent or his or her employer. The other type of pension is a government or employer fund, which the employee and employer pay into and from which the employee will derive a stream of income. Some countries have only one form available, while others have numerous variations on these two types. Most surveys ask only about income from pension funds; few ask about pension assets (e.g., pension savings accounts held by individuals). A pension can be viewed both as an asset and as a source of an income flow. For those who are still working, a question should be asked about whether they have any source of retirement pension. Since many government jobs, which are often the only formal sector jobs in rural communities, provide pensions, it will be important to understand how pension income and the expectation of pension income affects decisions about rural employment.

To understand net wealth, both borrowing and lending are important. Many multi-purpose surveys include a credit module; it is common for the questions on credit to ask which household member borrowed the money or is responsible for repaying it. These are important questions. It would be even better to clarify whether the loans were taken individually or jointly with another household member. Appropriate valuation measures are the amount that was borrowed and the amount that is still owed. Finally, it is useful to ask whether collateral was required on the loan and if so, whether the collateral belonged to the individual contracting the loan. This information will assist researchers in determining the extent to which the ownership of assets is linked – owning assets that can be used as collateral may make it possible to purchase additional assets.

In many countries, one means of obtaining cash is by pawning assets. Thus, in addition to asking whether each individual has borrowed money, it is also useful to ask whether the individual has any items that are currently pawned. These questions provide additional information on how assets can be used by individuals to obtain needed cash.

It is important to know not only how much an individual has borrowed, but also whether others have borrowed from him or her. Each respondent should be asked whether anyone or any business owes them money, and if yes, how much was borrowed and how much is still owed. Finally, the respondent should be asked whether or not s/he expects the loan to be repaid.

The debt and credit questions together with the other asset information provide the components to calculate net worth at the individual level. They will also provide information specifically about individual levels of credit and debt so that policy makers can understand the gender biases in credit market outcomes and how they affect rural employment.

### 3. Conclusions and Recommendations

Routinely collecting individual level data on asset ownership is a necessary first step to being able to analyze the role of productive assets in rural employment and how this differs by gender. Small-sample household surveys have demonstrated that it is possible to successfully collect such data. The resulting analyses have shown that individual asset ownership is important in labor allocation and to the distribution of welfare within households.

An important first step in increasing our knowledge of the dimensions of asset inequality by gender would be for data on the individual and joint ownership of land and housing to be collected in the national censuses. The incidence of asset ownership by gender would provide a needed baseline indicator of gender inequality across countries. As we have argued, it would be relatively easy for existing multi-purpose surveys to add a minimal set of questions regarding individual and joint ownership of a broad range of specific assets as well as questions regarding how these assets were acquired and who made decisions regarding their use. Systematically collecting such data in these surveys would greatly enhance gender analysis of the processes through which assets are acquired and utilized.

More specific data, more suitable to an in-depth asset module, is needed to understand the gender differentiated access to and ownership of productive assets and the relationships with rural employment. Data on the full range of assets and bundles of rights held by individuals is needed to understand the interactions among the various assets held by household members and differential outcomes. This additional data would strengthen both project design and evaluation. With additional information, the possibility that projects will backfire and worsen, rather than improve women's employment opportunities and well-being will decrease. Recognition that women have insecure land rights in a region, for example, would mean that an intervention would need to secure these land rights before attempting to increase agricultural productivity and thus, increasing the possibility that women will lose rights to the land.

Collecting this data is key to developing better programs to allow women to move out of poverty and to understanding the role that the range of assets plays in moving people out of poverty and how this differs for men and women.

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<sup>1</sup> This paper focuses on what we term productive assets, principally physical and financial assets that can be used for wealth accumulation. Broadly defined, assets also include human capital, natural capital and social capital, but these forms have been dealt with amply in the literature (Moser 2007). The individual-level ownership of productive assets has been understudied – relative to other assets - from a gender perspective.

<sup>2</sup> The full analysis of the surveys is presented in Doss, Grown and Deere (2008).

<sup>3</sup> Drawing on eleven LSMS surveys for Latin America for which some individual asset data is available, Deere, Alvarado and Twyman (2009) demonstrate that it cannot be assumed that the reported household head is the owner of the “household’s land” or other assets.

<sup>4</sup> Many of these studies were looking at labor allocation issues, but also indicate that the women lost control over the land. E.G. Jones, 1983; von Braun and Webb, 1989.

<sup>5</sup> Unpublished analysis of project data by Cheryl Doss. The documentation of the data is available in Barrett, et al. 2004.