

INTRA-HOUSEHOLD DISTRIBUTION OF ASSETS AND WEALTH IN ECUADOR

By

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To my parents, family, and friends, who have always supported me over the years

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LIST OF ABBREVIATIONS

DHS	Demographic and Health Survey
EAFF	Encuesta de Activos Florida-FLACSO (UF-FLACSO 2010 Ecuador Household Asset Survey)
ENDEMAIN	Encuesta Demográfica y de Salud Materna y Infantil (Demographic and Maternal and Infant Health Survey)
FLACSO	Facultad Latinoamericana de Ciencias Sociales (Latin American Faculty of Social Sciences)
IESS	Instituto Ecuatoriano de Seguridad Social (Ecuadorian Institute of Social Security)
LSMS	Living Standards Measurement Study
MIDUVI	Ministerio de Desarrollo Urbana y Vivienda del Ecuador
UF	University of Florida

Abstract of Dissertation Presented to the Graduate School
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This dissertation is comprised of three essays that explore the intra-household distribution of assets and wealth in Ecuador. The first essay focuses on gender differences in the likelihood of homeownership as well as the differences in housing wealth. The second essay examines the relationship between the intra-household distribution of assets and wealth and egalitarian decision-making in regards to the decisions about employment and spending one's own income. Finally, the third essay investigates how farm management decisions are related to asset ownership and wealth. Using the bargaining power framework, we propose that the intra-household distribution of assets and wealth impacts how decisions are made within the household since it gives an indication of the spouses' relative bargaining positions. If most of the wealth is owned by the husband (wife) then we would expect him (her) to make most of the decisions but a more equal distribution would result in more egalitarian decision-making practices. We use data from the UF-FLACSO 2010 Ecuador Household Asset Survey, a nationally representative survey that collected sex-disaggregated data regarding asset ownership and wealth from 2,892 households.

We find that although there are no gender differences in the likelihood of homeownership or in the amount of housing wealth, there are several gender differences in the factors predicting homeownership and housing wealth. In terms of household decision-making, in households in which only women own real estate (compared to those in which neither husband nor wife own real estate) women are more likely to make autonomous decisions. In households with a fairly equal distribution of wealth and when both spouses own real estate couples are more likely to make egalitarian decisions. Finally, with respect to farm management, the great majority of women land owners are involved in making agricultural decisions; their participation in fieldwork is strongly correlated to their participation in such decision-making. Although the intra-household distribution of wealth is not related to agricultural decision-making among landowning women, women's ownership of agricultural equipment is associated with women's participation in agricultural decisions. Overall, these results indicate that the intra-household distribution of asset ownership and wealth are related to how couples make decisions.

CHAPTER 1 INTRODUCTION

This dissertation is one piece of a large, international project called In Her Name: Measuring the Gender Asset Gap in Ecuador, Ghana and India. The project was specifically designed to collect data on asset ownership and wealth by individuals within households. The data collected from the Ecuador project, called Assets, Poverty and Gender Inequalities, is the basis for this dissertation,¹ which examines the intra-household distribution of physical and financial assets and wealth and how it is related to household decision-making. Although it is often assumed that individual asset ownership and wealth influence how decisions are made within households, few studies have directly examined the link. This dissertation begins to fill this gap in the literature by exploring these issues in three essays. The first one focuses on gender differences in the likelihood of homeownership and in housing wealth. The second essay examines the relationship between household decision-making and the intra-household distribution of assets and wealth. Finally, the third essay investigates the link between farm management decisions and the intra-household distribution of assets and wealth. But first, this chapter defines assets and wealth and explains why we would expect the intra-household distribution to impact decision-making.

This dissertation focuses on physical and financial assets and the wealth associated with them. Physical and financial assets include housing, land, other real estate, businesses, livestock, agricultural equipment and installations, consumer durables, and savings (both formal and informal). Wealth is then measured as the

¹ Carmen Diana Deere from University of Florida (UF) was the principal investigator (PI) and Jacqueline Contreras from Facultad Latinoamericana de Ciencias Sociales in Ecuador (FLACSO-Ecuador) was the co-coordinator on this project; it also involved other researchers (myself included) from UF and FLACSO-Ecuador.

sales/market value of these assets as reported by respondents (or in the case of saving, the amount saved).² Carmen Diana Deere and Cheryl Doss (2006) explain the importance of studying wealth; they argue that wealth and assets have value not only in terms of their use but also to the extent that they can be converted to cash, in which case they can be used to meet consumption needs. Also, assets may generate income including profits and rents, they often increase in value over time, and they can be used as collateral for obtaining a loan. Furthermore, asset ownership and wealth provide social status to current and future generations.

