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Examining Gender Inequalities in Land Rights Indicators in Asia

Caitlin Kieran

Kathryn Sproule

Cheryl Doss

Agnes Quisumbing

Sung Mi Kim

CGIAR Research Program on Policies, Institutions, and Markets

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AUTHORS

Caitlin Kieran (C.kieran@cgiar.org) is a senior research assistant in the CGIAR Research Program on Policies, Institutions, and Markets, led by the International Food Policy Research Institute (IFPRI), Washington, DC.

Kathryn Sproule is a senior research assistant in the Poverty, Health, and Nutrition Division of IFPRI, Washington, DC.

Cheryl Doss is a senior lecturer in African Studies and Economics at Yale University, New Haven, CT.

Agnes R. Quisumbing is a senior research fellow in the Poverty, Health, and Nutrition Division of IFPRI, Washington, DC.

Sung Mi Kim is a PhD candidate in Political Science at Stanford University, CA.

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ABSTRACT

A broad consensus has emerged among both policymakers and researchers that strengthening women's property rights plays an important role in reducing poverty and achieving equitable growth. Despite the important role of land in rural livelihoods and as a form of wealth in many Asian cultures, surprisingly few nationally representative data exist on women's land rights in Asia. This paucity hinders the formulation and implementation of appropriate policies to reduce gender gaps in land rights. This paper reviews the available data on men's and women's land rights, identifies what can and cannot be measured by these data, and uses these measures to assess the gaps in the land rights of women and men. Building on the conceptual framework developed in 2014 by Doss et al., we utilize nationally representative individual- and plot-level data from Bangladesh, Tajikistan, Vietnam, and Timor-Leste to calculate five indicators: incidence of ownership by sex; distribution of ownership by sex; and distribution of plots, mean plot size, and distribution of land area, all by sex of owner. The results show large gender gaps in landownership across countries. However, critical data gaps cloud our understanding of land rights and why women fare better or worse in certain countries. In particular, the limited information on joint and individual ownership indicates that this is an important area for future data collection and analysis.

Keywords: gender, land, ownership, Asia

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1. INTRODUCTION

In 1994, Bina Agarwal published a groundbreaking book claiming that the most important economic factor affecting women is the gender gap in command over property, particularly land. Since then, there have been numerous studies of the impacts of women's property rights. A broad consensus has emerged that strengthening women's property rights over land, livestock, and other nonland assets is important for both poverty reduction and equitable growth. Yet 20 years after Agarwal's book was published, there remain surprisingly few nationally representative data on women's property rights and ownership in most of Asia. This data gap is particularly surprising because land, which is a key asset in rural areas, is necessary to access many other services and is arguably easier to measure than nonland assets, because units of measurement can be standardized and verified using spatial data. Land policy reform has typically focused on changing household rights to land, and not those of individuals within the household (Lastarria-Cornhiel et al. 2014). However, accumulating evidence from South Asia, Africa, and Latin America demonstrates that women are disadvantaged in both statutory and customary land tenure systems (Agarwal 1994; Lastarria-Cornhiel 1997; Kevane 2004; Deere and León 2001; Deere et al. 2012), and that men and women within households do not necessarily pool resources (Haddad, Hoddinott, and Alderman 1997). Thus, strengthening household rights to land does not automatically imply that women within those households have equal and secure land rights.

Surprisingly, there are more nationally representative data on women's land rights in Africa than there are in Asia. The Demographic and Health Surveys (DHS) include a question about whether the respondent owns land solely, jointly, or both. These data are available for six countries in Africa, but only two in Asia. The recent Living Standards Measurement Study–Integrated Surveys of Agriculture (LSMS-ISA) for six countries in Africa collect detailed information on landholdings, including plot size and ownership information for each plot. The data gaps in Asia on men's, women's, and joint landownership are particularly severe. These gaps may arise from misconceptions about the nature of property rights, given the assumption that all Asian agriculture is “joint.” Early work on farming systems in developing countries (Boserup 1970; Lele 1986) identifies three general types: (1) extensive, land-surplus systems; (2) intensively cultivated, labor-surplus systems with a unimodal farm size distribution; and (3) dualistic systems with different factor intensities between large and small farms.

These systems have been thought to coexist with different family structure “types”: the polygamous societies of Africa, in which there is less congruence between the interests of women and those of their husbands; and the monogamous extended/nuclear family type in Asia and Latin America, in which men make most agricultural decisions. For example, it is common to differentiate the unified “family farms” in Asia from those in Africa south of the Sahara, where households hold several granaries or purses, controlled by different individuals (Dey 1985). However, these systems are themselves evolving, with empirical evidence challenging preconceived notions of gender division of labor by crop into “men's crops” and “women's crops” (Doss 2002).

Such assumptions about the nature of “family farming” in Asia have shaped the availability of sex-disaggregated data and research in the region. While there has been a larger body of research with a regional focus on Asia in the past few decades, these studies typically use disaggregated labor rather than landownership data. This is likely the result of assumptions that farming is conducted jointly and output is shared (Peterman, Behrman, and Quisumbing 2014).

In this paper, we initially review the literature that provides measures of women's landownership in Asia. Then we explore the few nationally representative datasets available on women's landownership in Asia. We identify five indicators of women's land rights and calculate those for which data are available. Detailed analyses are presented from the four countries where data are available to calculate all five indicators: Bangladesh, Tajikistan, Timor-Leste, and Vietnam. Because these surveys were intended to assess household living standards, their coverage is limited to households and excludes other entities that might own land, such as corporations or collectives. None of the surveys contain the information required to analyze women's and men's rights over all agricultural land. Thus, this paper focuses on gendered patterns of ownership of household land.

2. MEASUREMENT OF SEX-DISAGGREGATED LAND INDICATORS

One of the challenges of the existing literature on women's property rights is that each study uses a different definition of landownership or property rights and presents different indicators. Each indicator provides information on different aspects of these issues, but they are often discussed interchangeably. Drawing from Doss et al. (forthcoming), we identify five key indicators of landownership to review the existing literature and as a framework for analyzing the available data on women's landownership in Asia.

Indicators 1 and 2 use individual men and women as the unit of analysis and identify whether each individual owns land. Indicator 1 presents the incidence of ownership—the percentage of women who are landowners and the percentage of men who are landowners:

$$(1) \frac{\text{Women landowners}}{\text{Total number of women}}, \frac{\text{Men landowners}}{\text{Total number of men}}$$

Depending on the available data, the numerator could specify the form of ownership such as sole or joint ownership.

Indicator 2 distributes the landowners by sex, indicating the percentage of landowners who are women and the percentage of landowners who are men:

$$(2) \frac{\text{Women landowners}}{\text{Total number of landowners}}, \frac{\text{Men landowners}}{\text{Total number of landowners}}$$

While the numerator is the same as in (1), the denominator is now landowners.

The first two indicators use people as the unit of analysis; the remaining indicators are based on land. Indicator 3 is the distribution of plot ownership by sex:

$$(3) \frac{\text{Number of plots owned by women}}{\text{Total number of plots}}, \frac{\text{Number of plots owned by men}}{\text{Total number of plots}}, \frac{\text{Number of plots owned jointly by men and women}}{\text{Total number of plots}}$$

This measure does not account for the difference in size and quality among plots, but it gives a simple measure of how the plots are owned.¹⁹

Indicator 4 compares the mean size of plots:

$$(4) \frac{\text{Land area owned by women}}{\text{Number of plots owned by women}}, \frac{\text{Land area owned by men}}{\text{Number of plots owned by men}}, \frac{\text{Land area owned jointly by men and women}}{\text{Number of plots owned jointly by men and women}}$$

This information is often presented in agricultural studies because it is relatively easy to calculate, but for this measure to provide information on patterns of women's landownership, data on both mean plot size and the number of plots owned by men and women are required.