Theoretical Considerations

To address the questions of why and how assets and wealth impact how decisions are made within households, a description of the bargaining power framework is warranted. The bargaining power model of household decision-making is one of many economic household models (see Agnes Quisumbing 2010). These models are used by economists to predict how households make economic decisions, like how much of their budget to allocate towards different types of consumption goods.

Traditionally economists have used the unitary household model to estimate household expenditures and other types of economic decisions (Quisumbing 2010). Frank Ellis (1988) presented a household model of peasant economics, which included both production and consumption activities within households; however, this model too was unitary (see Elizabeth Katz 1991). Unitary models assume that all household members share common preferences or that one person makes all the decisions (either

² Respondents were asked, "How much would you receive if you sold (the asset) today?" For assets owned by more than one person, the value was divided equally among all the owners to get the individual's wealth. If the spouses answered the questionnaire separately and there was a disagreement over the value of the asset, the value reported by the owner was taken as the value. If both principal adults were determined to be owners, then the average reported value was used.

in his/her self-interest or in the best interest of all the household members) to maximize the household's utility. Collective models, including cooperative and non-cooperative, are now more widely used. The bargaining power model, a type of cooperative household model, is often used in feminist economic studies of household decision-making (see Greta Friedemann-Sánchez 2008, Agnes Quisumbing and John Maluccio 2003, Bina Agarwal 1994, Deere and Doss 2006).

Although several feminist economists have criticized the bargaining model (see Katz 1991, 1997, and Bina Agarwal 1997), it is still widely used within feminist economics because it allows for different preferences and it recognizes that spouses³ have different bargaining power, which influences decision-making within households. One of the biggest criticisms of the bargaining model is that it is gender neutral; in other words, it assumes that resources in the hands of a man or woman give equal bargaining power. However, as Katz (1991) pointed out, there are gender biases not captured by these models. For example, what can be bargained about is often gendered; because of gender norms, women may not be able to participate in certain decisions.

Notwithstanding these limitations, the bargaining power framework is used to inform and address the research questions presented in each of the following chapters. Nash bargaining models of the household start with the fact that household members have different preferences and thus utility functions. Generally, two person households are analyzed. These two people, typically the husband and wife, are in charge of most of the decisions. The spouses have two main alternatives, they can cooperate within the household or they can choose not to cooperate and exit the household. A main

³ Throughout the dissertation the terms spouse and partner are used interchangeably to refer to either the husband or wife or partners in a consensual union.

assumption is that a person will stay in the household unless leaving the household gives her/him more utility. (Another assumption is that leaving the household is a feasible option, this is discussed in more detail below.) The utility achieved outside the household is considered the fallback utility or fallback position.⁴

Supposing that they decide to remain in the household, then the question becomes how they make decisions. It is important to remember that the non-cooperative outcome (i.e. exiting the household) determines the cooperative outcome (i.e. bargaining and decision-making). After obtaining the non-cooperative outcome, household models then predict the cooperative outcomes based on these. In essence, it is assumed that there is complete information such that each member of the couple knows the fallback position of the other and makes their decisions based on this information. Then the couple makes decisions to maximize their joint utility functions. Typically this is expressed as follows.

$$\text{Max } \alpha U_1 + (1 - \alpha)U_2$$

In this expression we see that there are weights (α and $1-\alpha$) attached to the utility functions (U_1 and U_2). The weights are interpreted as the balance of power in the household or in other words the bargaining power that each partner has. These weights are generally assumed to be between 0 and 1 and to sum to 1. Expressing the weights in this manner implies that increasing the power of one partner will necessarily decrease the power of the other.

⁴ The explanation of the bargaining power framework draws on work from several authors including Marilyn Manser and Murray Brown 1980, Marjorie McElroy and Mary Jean Horney 1981, Siwan Anderson and Mukesh Eswaran 2009, Quisumbing 2010, among others.