The most useful measure using land as the unit of analysis compares the land area owned by women, by men, and jointly by men and women as a percentage of the total owned land area. Although it may also be relevant to calculate measures based on land values, these may reflect land market imperfections as well as location—if land markets are absent or imperfect, the land value measure will be less informative than the area measure.

¹⁹ This measure could also be used to consider the form of ownership, using categories of individually owned by women, individually owned by men, owned jointly by a couple, and other forms of ownership, as explained by Doss and colleagues (forthcoming).

$$(5) \frac{\text{Land area owned by women}}{\text{Total land area}}, \frac{\text{Land area owned by men}}{\text{Total land area}}, \frac{\text{Land area owned jointly by men and women}}{\text{Total land area}}$$

$$\frac{\text{Land value owned by women}}{\text{Total land value}}, \frac{\text{Land value owned by men}}{\text{Total land value}}, \frac{\text{Land value owned jointly by men and women}}{\text{Total land value}}$$

Together, these five indicators provide a comprehensive picture of women's landownership.

3. EXISTING EVIDENCE FROM MICROLEVEL STUDIES IN ASIA

The existing literature provides little information on gendered bundles of rights over land in Asia. We reviewed studies based on data collected in or after 2000 that analyze data that are either nationally or subnationally representative, with sample sizes of at least 400 observations. While some specify agricultural land, others include a broader definition of land. In total, we identified 15 studies from 7 countries (Bangladesh, Cambodia, India, Kyrgyz Republic, Nepal, Sri Lanka, and Vietnam) that present landownership information by gender. Only 5 are nationally representative.

Other datasets collect individual-level data on landownership, but these data and the papers associated with them do not meet our review criteria. For example, the Women's Empowerment in Agriculture Index (WEAI) gathers data from the primary male and female decisionmaker of each household regarding who owns most of the household's agricultural land. Because it does not identify all of the landowners, none of the indicators can be calculated. Other studies analyze data by the sex of the household head (de Brauw et al. 2013 on China; Shahriari et al. 2009 on Tajikistan), but not by the sex of the individual owner. Additional studies may have the data to calculate these indicators, but they do not do so. A China study by de Brauw and others (2008) looks at the difference in cultivated land per laborer among "female-managed" as well as "other-managed" farms. The Suaahara Baseline Survey, conducted in Nepal in 2012, collected information on decisionmaking regarding each plot of land; however, to date no one has used these data to calculate the indicators of landownership.²⁰ Finally, the Indonesia Family Life Survey datasets do collect individual landownership information (not at the plot level), but no papers analyzing these data report any landownership indicators.²¹

Table 3.1 presents the results of the existing studies. Although inconsistent reporting of the measures makes it challenging to compare across indicators or countries, the review reveals considerable gender inequality for almost all statistics presented. The most commonly reported indicator is the incidence of ownership (Indicator 1)—which is usually given as a *self-reported*²² measure. For every instance of Indicator 1 for which statistics on both men and women are presented, with the exception of one study in India (ICRW 2006), the incidence of women's ownership is much lower than men's. Three of the studies reporting Indicator 1 also indicate whether ownership is documented, that is, whether or not there is a legal certificate, title, and so on. The share of landowners who are men/women (Indicator 2) is reported three times and also indicates considerable gender inequality. Statistics on the percentage of joint ownership are presented in two of the studies and range from 2 percent in Karnataka, India (Swaminathan, Suchitra, and Lahoti 2011), to 32.6 percent in Nepal (Pandey 2003). The distribution of plots by sex of owner (Indicator 3) is reported in one study in the Kyrgyz Republic (CEDAW 2007 and two in Vietnam (Scott et al. 2010; Menon, Rodgers, and Nguyen 2014). In both countries women fare worse than men. The mean plot size (Indicator 4) is reported in just two studies, only one of which calculates the statistics for both men and women (Swaminathan, Suchitra, and Lahoti 2012). This study, in India, finds that women's plots are, on average, smaller than men's plots. Finally, the distribution of land area by sex of owner (Indicator 5), also reported by only two studies, shows that women fare much worse than men—owning just 9 percent of arable land area in the Kyrgyz Republic (CEDAW 2007) and 12 percent of land in India (Swaminathan, Suchitra, and Lahoti 2012).

²⁰ We exclude this dataset from our own analysis because it is also not nationally representative.

²¹ This survey is representative of 83 percent of the Indonesian population and interviews 30,000 people living in 13 of the 27 provinces. Individual landownership information is available for the 1993–1994, 1997–1998, 2000, and 2007–2008 rounds of the survey. Indicators 1 and 2 could be calculated, but to the best of our knowledge, no one has done so.

²² Self-reported measures, such as those obtained through the majority of these questionnaires, ask the respondent for information directly. The self-reported ownership measure allows the respondent to define ownership.

Table 3.1 Review of published large-scale microlevel estimates on gendered land outcomes in Asia (2003–2013)

Author(s) (year published)	Country (year data collected)	Sample size	Sampling strategy and characteristics	Type of land surveyed	Indicator ^a	Further description of indicator	Women	Men	Joint	Other	Data source(s)	Level of analysis
World Bank (2008)	Bangladesh (2006)	5,000 adults	Nationally representative	Any land	1	Name on marital property paper	< 10%	NA	NA	NA	World Bank Gender Norms Survey (WBSGN)	Person
Cambodia, NIS; and ORC Macro (2006)	Cambodia (2005)	4,201 women	Nationally representative	Any land	1	Own land alone	13.6%				Cambodia Demographic and Health Surveys (CDHS)	Person
						Own land jointly	46.5%	NA	NA	NA		
						Own land	60.1%					
International Center for Research on Women (ICRW) (2006)	India (2002)	450 women ^b	West Bengal, District 24 (3 subsites representing rural/urban, Hindu/Muslim, and	Agricultural and residential land	1	Own land	36% ^c	NA	NA	NA	ICRW and Center for Studies in Social Sciences, Kolkata, India	Person
						Own home and land	9%					
Swaminathan, Suchitra, and Lahoti (2011)	India (2010–2011)	4,110 households (men and women interviewed from each)	Karnataka state (8 districts)	Agricultural land	2	Rural	14%	71%	2% ^d	12% ^e	Karnataka Household Asset Survey (KHAS)	Person
						Urban	15%	64%	0% ^d	20% ^f		
						Rural, documented	15%	51%	NA	33% ^g		
						Urban, documented	12%	56%	NA	28% ^g		
Swaminathan, Suchitra, and Lahoti (2012)	India (2010–2011)	2,626 households, 4,677 respondents	Karnataka state (8 districts) (represents 64% of sample)	Agricultural and residential land	1	Own agricultural land	13%	60%			Karnataka Household Asset Survey (KHAS)	Person
					2	Rural only	20%	80%				
					4	Average plot size (acres) ^h	2.16	2.74	NA	NA		
					5	Distribution of value (USD) ^h	12%	78%				

Table 3.1 Continued

Author(s) (year published)	Country (year data collected)	Sample size	Sampling strategy and characteristics	Type of land surveyed	Indicator ^a	Further description of indicator	Women	Men	Joint	Other	Data source(s)	Level of analysis
Panda and Agarwal (2005)+	India (2001)	502 women (302 rural and 200 urban)	10 wards in Thiruvananthapu ram district of Kerala	Agricul- tural and residential land	1	Own land Own home and land	5.6% ⁱ 14.5% ^k	NA ^j	NA	NA	Panda & Agarwal	Person
Velayudhan (2009)	India (2003– 2004)	4,754 women and 5,170 men ^l	Gujarat: 10 districts, 15 tehsils, and 23 villages	Agricul- tural land	1	Own land	11.8% ^m	81%	NA	NA	Working Group for Women and Land- ownership (WGWLO)	Person
International Center for Research on Women (ICRW) (2006)	India (2004– 2005)	402 married couples	10 wards in Thiruvananthapu ram district of Kerala. Follow- up to 2001 study	Agricul- tural and residential land	1	Own land Own home and land	5.2% 14.9%	5.7% 9.5%	NA	NA	ICRW and Population Council, New Delhi, India	Person
Committee on the Elimi- nation of Discrimination against Women (CEDAW) (2007)	Kyrgyz Republic (2002)	245,125 farm units	Nationally representative agricultural census	Agricul- tural land	3 5	Registered farm units Arable land area	12.3% 9%	87.7% 91%	NA	NA	Kyrgyz Republic Agricultural Census	Plot
Pandey (2003)	Nepal (2000– 2002)	400 adult married women	Kathmandu metropolitan area. Widows excluded. Women belonged to a similar caste group (Chhetri/ Brahmin).	Agricultural and residential land (may own home, ag land, or both home and ag land)	2 4	Own land Value of land owned (USD) ⁿ	22.0% 34,407	45.3% NA	32.6% 48,051	NA	Center for Social Development	Person