It should also be noted at this point that the weight, α , is determined by the utilities achieved in the non-cooperative outcome. It is a function of the fallback positions; expressed mathematically $\alpha = g(\bar{U}_1, \bar{U}_2)$, where \bar{U}_1 and \bar{U}_2 are the utilities achieved in the non-cooperative scenario. They can be thought of as the fallback positions of the wife and husband respectively. It is generally assumed that α is increasing in the first term and decreasing in the second term; in other words an increase in the wife's fallback position (\bar{U}_1) implies an increase in her bargaining power while an increase in her husband's fallback position (\bar{U}_2) will decrease her bargaining power. Thus, her bargaining power, α , depends on both her own fallback position (\bar{U}_1) and that of her husband (\bar{U}_2). Therefore, the relative fallback positions are important. This can also be seen from the first expression; as her bargaining power (α) increases, then by definition his bargaining power ($1 - \alpha$) decreases. From this expression we can also see that all else equal, owned assets, which we assume increase utility, will have a positive impact on a woman's bargaining power when she alone owns them and a negative impact when her husband alone owns them (the impact of jointly owned assets is unclear and would depend on their starting points).

Bargaining Power and Marital Regimes

As mentioned above, an important assumption of these models is that exiting the household is a feasible alternative. However, this is not always the case. Two possible exit strategies are discussed in the literature: 1) exiting the household by separation or divorce; or 2) remaining in the household but reverting to separate spheres (Shelly Lundberg and Robert Pollack, 1993, Katz 1997, Michael Carter and Elizabeth Katz 1997, and Siwan Anderson and Mukesh Eswaran 2009, among others).

In the separate spheres scenario, separation/divorce is not feasible (either legally prohibited or prohibited by cultural norms) and therefore, each member of the couple retreats into her/his traditional gender roles (e.g. a woman taking up traditional domestic labor but not helping her husband in his domain and *vice versa*). It is important to know about the relevant exit options available to the couple since these strategies can greatly impact the outcomes of the bargaining model. As explained in Anderson and Eswaran (2009), if divorce is the effective exit strategy, then an increase in a woman's unearned income (measured as the value of inherited or gifted assets) will unequivocally improve her fallback position since she does not have to forego any leisure time whereas earning higher income implies a decline in leisure time. However, if retreating into separate spheres is the effective exit strategy, then earned income (income earned in the labor market) can have a greater impact on a woman's fallback position than unearned income; this is the case that Anderson and Eswaran (2009) found in Bangladesh.

If physically exiting the household is feasible, the marital regime that regulates property rights between spouses becomes especially relevant. In Ecuador, the marital regime is that of partial community property. As such, any property acquired while married is considered joint property while property obtained while single and all inherited property remains an individual's property. This implies that if a couple divorces, any individual property will go to the individual while joint property will be split equally between the partners. Thus, the relevant fallback positions of each spouse is based (at least in part) in the amount of property and/or wealth that would accrue to that

person in case of divorce. This also assumes that divorce is feasible and that the marital regime regulating property rights is enforced upon divorce.

Women's Empowerment and Bargaining Power

Empowerment is defined as “the process by which those who have been denied the ability to make strategic life choices acquire such an ability” (Naila Kabeer 1999: 435). Kabeer (1999) discusses the importance and interconnectedness of resources, agency, and achievements to the process of empowerment (see Figure 1-1). This framework is similar to the bargaining power framework in terms of these three concepts. In the bargaining power framework, access to resources changes outcomes/achievements through the process of bargaining to make household decisions.

One of the big differences in the empowerment and the bargaining power literatures is in terms of the treatment of power. In her investigation of empowerment, Jo Rowlands (1997), describes three types of power: power over, power to, power with, and power from within (see also Janet Gabriel Townsend, Pilar Alberti, Marta Mercado, Jo Rowlands, and Emma Zapata 1999). In the bargaining power framework, an increase in one person's bargaining power means a decrease in another person's bargaining power; this is an example of *power over*. *Power to* is a “generative or productive power which creates possibilities and actions without domination” (Rowlands 1997: 13); it is “the power to new things...” (Townsend et al. 1999: 33). *Power with* is “the capacity to achieve with others what one could not achieve alone...” (Townsend et al. 1999: 31). *Power from within* is “the spiritual strength and uniqueness that resides in each one of us and makes us truly human. Its basis is self-acceptance and self-respect

which extend, in turn, to respect for and acceptance of others as equals,” (Suzanne Williams et al. 1994: 233 quoted in Townsend et al. 1999: 30).

Although *power over* is a zero sum game, the other types of power are positive and additive. In other words, increasing women’s power does not necessarily imply a decrease in men’s power. The bargaining power framework is based on the assumption of *power over* and as such it dismisses the possibility of any positive and additive type of power such as *power for*, *power with* or *power within*.

Many economic studies using the household bargaining power framework focus on the link between women’s access to resources and outcomes, largely ignoring the intermediate link: how access to resources impacts decision-making (see review in Carmen Diana Deere and Magdalena León 2001: 15, Elizabeth Katz and Juan Sebastian Chamorro 2003, Quisumbing and Maluccio 2003, Quisumbing 2010, among others). Furthermore, many of these past studies have used income (labor and non-labor market income) as the predominant measure of resources arguing that a woman’s fallback position is determined by such income without also considering her assets and wealth. These studies have found that increasing women’s income has a positive impact on other development goals such as nutrition, education, and the budget share spent on various types of consumption goods. However, as discussed above one’s fallback position also includes the assets and wealth that are owned and that one would keep in case the household dissolved due to separation, divorce, or the death of a spouse.

Bargaining Power and the Importance of Perceptions

Previous authors have expounded on the importance of perceptions in a bargaining framework; often critiquing the Nash bargaining model because it does not

address such perceptions (see Amartya Sen 1990 and Katz 1991, 1997). Perceptions are important not only in terms of both the perceived contributions of household members (Sen 1990) and thus their bargaining power, but also in terms of what they deem worthy of bargaining over (Katz 1991). Katz (1997) also argues that it's not just one's own perceptions but the perceptions of other household members that are important for how well the threat point can be utilized in the bargaining process. In other words, a woman's perceptions of her assets (or other contributions) are only valid for bargaining power if her husband has similar perceptions. If they have different perceptions about her resources/assets/contributions then the bargaining process and thus outcomes will reflect these differences and perhaps how their perceptions have changed as a result of the bargaining process.

Thus, it is important to take into account the different perceptions of men and women in the bargaining power model of household decision-making. Interviewing only one of the partners will likely give different results/estimates than if responses were collected from the other partner. As explained in more detail below, we have collected information from both partners and can thus test whether there is a systematic difference in their responses and thus in the results of the various models presented in the next chapters.

Gaps in the Literature

Four main gaps in the literature were identified. First, resources are linked to welfare outcomes (household budget shares, health, nutrition, and/or education) without considering the decision-making processes within households that lead to such outcomes. Second, the resources considered are typically limited to income and less so to land rights (access or ownership), but all physical and financial assets are likely to

impact one's fallback position and thus bargaining power. For example, owning a home or piece of land or other asset could provide a livelihood in case the household dissolved and as such impacts the relative bargaining positions of the spouses. Third, studies tend to focus on women's assets and not the relative positions of husband and wife. As discussed above, according to the bargaining power framework, it's their relative positions that determine bargaining positions within the relationship. And fourth, the few studies that do focus on the direct link between resources and decision-making tend to focus on women's autonomous decision-making, or occasionally her participation in decisions without really considering other forms of decision-making processes within the household and what they mean for women's empowerment (or what they indicate in terms of bargaining power).

The main contribution of this dissertation is that the intra-household distribution of assets and wealth is used as an indicator of resources and is linked this directly to various forms of decision-making within households. This is done in three essays. The first essay (Chapter 2) focuses on housing, which is arguably the most important asset to own in Ecuador. Results of this essay indicate that there is little to no gender differences in the likelihood of homeownership or in housing wealth but that there are gender differences in the factors explaining homeownership and housing wealth. Then, the second and third essays (Chapters 3 and 4) focus on the relationship between decision-making and the intra-household distribution of assets and wealth. Chapter 3 examines how couples make the decisions about working and spending income. Chapter 4 focuses on how rural smallholders make agricultural decisions.