Table 3.1 Continued

Author(s) (year published)	Country (year data collected)	Sample size	Sampling strategy and characteristics	Type of land surveyed	Indicator ^a	Further description of indicator	Women	Men	Joint	Other	Data source(s)	Level of analysis
Allendorf (2007)+	Nepal (2001)	8,633 households; analysis limited to 4,884 households with married women	Agricultural households with married couples living together	Any land	1	Owns land ^o	9%	NA	NA	NA	Nepal Demographic and Health Survey (NDHS)	Person
Nepal, MOHP; New ERA, and ICF International (2012)	Nepal (2011)	12,674 women 4,121 men	Nationally representative	Any land	1	Own land alone	9.7%	24.7%			Nepal Demographic and Health Surveys (NDHS)	Person
						Own land jointly	0.4%	2%	NA	NA		
						Own land alone and jointly	0.3%	0.5%				
International Center for Research on Women (ICRW) (2006)	Sri Lanka (not reported)	378 married women under 55 years old and their husbands	3 sites containing a mix of rural and urban settings in various geographic locations	Agricultural and residential land (may own home, agricultural land, or both)	1 ^p	Own land	30.4%	73.2%	NA	NA	ICRW and Center for Women's Research (CENWOR), Sri Lanka	Person
Menon, Rodgers, and Nguyen (2014)+	Vietnam (2004, 2008)	1,728 matched households (7,623 individuals in 2004 and 7,203 in 2008)	Nationally and regionally representative sample	Any land	3 ^q	Land use certificates (LUCs)	21.3%, 19.8% ^r	63.0%, 62.0%	15.7%, 18.3%	NA	Living Standards Measurement Survey (LSMS)	LUCs

Table 3.1 Continued

Author(s) (year published)	Country (year data collected)	Sample size	Sampling strategy and characteristics	Type of land surveyed	Indicator ^a	Further description of indicator	Women	Men	Joint	Other	Data source(s)	Level of analysis
Scott et al. (2010)+	Vietnam (2004)	653 land use certificates for married individuals (281 in Southern community and 372 in Northern community)	Regionally representative (Ha Ta and Can Tho provinces)	Agricultur al land	3	LUCs	35.8%	60.3%	1.7%	2.2%	Authors' survey	LUCs

Source: Compiled by authors based on literature review.

Notes: NA = not available; + Peer-reviewed paper published in academic journal. ^a Indicators: (1) incidence of ownership, (2) share of landowners by sex, (3) distribution of plots by sex of owner, (4) mean plot size, and (5) distribution of area by sex of owner. ^b Findings based on 380 respondents. ^c 28.4 percent jointly owned, 71.7 percent individually owned. ^d Married couples. ^e This figure is a combination of the following categories: Other joint ownership (4 percent), Joint ownership between household and nonhousehold member (8 percent). ^f This figure is a combination of the following categories: Other joint ownership (3 percent), Joint ownership between household and nonhousehold member (17 percent). ^g Joint ownership between household and nonhousehold member. ^h This indicator is restricted to the subsample of rural households (64% of entire sample). ⁱ Rural: 6.6 percent, urban: 4.0 percent. ^j The household's economic status, which the survey did measure, can be taken as a broad (although admittedly imperfect) proxy for the man's property status. ^k Rural: 3.0 percent, urban: 32.0 percent. ^l Sample size not stated in either paper but back calculated based on given statistics. ^m Detailed interviews done with 225 of the total 561 women who owned land. ⁿ This refers to the average value of property owned by women and owned jointly, rather than the average plot value. ^o 71 percent of women live in a landed household (in which the woman herself or other household members, men and/or women, own land); 20% of women live in landless households. ^p Authors' own calculations based on numbers provided. ^q Refers to the number of land use certificates (LUCs) held by men, women, and jointly. ^r Statistics for 2004 and 2008, respectively.

Although the representativeness of the samples and the specific statistics presented vary across studies, several trends emerge: (1) regardless of indicator and country, in the majority of cases, women are disadvantaged compared with men in regard to *reported* landownership, *documented* ownership, and plot size; (2) however, there is a wide range in the magnitude of the gender gap, depending on the country, region, type of land, definition of landholding, and inclusion of joint ownership, even within the same country (for instance, India and Vietnam); (3) few studies include sex-disaggregated information on area or value of landholdings; however, when reported, women have less land in both area and value terms; and (4) most studies present only one indicator; however, for the few studies that present more than one, the extent of gender inequality differs when measured by different indicators, suggesting the importance of collecting and presenting multiple measures of landownership.

This review confirms gaps in the availability of gender-land statistics. Only 7 of the 32 Asian countries²³ have data to calculate at least one landownership indicator. While 6 out of 15 studies were conducted in India, none of the studies used nationally representative data. A second data gap highlights the paucity of sex-disaggregated data at the *national* level. Third, all studies reported forms of *ownership* and not a single study presented *management* rights over the land; given the presence of active land rental markets in Asia, important policy insight may be gleaned from analysis of management rights. Furthermore, the definition of landownership is often not specified in analyses; when stated, it varies across countries as well as studies within the same country. Some present *reported* ownership, as defined by the respondent, while others include only *documented* ownership, as evidenced with a legal title. Moreover, *joint* ownership (whether reported or documented) is only reported for four countries (Cambodia, India, Nepal, and Vietnam).²⁴

²³ There is no consensus regarding the countries that make up Asia. We use the UN Statistics Division's definition of the countries included in Central Asia, Eastern Asia, Southern Asia, and South-Eastern Asia, but exclude Western Asia (<http://unstats.un.org/unsd/methods/m49/m49regin.htm#asia>).

²⁴ While we can only make conjectures about why this is the case, one theory is that joint ownership is assumed to be common in Asia and thus studies do not specifically ask about it.

4. EVIDENCE FROM NATIONALLY REPRESENTATIVE DATA IN ASIA

The three major sources of nationally representative sex-disaggregated data on landownership are presented below.

Demographic and Health Surveys

Data have been collected in more than 90 countries through the DHS Program.²⁵ In 2009, selected DHS countries began collecting landownership data at the household level, as well as in the Woman's and Man's Questionnaires. The household survey includes the question, "Does any member of this household own agricultural land?" In the Woman's Questionnaire and the Man's Questionnaire, respondents are asked, "Do you own any land either alone or jointly with someone else?" and responses of "alone only," "jointly only," "both alone and jointly," or "does not own" are allowed. These data facilitate calculation of the incidence of landownership by sex (Indicator 1). Table 4.1 displays the DHS weighted results from the two countries in Asia with landownership information at the individual level: Cambodia (data from the Cambodia DHS 2010)²⁶ and Nepal (data from the Nepal DHS 2011). The DHS are nationally representative population-based surveys in which all women aged 15 to 49 in sampled households are eligible to participate and, in some countries, including Cambodia and Nepal, a subsample of men aged 15 to 49 are eligible to participate.