Hypotheses and Findings

My principal hypothesis is that decision-making within households is associated with women's access to resources, particularly their ownership of physical assets and the intra-household distribution of wealth (measured as the female's share of couple's wealth). Following the collective bargaining model framework, we posit that women's ownership of major assets such as the primary residence, land, and other real estate is associated with a stronger fallback position and hence greater bargaining power within households than women who do not own major assets. And, women's greater bargaining power should be reflected in the way couples make decisions; we expect that women who own real estate will be more likely to participate in household decision-making than those who do not.

Furthermore, since the spouses' relative positions are an important determinant of bargaining power, we use their relative wealth positions, measured as women's share of couple wealth, as an indicator of their relative bargaining positions. The wife's share of couple wealth is between 0 and 1, and is calculated as follows.

$$\text{Wife's share of couple wealth} = \frac{\text{Wife's wealth}}{\text{Wife's wealth} + \text{Husband's wealth}}$$

We hypothesize that the greater the wife's share of couple wealth, the greater her bargaining power within the household and this will be related to her greater participation in household decision-making. More specific hypotheses are listed in each chapter.

In general, the results indicate that the intra-household distribution of assets and wealth is indeed related to household decision-making. Both spouses owning real estate is correlated to egalitarian decision-making while only the wife owning real estate

is correlated to women's autonomous decision-making. Furthermore, a more equal division of wealth is related to egalitarian decision-making but negatively related to women's autonomous decision-making. The wife's share of couple wealth does not follow the same pattern when it comes to agricultural decision-making, which may indicate that wives' are choosing in which decisions to participate and ultimately choosing something besides agriculture. However, the ownership of agricultural equipment is a strong predictor of how agricultural decisions are made; women are more likely to make a joint decision about what to cultivate when both partners own agricultural equipment and more likely to make an autonomous decision when only they own agricultural equipment. Thus in general we find, as expected, that a fairly equal distribution of assets and wealth within households is related to egalitarian decision-making processes while a distribution that favors women is associated with women's autonomous decision-making.

Setting

Ecuador provides an interesting case study to explore these hypotheses. At 41% Ecuador has one of the highest rates of joint homeownership by couples in Latin America and therefore one of the highest rates of homeownership by women in Latin America at 44% (Carmen Diana Deere, Gina Alvarado, and Jennifer Twyman 2012). Moreover, according to the results of the 2010 Ecuador Household Assets Survey, also analyzed herein, women own 52.2% of the gross household physical and financial wealth, a share approximately equal to their share of the population (Carmen Diana Deere and Jacqueline Contreras 2011).

The high rate of joint asset ownership and thus the near gender equality of wealth in Ecuador is likely related to the marital regime regulating property rights by couples.

As noted earlier, given Ecuador's partial community property marital regime, legally any property purchased during marriage is considered joint property of the couple, while property acquired while single as well as inherited property remain individual property during marriage. Furthermore, the marital regime applies to both marriages and consensual unions. The inheritance regime in Ecuador, like other South American countries, applies to both men and women equally; all children inherit equally from their parents. However, Ecuador's inheritance is less favorable in terms of widow(er)s inheriting from their deceased spouses. In most South American countries a widow(er) retains her/his half of the community property and inherits from the deceased spouse; but, in Ecuador the widow(er) receives only her/his half of the community property and does *not* inherit from the deceased spouse's patrimony unless they have no living children (Deere and Contreras 2011, Deere and León 2001). The one source of gender inequality under the law is that even though either or both spouses can administer the community property, if nothing is declared at the time of marriage, the husband becomes the administrator by default, in contrast to many other Latin American countries which recognize the dual-headed household and as such both partners administer the marital property.

Furthermore, as described by Carmen Diana Deere, Jacqueline Contreras, and Jennifer Twyman (2010), the marital regime seems to be widely known and enforced through a mechanism known as the "double signature," which requires both spouses to sign the paperwork when selling real estate, vehicles, and stocks. Even so, at times gender equality in practice can be elusive. Historically, property rights have favored men; in Ecuador men's legal authority over their wives known as *potestad marital* gave

husbands many rights over their wives. For example, until 1970 married women did not have legal capacity and had to be represented by their husbands in court; women could not administer their own property until 1949 (Deere and León 2001: Table 2.1).