Table 4.1 Demographic and Health Surveys: Landownership in Asia by households, women, and men

Country (year)	Household			Women		Sample size men	Men	
	Sample size households	Households owning any agricultural land (%)	Sample size women	Own any land (sole or joint) (%)	Own any land solely (%)		Own any land (sole or joint) (%)	Own any land solely (%)
Cambodia (2010)	15,667	68	18,754	51	15	8,239	54	12
Nepal (2011)	10,826	68	12,674	10	10	4,121	27	25

Sources: Authors' analysis of data from the Demographic and Health Surveys (DHS), 2010–2011 (Cambodia, National Institute of Statistics and ICF Macro 2011; Nepal, MOHP; New Era; and ICF International 2012).

Notes: All descriptive statistics for country-specific figures use sample weights provided in the DHS.

In Nepal, 68 percent of households, both urban and rural, own agricultural land. A much higher percentage of men than women own land. Interestingly, the vast majority of women landowners own land alone only. Less than 1 percent of women own any land jointly. Joint ownership is also rare among men, with 2 percent owning land jointly only and 0.5 percent owning land both alone and jointly (Nepal DHS 2011).

In Cambodia, 68 percent of all households own agricultural land (Cambodia DHS 2010). Landownership among both men and women is very common, with men only slightly favored in the incidence of ownership by sex. Notably, a higher percentage of women than men own some land solely.

²⁵ See <http://dhsprogram.com/> for more information on the DHS Program.

²⁶ The 2005 DHS in Cambodia also collected individual-level information on women's landownership in the Woman's Questionnaire, but did not collect this information on men's landownership. The question asked, "Please tell me if you own land alone, or jointly with someone else." The response options included "yes alone," "yes jointly," or "does not own." Those women who own land alone are also asked, "In an emergency, could you sell any of the land without anyone else's permission?" The report indicates that 13.6 percent of Cambodian women own land alone and 46.5 percent own land jointly, with a total of 60 percent of Cambodian women owning some land. Of women who own land alone, 65 percent can sell it without permission (Cambodia DHS 2005 reported in Cambodia, NIS; and ORC Macro 2006).

Although a higher percentage of men than women are landowners in both Cambodia and Nepal, Cambodia has a much greater incidence of ownership for both sexes, a substantially smaller gender gap, and higher levels of joint ownership than does Nepal.

Food and Agriculture Organization: Gender and Land Rights Database

The FAO Gender and Land Rights Database (GLRD)²⁷ presents statistics on the share of agricultural holders who are female and male as well as information on country-level laws and institutions relevant to women's land rights. The database compiles data from a variety of sources, but many of the microlevel data on land are collected within the framework of the World Programme for the Census of Agriculture (WCA). Given the immense resources required to undertake a census, agricultural censuses are typically conducted once every 10 years.

In interpreting the statistics presented in the FAO database, it is essential to note that information is collected on the sex of the *holder* rather than the *owner* of each agricultural holding.²⁸ The holder is defined as a "person who makes major decisions regarding resource use and exercises management control over the agricultural holding operation. The holder has technical and economic responsibility for the holding and may undertake all responsibilities directly, or delegate responsibilities related to day-to-day work management to a hired manager" (FAO 2005, sect. 3.36).²⁹ Therefore, this measure is more closely aligned with management than ownership, which in many contexts may be more relevant to issues of agricultural productivity and delivery of extension services. Management issues are important in Asia, where there is an active land rental market, so many people farm land that they do not own themselves.

It is also important to note that agricultural censuses collect data exclusively on agricultural land and thus cannot be used to make claims about other land categories. The agricultural censuses are the only datasets included in this paper that are representative of all agricultural holdings. As a result, they collect information on individual, joint, and institutional holdings such as corporate, government, and cooperative farms. An "individual" holding is operated by one person or multiple members of the same household. In general, if people from more than one household are jointly operating a holding, then it is considered to be a "joint" holding. While most countries report the share of individual agricultural holders by sex, they do not systematically identify the sex of joint or institutional holders. Therefore, it is not possible to analyze the gender gap in the share of agricultural holders for all types of holdings. The data also prevent examination of the share of joint holders as we have defined them within this paper. In other words, we do not know what percentage of individual agricultural holders jointly operate holdings with a household member of the opposite sex. Despite these limitations, the WCA collects very useful information.

The GLRD currently presents data from nine countries in Asia that have conducted agricultural censuses collecting information on the sex of agricultural holders in or after 2000. Figure 4.1 indicates the distribution of holders by sex, which is the indicator presented in this source.³⁰

²⁷ For more information, see www.fao.org/gender/landrights/home/en/.

²⁸ An agricultural holding is defined as "an economic unit of agricultural production under single management comprising all livestock kept and all land used wholly or partly for agricultural production purposes, without regard to title, legal form or size" (FAO 2005, sect. 3.23). This is sometimes referred to as a "landholding," but an agricultural holding does not necessarily include land.

²⁹ The GLRD (www.fao.org/gender/landrights/en/) identifies the total number of holders and the number of women holders for countries where this information is available.

³⁰ More recent data exist for Bangladesh (2008) and for India (2005–2006), but they are not currently publicly available.

Figure 4.1 FAO: Percentage of agricultural holders who are male and female

Source: FAO Gender and Land Rights Database (FAO 2014a).

Across all of these countries, men make up the majority of agricultural holders, although the gender gap varies dramatically. For example, in Thailand women make up more than one-quarter of all agricultural holders, while in Bangladesh women account for just 3 percent. Thus policymakers should be attuned to these differences and not ignore the needs of female holders even in countries with a smaller gender gap.

5. EVIDENCE FROM NATIONALLY REPRESENTATIVE INDIVIDUAL AND PLOT-LEVEL DATA: BANGLADESH, TAJIKISTAN, TIMOR-LESTE, AND VIETNAM

Only four countries in Asia have collected both individual- and plot-level landownership and/or management data on a nationally representative scale. These are Bangladesh, Tajikistan, Timor-Leste, and Vietnam. Plot-level data that include information on plot area and the owner, manager, or both facilitates analysis of all five landownership indicators, which are presented in Table 5.1. The Bangladesh and Vietnam surveys report multiple owners for each plot of land, enabling analysis of both sole and joint landownership. The other two surveys do not. These four countries capture a range of the diversity in landownership systems and gender norms across Asia, ranging from patriarchal Bangladesh to socialist transition economies (Tajikistan and Vietnam) to Timor-Leste, which maintains a high degree of customary landownership. Unlike the WCA, these surveys sample households and not all agricultural land or holdings. As a result, they only capture land that is owned, managed, or both at the household level and exclude communal and public land, as well as land under state control and operation.

Bangladesh

Contextualizing the Data

Similar to other societies in South Asia, Bangladeshi society is dominated by a patrilineal and patrilocal kinship system. Despite Islamic law, which in principle applies to 85 percent of the population and allows women to own property, the practices of *benami*, whereby husbands acquire property in their wives' names but retain actual control of the land, and *naior*, whereby daughters are encouraged to relinquish their inheritance claims to their brothers, illustrate limitations women face in exercising their property rights (Subramanian 1998).³¹ While Islamic law allows women to own property, Islamic inheritance law stipulates that sisters inherit half the share of their brothers. Although Bangladeshi law putatively guarantees equal access to property, these customary and religious laws underlie the gender inequality in landownership. Moreover, because brides leave their natal villages to marry and would find it difficult to cultivate land in distant villages, sisters typically surrender their land inheritance rights to their brothers, in return for financial support in times of need.

Bangladesh Integrated Household Survey, 2011–2012

The Bangladesh Integrated Household Survey (BIHS) was designed and supervised by the International Food Policy Research Institute (IFPRI) and was administered by Data Analysis and Technical Assistance (DATA), Dhaka, Bangladesh. The 6,500 households in the sample are nationally representative of rural Bangladesh. For each plot of land that was owned or operated by someone in the household in the previous 12 months, respondents answered questions regarding its current operational status and the identity of its owner, with three member ID codes allowed.³² The owner reported is the person who is actively using the plot. Respondents also identified the “official” or documented owner of the plot, who is the person or people whose name(s) are on the legal title for each plot of land. Due to large overlap between the two ownership categories, we focus on documented ownership, and we exclude from the analysis land exclusively owned by people outside the household.³³

³¹ *Benami* is a term in Hindu law describing a transaction, contract, or property that is made or held under a name that is fictitious or is that of a third party who holds the property as ostensible owner for the principal owner. Strictly speaking, *naior* is the custom whereby married women visit their parental home for a few days or weeks. Many women trade in their inheritance rights from their parents to keep their right to *naior* and maintain good relations with their brothers and birth family.

³² Codes included options for ownership by all members jointly, ownership or a temporary user right by a male or female outside of the household, or status as government/Khas land or land owned by other institutions.

³³ The only major exception is that while 8.5 percent of women and 52 percent of men are documented owners, 9.5 percent of women and 63 percent of men are reported as owners.

Table 5.1 Indicators 1 to 5 for landownership in Asia (weighted)^a

Indicator number		1	2	3	4	5
Country	Category of analysis	Incidence of ownership women landowners/total # of women; men landowners/total # of men	Distribution of landowners by sex women landowners/total number of landowners; men landowners/total number of landowners	Distribution of plots by sex of owner number of plots owned by women/total number of plots; number of plots owned by men/total number of plots; number of plots owned jointly/total number of plots	Mean plot size mean size of women's plots in acres; mean size of men's plots in acres	Distribution of area by sex of owner land area owned by women/total land area; land area owned by men/total land area; land area owned jointly by men and women/total land area
Bangladesh (2011–2012)	Men	52.23%	77.39%	86.28%	0.19 ^{b, +, ***}	87.71%
	Women	8.5%	22.61%	11.68%	0.16 ^{‡, ***}	10.10%
	Joint	NA	NA	2.04%	0.20	2.19%
	N	27,285 adults	4,366 documented landowners	15,451 documented plots	15,451 documented plots	2,898 documented acres
Tajikistan (2007)	Men	28.6%	82.9%	83.9%	0.31 ^{c, ***}	85.7% ^d
	Women	4.3%	17.1%	16.1%	0.27 ^{***}	14.3% ^e
	Joint	NA	NA	NA	NA	NA
	N	17,384 adults	3,017 landowners	3,750 plots	1,304 acres ^f	1,304 acres
Timor-Leste (2007) ^g	Men	44.1%	85.7%	87.2%	0.74 [*]	88.4%
	Women	7.3%	14.3%	12.8%	0.64 [*]	11.6%
	Joint	NA	NA	NA	NA	NA
	N	15,114 adults	4,619 land managers	6,090 plots	3,565 acres ^f	3,565 acres
Vietnam (2004)	Men	37.74%	62.73%	67.81%	0.26 ^{+, ***}	71.83%
	Women	16.41%	37.27%	19.37%	0.2 ^{‡, ***}	15.38%
	Joint	NA	NA	12.82%	0.25	12.79%
	N	26,228 adults	8,266 landowners	26,896 plots with LUCs	7,151 acres with LUCs ^f	7,151 acres with LUCs

Sources: Authors' calculations based on survey data from the Bangladesh Integrated Household Survey (2011–2012), the Tajikistan Living Standards Survey (2007), the Timor-Leste Survey of Living Standards (2007), and the Vietnam Household Living Standards Survey (2004).

Note: LUC = land use certificate; NA = not available. ^a Note on weights: for Indicator 1, we created an adult population weight by multiplying the household weights provided for each household by the number of individuals 18 and over in each household. For Indicator 2, we created an owner weight by multiplying the household weights provided for each household by the number of individuals 18 and over in each household who owned (or managed) land. For Indicators 3–5 we used household weights. ^b We converted all decimals to acres using a 1/100 decimal-to-acre conversion rate. ^c Refers to plots owned by men and women with documents ($n = 2,944$ and 576 respectively); plots owned by men/women without documents are excluded ($n = 211$ and 42 respectively). ^d 79.1 percent is documented and 6.7 percent is undocumented. ^e 13.6 percent is documented and 0.7 percent is undocumented. ^f Note that due to missing plot area data, slightly fewer plots are included in analysis of Indicators 4 and 5 than Indicator 3. Plot area data are missing from 21 plots in Tajikistan, 34 plots in Timor-Leste, and 281 plots in Vietnam. ^g Note that all statistics reported are based on land management rights, which may or may not include ownership rights. Ownership questions were not asked in this survey. * Indicates statistical significance at the 90% level, ** at the 95% level, and *** at the 99% level. + Denotes comparison of plots owned by men solely and plots owned by women solely. ‡ Denotes comparison of plots owned by women solely and plots owned jointly by men and women.

Data Analysis

There are evident gender inequalities across all measures of landownership (See Figure 5.1). Overall, almost 35 percent of the population owns land, with approximately 29 percent owning documented land. Using the individual as the unit of analysis, the first indicator demonstrates that men are more than six times as likely as women to be documented landowners in Bangladesh. The second indicator tells us that women make up less than one-quarter of the documented landowners.³⁴

Figure 5.1 Bangladesh: Official ownership

Source: Authors' calculations based on data from the Bangladesh Integrated Household Survey (2011-12)

Using the plot as the unit of analysis, men solely own more than 86 percent of the officially owned plots. Just less than 12 percent of plots are owned by women and just more than 2 percent are owned jointly by men and women. However, the plots owned by women are statistically significantly smaller than those owned by men or jointly by men and women. The distribution of land area by the sex of the owner shows that the vast majority of the officially owned land area is owned by men only and just a small fraction of land area is owned jointly by men and women.

The data paint a clear picture of substantial gender disparities in landownership in Bangladesh, although the extent of the inequalities differs across the indicators. The gender gap in the share of landowners who are women and men is smaller than the gender gap in other measures of landownership. However, female landowners own fewer and smaller plots.

Tajikistan

Contextualizing the Data

Although Tajikistan became an independent country in 1991 following the collapse of the Soviet Union, all land continues to be owned by the state (FAO 2014a). While landownership is not permitted and land cannot be bought and sold (Lerman 2012), long-term use rights can be allocated and inherited (Shahriari et al. 2009). In effect, post-Soviet agricultural reform has produced four categories of agricultural producers: household plots,³⁵ individual and family dehkan farms,³⁶ collective dehkan farms, and

³⁴ A man or a woman is considered a landowner if he or she owns land solely or jointly.

³⁵ The government also granted, to thousands of mainly rural households, temporary use of small plots on 75,000 hectares called "presidential lands" (OECD Development Centre 2014). Presidential lands served to bolster the size of household plots under the national minimum size (USAID 2014).

³⁶ Dehkan farms are midsized peasant farms that are legally distinct from household plots and were created during a phase of

agricultural enterprises (the successors of former state farms) (Lerman and Sedik 2008)). However, only household plots and individual and family dehkan farms provide individual household tenure rights (Lerman 2012) and are captured in the dataset analyzed in this paper.³⁷ Furthermore, although a 1996 decree established an individual's right to withdraw an individual land share from a collective dehkan enterprise and obtain a certificate (Lerman and Sedik 2008), it is an expensive and largely unsuccessful process (USAID 2014). Additionally, collective dehkan members, especially women, do not generally know about their tenure rights (USAID 2014).

While women legally have the same land use rights as men, cultural objections and patrilineal inheritance practices limit their land rights in practice (USAID 2014; FAO 2014a). Women's land rights are particularly important since female-headed households constitute almost one-fifth of all households as a result of male casualties from the 1992–1997 civil war, mass young male outmigration, and lower male life expectancy (Shahriari et al. 2009).

Tajikistan Living Standards Survey, 2007

Four LSMS surveys have been conducted in Tajikistan (1999, 2003, 2007, and 2009). This paper utilizes data from the 2007 Tajikistan Living Standards Survey (TLSS) (World Bank 2007a), the most recent date with available agricultural plot information. The 2007 survey was implemented by the National Committee for Statistics (Goskomstat) in collaboration with the World Bank and UNICEF. The TLSS sample comprises 4,860 households in 270 clusters and is representative of the entire country. The survey collected data on every plot of land cultivated by a household member within the previous 12 months, with data on how each plot was acquired, if the plot had a legal title or ownership rights (including certificates, sealed documents [acts], and sales receipts), and the names of household members listed on the title.³⁸ Information on joint ownership is not available because only one household member's ID per plot for the legal title was collected.

Data Analysis

Gender inequalities in Tajikistan are evident with respect to all five indicators. Just more than one-quarter of men but less than 5 percent of women own land in Tajikistan (Indicator 1). Among landowners, the distribution favors men, with only 17.1 percent of landowners being women. Similarly, only 16.1 percent of plots are owned by women. Men's plots are larger than women's (for both plots with and without documents), though the difference is significant only for documented land. By area, documented land accounts for 91.8 percent of all owned land in Tajikistan. The inequality in land area distribution is similar to that of plot ownership. Women own only 14.3 percent of the total land area.

While the gender imbalances in landownership favor men (see Figure 5.2), the low incidence of landownership—only 1 in 4 men and 1 in 23 women own land—suggests that policies addressing land rights for both men and women are required. Many factors make it difficult for both men and women to obtain individual legal ownership rights, including the lack of knowledge regarding land rights and legacies of the collectivist system that make it costly and difficult to obtain individual land rights, although women are especially disadvantaged.

reorganization of traditional large-scale collective farms (Lerman and Sedik 2008) .

³⁷ As of 2014, the agricultural sector is now largely individualized; however, as of 2005 only 5,000 private and family farms were established; by 2012, this figure was more than 85,000, representing 65 percent of total arable land (Lerman 2012).

³⁸ The types of land included are household plot/garden, remote plots / presidential land, dacha, and individual dehkan and other plots (excludes group/communal land).

Figure 5.2 Tajikistan: Landownership

Source: Authors' calculations based on data from the Tajikistan Living Standards Survey (2007).

Timor-Leste

Contextualizing the Data

Timor-Leste was colonized by Portugal and later occupied by Indonesia, resulting in waves of violence, evictions, and expropriations, and the displacement of an estimated three-fourths of its population at the time of independence in 2002 (World Bank 2014). Today Timor-Leste struggles to overcome the challenges of landownership and use rights, which involve traditional interests, Portuguese ownership titles, Indonesian ownership titles, and long-term occupation (Narciso and Henriques 2010). The situation was exacerbated by the destruction of most public records in 1999, though only one-quarter of plots have ever been formally registered (USAID 2012). Thus, competing land claims have been a source of friction in Timor-Leste, especially since independence in 2002 (UNDP 2013). In 2003, the country's first significant land law transferred ownership of property previously controlled by the Portuguese and Indonesians to the new state (*Economist* 2012). While a series of land laws have been passed since then,³⁹ the complexities and predominance of customary ownership systems, which covered about 97 percent of rural land in 2005 (Dale et al. 2010), have delayed the development of a formal land administration system.

Given the ambiguity and evolving nature of land laws as well as inadequate government support structures, most people use the traditional system of justice, *adat*, and other informal processes for resolving land disputes (Narciso and Henriques 2010; USAID 2012). Customary practices govern land rights in most rural areas (USAID 2012) and customary rights are recognized so long as they do not contradict Timor-Leste law. The vast majority of people occupy land without a formal title, and long-term land users may have a stronger claim over a particular parcel of land than those with formal titles (USAID 2012).

³⁹ As of 2010, a government land registration program called Ita Nia Rai had collected more than 10,000 claims in preparation for laws that would later determine the ordering of competing claims (Dale et al. 2010). In 2012, parliament passed laws allowing authorities to grant titles for land with uncontested ownership, set up a system for resolving land disputes outside dysfunctional courts, and recognized communal land as a legal category for communities to register shared plots (*Economist* 2012). The goal of a land law introduced to parliament at the beginning of 2013 is to address many of the ambiguities present in the landownership laws (Piaskowy 2013).

Although the constitution guarantees both men and women the right to own property, the presence of the formal justice system is limited (Dale et al. 2010). Inheritance is the primary way in which land is acquired in Timor-Leste, a predominantly patrilineal society (Dale et al. 2010; Henriques, Narciso, and Branco 2011).⁴⁰

Timor-Leste Survey of Living Standards, 2007

The most recent LSMS survey (World Bank 2007b) was collected in 2007 and contains individual plot-level agricultural information. The 2007 Timor-Leste Survey of Living Standards (TLSLS) includes 4,477 households and is nationally representative. The survey collected data on every plot of land that a household member cultivated or controlled, even if the plot did not belong to the household, and subsequently asked who in the household made decisions about the plot as well as the tenure status of the plot.⁴¹ While no question was asked to determine individual legal ownership of a plot (that is, legal title), the aforementioned questions were used to construct a measure of land management rights, which serves as a proxy for landownership rights given the historical circumstances and largely customary tenure in the country.⁴² However, given the difference in the land rights definition as compared with the other countries, we use the term *manager* instead of *owner* when referring to Timor-Leste. The Timor-Leste survey allowed one name per plot to be listed as manager and does not address joint management.

Data Analysis

Significant gender inequalities are evident across all five indicators in Timor-Leste (see Figure 5.3). Indicator 1 shows that 44.1 percent of men and 7.3 percent of women manage land in Timor-Leste. Indicator 2 also reveals gender imbalance; only 14.3 percent of landowners are women. The percentage of plots owned by sex reflects a similar distribution, with only 12.8 percent of plots owned by women. Men's plots are bigger than women's; average plot size is 0.64 acres for women and 0.74 for men. Examining the distribution by total land presents a similar picture, with women owning only 13.4 percent of total land area.

Figure 5.3 Timor-Leste: Land management

Source: Authors' calculations based on data from the Timor-Leste Survey of Living Standards (2007).

⁴⁰ The Bunak and Tetun Terik are matrilineal people and make up about 12 percent of the population.

⁴¹ To infer ownership, our analysis uses the answers to the following questions: (1) "Tell me about any plot of arable land a member of your household controlled, even though it does not belong to your household." (2) "What is the tenure status of this plot?" with the following response codes: owner, part owner, rented from someone, rented to someone, public land, private land, and other (specify). Note that plots rented from someone and public land are excluded from this analysis in keeping with analysis for the other countries. (3) "Who in this household makes decisions about this plot of land?"

⁴² The 2001 survey asked about legal ownership; however, it was conducted around the time of independence when a large proportion of the population was displaced.

Every indicator of land management indicates a substantial gender gap in land rights that consistently favors men in Timor-Leste. Given the nascent and evolving land tenure system in Timor-Leste, these findings suggest there is ample room for policies to help redress the gender imbalance in landownership. However, acknowledging the predominance of customary law, policies exclusively targeting statutory law may not redress inequalities faced by women under the traditional justice system.

Vietnam

Contextualizing the Data

Vietnam's transition from a socialist to a market-oriented economy, a process known as *Doi Moi*, has sparked numerous agrarian changes since 1986. The shift from collective property models to the quasi-privatization of land has significant implications for women's land rights (Scott et al. 2010). Although the state owns all land, the 1988 Land Law allowed households to obtain land use certificates (LUCs), granting long-term use rights (Spichiger et al. 2013). The 1993 Land Law expanded these rights to allow farmers to transfer, trade, bequeath, rent, and mortgage their LUCs. Providing space for only one name meant that most LUCs bore the name of the household head, resulting in gender disparities in property rights (Menon, Rodgers, and Kennedy 2013).

A government decree in 2001 as well as the 2003 Land Law required that all documents registering family assets include the names of husband and wife (Vietnam Laws Online Database 2014). In addition, the 1986 Law on Marriage and Family, revised in 2000, asserts that jointly owned property must be registered under the names of both spouses, all land acquired during marriage is a common asset, and any decisions regarding joint or common property must be made with the agreement of both spouses (FAO 2014a). Despite these provisions, women's land rights remain limited due to inconsistent implementation and poor enforcement (Menon, Rodgers, and Kennedy 2013) compounded by de facto discrimination (Hatcher, Meggiolaro, and Ferrer 2005). Customary rules tend to regulate ownership and inheritance rights and property disputes in areas where the state is incapable of administering state law (Phan 2011). Differences are most pronounced between the northern and southern regions due to variations in cultural norms as well as agrarian reforms (Scott et al. 2010).

Vietnam Household Living Standards Survey, 2004

The government of Vietnam's General Statistical Office administered the Vietnam Household Living Standards Survey (VHLSS) in 2004 (World Bank 2004).⁴³ In 2004, the nationally representative sample for the VHLSS included 9,189 households. The survey collected data on every plot of land that each household used or managed in the previous 12 months and identified up to two household members who are listed on the LUC, if there is one.⁴⁴ We refer to those individuals with certified land use rights as "landowners."

Data Analysis

Although analysis of the 2004 VHLSS revealed a smaller gender gap in land rights in Vietnam than in the other three countries, significant gender inequalities remain (see Figure 5.4). Just greater than one-quarter (26.8 percent) of the overall population has land use certificates. Approximately 16.7 percent of the population manages land for which they do not have a certificate. Men are more than twice as likely as women to have their name on an LUC.⁴⁵

⁴³ Note that Menon, Rodgers, and Kennedy (2013) analyzed both the 2004 and 2008 VHLSS, but the analysis presented in this paper is limited to the 2004 data.

⁴⁴ If no LUC exists or no household members are listed on it, the survey identifies which household members manage and use the plot.

⁴⁵ A person is considered a landowner if his or her name is on an LUC, whether or not a second person is listed.

Figure 5.4 Vietnam: Land use certificates

Source: Authors' calculations based on data from the Vietnam Household Living Standards Survey (2004).

Far more plots are solely owned by men than by women, and an even smaller proportion of plots are owned jointly by men and women. Plots owned solely by men or jointly by men and women are larger, on average, than those owned solely by women. Given the larger size of men's plots, it is not surprising that the distribution of land area by sex of the owner reveals even greater gender inequalities than the distribution of plots by sex of the owner.⁴⁶

Every indicator of landownership in Vietnam confirms the existence of a gender gap that consistently favors men.⁴⁷ However, the extent of the inequalities varies substantially across the different measures. We observe greater equality when conducting the analysis at the individual level than at the plot level, reflecting the smaller size and quantity of women's plots. Analyzing both makes it clear that achieving greater gender equality in land use rights would require policies and programs to increase the amount of land area owned by women.

Cross-Country Analysis

Regardless of differences in timing and survey methodology (see Table A.1 in the appendix), all of the indicators of landownership and management across the four countries confirm that more men than women control land and male landowners/managers control more land than female landowners/managers.⁴⁸ Although Vietnam has greater gender equality in land rights than the other countries, the gaps persist.

⁴⁶ Note that fewer plots were included in the calculation of Indicators 4 and 5 (26,615 plots) than in the calculation of Indicator 3 (26,896 plots) due to lack of data on the size of 281 plots.

⁴⁷ It is also possible to calculate total land area managed by surveyed households. Overall, almost 68 percent of land area is owned or managed by men solely (50.2 percent owned, 17.7 percent managed), while about 14 percent of land area is owned or managed by women solely (10.8 percent owned, 3.6 percent managed) and almost 18 percent is owned or managed jointly (9.0 percent owned, 8.9 percent managed). Note that land can either have an LUC or be managed by someone in the surveyed households, but not both.

⁴⁸ For example, the BIHS (Bangladesh) collects information on both official and unofficial ownership, the TLSS (Tajikistan) focuses on the name(s) listed on the legal title or ownership documents, the TLSLS (Timor-Leste) does not gather ownership information but inquires who makes decisions about each plot, and the VHLSS (Vietnam) gathers data on the name(s) listed on LUCs and on who manages and uses each plot.

Substantial heterogeneity exists not only across the countries but also across the indicators within some of the countries. In both Timor-Leste and Tajikistan the disparities in the share of landowners who are women are very similar to the disparities in the percentage of plots and land area owned or managed by each sex. In Vietnam and Bangladesh, on the other hand, there are substantial differences across these three indicators. We observe higher levels of gender equality using individual- rather than plot-level indicators. These findings highlight the importance of collecting multiple indicators of men's and women's control of land within each country. Developing policies and programs to redress these disparities requires identifying where the largest gender gaps lie and, given the cultural and land rights context, what reforms are feasible.

6. CONCLUSIONS AND POLICY RECOMMENDATIONS

Our review of existing evidence and analysis of nationally representative data highlights gaps in the available data on women's landownership and management in Asia. Although the literature reports a wide range of landownership indicators, the different data sources use varying definitions of ownership and may include both agricultural and nonagricultural land.

Depending on how data are collected and whether unit record data are publicly available, estimates can be made for some, but not all, indicators of landownership. For example, the DHS can report only the percentage of men and women who are landowners (Indicator 1) and the FAO's Gender and Land Rights Database reports only the percentage of agricultural holders who are men and women (Indicator 2).⁴⁹ With data on individual owners and their plots, it is possible to estimate all of the landownership indicators.

Our results underscore the benefits of collecting data not just on who owns or manages land but also on sole and joint ownership or management. The relatively high level of joint ownership in Vietnam as compared with Bangladesh may be, at least in part, the result of the government decree stipulating that LUCs contain the names of both husband and wife if the land is owned by a family. Further analysis is needed to understand the impacts of this joint ownership. Identifying the individual and joint owners of each plot provides the potential for analyzing how other individual characteristics such as age, headship, or marital status, and household characteristics such as wealth and ethnicity, affect landownership. Asking about both individual and joint ownership allows analysis of the patterns of landownership, rather than simply assuming that the family farm model in which the male household head owns and manages the land is appropriate.

This paper has, to the extent possible, avoided direct comparison of indicator values across countries because the methodologies and definitions of land rights differ across the surveys. Having a standard set of indicators would allow for better comparison across countries or regions as well as the ability to track the indicators over time within a country or region. Given the diversity of cultures, political systems, and land tenure systems across Asian countries, having a standard set of indicators removes the measurement variability that further clouds our understanding of men's and women's land rights and why women fare better or worse in certain countries on these indicators.

Both existing evidence and that presented here call attention to the lack of large-sample individual- and plot-level data on landownership. Only 12 countries in Asia have any sex-disaggregated individual- or plot-level landownership data. Only three countries have more than two data points (India, Nepal, and Vietnam) and only Vietnam has panel data that allow analysis of the patterns of landownership over time. In addition, the lack of standardization in methodologies and indicators reported, even within the same country, poses a challenge to triangulating evidence from different sources.

As women's land rights are increasingly on the policy agenda, it is critical that national governments begin to collect data on women's landownership in a systematic way. This will both identify the critical gender land gaps and provide a baseline for monitoring programs and policies to improve them. Our hope is that, 20 years from now, not only will women's land rights have increased substantially, but we will have the data to demonstrate both the decreasing gender gaps and the resulting improvements in agricultural growth and the well-being of women and their families.

⁴⁹ Some of the agricultural censuses have more information than is reported in the GLRD, but the information is not publicly available. FAO is in the process of incorporating additional indicators of land rights into the GLRD.

APPENDIX: SUPPLEMENTARY TABLES

Table A.1 Methodology for statistics

Indicator	Bangladesh Integrated Household Survey (2011–2012)	Tajikistan Living Standards Survey (2007)	Timor-Leste Survey of Living Standards (2007)	Vietnam Household Living Standards Survey (2004)
Definition of surveyed land	List all land (all types of land and water bodies) owned or under operation in last 12 months. Plot description and plot type [Household Questionnaire, Module G: Roster of land and pond/water bodies owned or under operation].	Please tell me about each plot of land belonging to your household that has been cultivated by a member of your household during the last year. Please describe or give me the name of each plot [Household Questionnaire, Module 12: Agriculture].	Please tell me about each plot of land that a member of your household cultivated, or any plot of arable land a member of your household controlled, even though it does not belong to your household. Include also garden plots. Please describe or give me the name of each plot [Household Questionnaire, Section 9: Agriculture].	For the last 12 months, has your household used or managed farming, forestry land or water surface for aquaculture, residential land, or gardens/ponds next to residential land, including purchased, rented, and renting out land? If yes: Now, I would like to ask you some questions about plots used or managed by the household members, starting with residential land. Please let us know the name of each existing household-owned plot [Household Questionnaire, Section 9: Extended Agriculture, Forestry and Aquaculture].
Questionnaire format	Questionnaire includes plot roster (Module G). Questionnaire addresses owned land (official and unofficial ownership).	Questionnaire includes plot roster (Module 12-Ag). Questionnaire addresses owned land (with or without a title), land rented to others, and land rented from others; land rented from others is excluded from this analysis.	Questionnaire includes plot roster (Section 9-Part A). Questionnaire addresses managed land (owned or controlled); it also collects information on the tenure status of the plot.	Questionnaire includes plot roster [Section 9.1-9.3]. Questionnaire collects information on all used or managed land and identifies the type of land, means of acquisition, and whether it is guaranteed with a long-term use rights certificate. The questionnaire also collects data on land that was rented / borrowed / temporarily exchanged (9.2) or temporarily rented out / lent out (9.3) in the previous 12 months.

Table A.1 Continued

Indicator	Bangladesh Integrated Household Survey (2011–2012)	Tajikistan Living Standards Survey (2007)	Timor-Leste Survey of Living Standards (2007)	Vietnam Household Living Standards Survey (2004)
Ownership indicator (household level)	<p>Question: Current operational status <i>and</i> Who owns the plot?</p> <p>Response / matching code: Current operational status: Fallow (1); Own operated (2); Rented/leased in—cash (3); Rented/leased in—crop share (4); Mortgaged in (5); Rented/leased out—cash (6); Rented/leased out—crop share (7); Mortgaged out (8); Group leased in with other farmer (9); Leased out to NGO (10); Taken from joint owner (11); Jointly with other owners (12). Who owns the plot: Member ID; All members jointly (71); Male outside household (72); Female outside household (73); Temporary user right (74); Govt/Khas land / other institutions (75); Not applicable / not decided (98). (Land owned solely by people outside household was excluded from analysis.)</p>	<p>Question: How did your household acquire this land?</p> <p>Response / matching code: State allocated (1); Presidential (state allocated) (2); Inherited (3); Other (specify) (4).</p>	<p>Question: What is the tenure status of this plot?</p> <p>Response / matching code: Owner (1); Part owner (2); Rented from someone (3); Rented to someone (4); Public land (5); Private land (6); Other (specify) (7). (Plots rented from someone and public land were excluded from this analysis because they do not convey ownership status.)</p>	<p>Question: Is this plot guaranteed with a long-term land use rights certificate? <i>and</i> Why do you own this plot?</p> <p>Response / matching code: LUC: Yes (1); No (2) Acquisition: Signing contract (1); Inheritance (2); Bid (3); Bought (4); Reclaimed land (5); Bartered (6); Rent (7); Borrowed (8); Others (9). (Rented-in land was excluded from analysis; while some rented plots had an LUC, none of these plots had household members listed on LUC. In 18 cases, land was borrowed—these were kept in the analysis.)</p>
Owner indicator (individual level)	<p>Question: Who owns the plot officially?</p> <p>Response / matching code: 3 household member ID codes allowed per plot. If owner is not a household member, the following codes apply: All members jointly (71); Male outside household (72); Female outside household (73); Temporary user right (74); Govt/Khas land / other institutions (75); Not applicable / not decided (98).</p>	<p>Question: In whose name is the legal title or ownership registered?</p> <p>Response / matching code: 1 household roster code allowed per plot or record 98 if not a household member.</p>	<p>Question: Not asked.</p> <p>Response / matching code: NA.</p>	<p>Question: Under which household member's name is the land use right certificate for this plot registered?</p> <p>Response/matching code: 2 household member ID codes allowed per plot.</p>

Table A.1 Continued

Indicator	Bangladesh Integrated Household Survey (2011–2012)	Tajikistan Living Standards Survey (2007)	Timor-Leste Survey of Living Standards (2007)	Vietnam Household Living Standards Survey (2004)
Documentation indicator	<p>Question: Who owns the plot officially? (same as individual-level owner indicator above)</p> <p>Response / matching code: (same as individual-level owner indicator above)</p>	<p>Question: What legal title or ownership rights do you have for this plot of land?</p> <p>Response / matching code: (1) Certificate; (2) Act (sealed document); (3) Sales receipt; (4) No documents; (5) Other (specify).</p>	<p>Question: Not asked.</p> <p>Response / matching code: NA</p>	<p>Question: Is this plot guaranteed with a long-term land use rights certificate?</p> <p>Response / matching code: Yes (1); No (2).</p>
Management indicator (individual level)	<p>Question: Who owns the plot?</p> <p>Response / matching code: 3 household member ID codes allowed per plot. If owner is not a household member, the following codes apply: All members jointly (71); Male outside household (72); Female outside household (73); Temporary user right (74); Govt/Khas land / other institutions (75); Not applicable / not decided (98)</p>	<p>Question: Who makes decisions about the use of this plot?</p> <p>Response / matching code: 1 household roster code allowed per plot <i>or</i> record 98 if not a household member.</p>	<p>Question: Who in this household makes decisions about this plot of land?</p> <p>Response / matching code: 1 household roster code allowed per plot.</p>	<p>Question: Which household member is currently managing and using this plot?</p> <p>Response / matching code: 2 household member ID codes allowed per plot.</p>

Table A.1 Continued

Indicator	Bangladesh Integrated Household Survey (2011–2012)	Tajikistan Living Standards Survey (2007)	Timor-Leste Survey of Living Standards (2007)	Vietnam Household Living Standards Survey (2004)
Land area	Respondent estimates in decimal. In analysis, decimals are converted to acres.	Farmer estimates in sotka and area is converted to acres.	Farmer estimates in square meters and area is converted to acres.	Respondent estimates in square meters. In cases where respondent estimates in local units of measurement, enumerator translates them into square meters using conversions in manual. In analysis, square meters are converted to acres. Note that for households with more than 15 plots of land, additional plots were merged together and the total area of all merged plots was recorded. Plot area of merged plots was estimated by dividing the total area by the number of merged plots to find the average area of each.
Treatment of outliers (area measurements)	Top 1% of area trimmed (> 150 decimal). In total, number of observations trimmed: 529 plots.	Top 1% of area trimmed (> 199 sotkas); 40 observations trimmed.	Top 1% of area trimmed (> 20,000 square meters); 34 observations trimmed.	Top 1% of area trimmed (> 19,999 square meters); number of observations trimmed: 453 plots.

Source: Authors' compilation based on survey data from the Bangladesh Integrated Household Survey (2011–2012), the Tajikistan Living Standards Survey (2007), the Timor-Leste Survey of Living Standards (2007), and the Vietnam Household Living Standards Survey (2004).

Note: NA = not applicable; NGO = nongovernmental organization.

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Fax: +1-202-467-4439
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