Although the laws have changed over time, the idea that men are household heads and the owners and managers of property persists. Also, even though marriages and consensual unions are treated equally under the law, they are socially construed as quite different: one's marital status is still considered single while in a consensual union and to acquire the same rights as a marriage the consensual union must meet certain requirements (a two year monogamous relationship). For these reasons, it is more difficult to enforce the community property rights of consensual unions (Deere, Contreras, and Twyman 2010).

Survey Design and Data Collection

Fieldwork was conducted in Ecuador from June 2009 to August 2010 in two stages. First, qualitative fieldwork consisting of focus group discussions and key informant interviews was carried out in three provinces (Pichincha, Manabí, and Azuay), which were chosen to represent the two main regions in Ecuador—the coast and the highlands—and to highlight various processes through which wealth may be accumulated. Pichincha, a highlands province was chosen because of the prevalence of the flower industry in rural areas. Manabí on the coast was chosen for its fishing and tourism industry, and Azuay in the highlands was chosen because of the high rates of

international migration in the area (see the case study reports: Jacqueline Contreras 2010, Deere 2010a, 2010b, and Jennifer Twyman 2010).⁵

A total of 40 focus groups were conducted; most of the groups were organized with women's organizations and therefore were comprised only of women. However, we also conducted some mixed-sex groups and in each province there was at least one all male group; these were typically organized in collaboration with micro-credit organizations or peasant organizations. In each province we also held one focus group with professional and businesswomen. The focus groups focused on four themes: the accumulation of assets over the life cycle; the importance of assets; the market for assets; and household decision-making over asset acquisition and use. Besides the focus groups, we also carried out a total of 58 interviews with key informants, including lawyers, judges, notary publics, real estate agents, leaders of grassroots movements, NGO representatives, and academics.

Second, a nationally representative household survey was conducted with the collaboration of the survey company HABITUS.⁶ A stratified random sample was used. The primary sampling units were the (updated) 2001 national census blocks, which were characterized by socio-economic level based on an index of the proportion of household basic needs satisfied according to the 2001 census data. The household was the secondary sampling unit and these were drawn with equal probability within

⁵ More information can be found at the Ecuador project website: <http://www.flacsoandes.org/web/cms2.php?c=1409> and for the international project website: <http://genderassetgap.iimb.ernet.in/>.

⁶ Although HABITUS was hired to conduct the survey, the research team was actively involved throughout the process. We participated in training enumerators, supervising a pilot survey of about 100 households, making modifications, and supervising the administration of the survey and data verification processes. We had less influence in the data entry process.

each selected census block. Twelve households were interviewed per census block and replaced if there was a rejection or no one in the household could be located after three attempts.⁷ The sample is representative of rural and urban areas and the two major regional geographic and population groupings of the country, the Sierra (highlands) and Coast.⁸

The survey instrument included two questionnaires. First, a household questionnaire was designed to be answered by the couple together or if both were not available, then one of the two could answer these questions. Then, an individual questionnaire was administered separately to the two principal adults. It included questions about decision-making, savings, loans, and other information that we thought to be of a private nature and that we would get more truthful responses if the individual answered these questions alone. Furthermore, if the individual was not present during the first part of the questionnaire, then they were asked some of the questions that the spouse/partner had already answered in the household questionnaire regarding asset ownership and values. In this way we hoped to get the best information possible; the logic was that if the couple was together they could discuss and come to an agreement about the best response, especially in terms of the value of assets.⁹ If the couple was

⁷ The original sample size contemplated was 3,000 households. As is typical in large-scale living standard surveys (James Davies, Susana Sandstrom, Anthony Shorricks, and Edward Wolff 2008) we faced an extremely high rejection rate among the highest socio-economic group and the sample is thus truncated, not being representative of the wealthiest households. The final sample of 2,892 households has a survey margin error of 1.8% nationally, 2.2% for urban areas and 3.2% for rural areas. See Deere and Contreras (2011) for further details.

⁸ The Amazon region and the Galapagos Islands, which hold less than 5% of households nationally, were excluded from the sample due to budget constraints.

⁹ There is a considerable debate in the family studies literature in the United States about whether it is preferable to interview a couple together or separately (Gill Valentine 1999). In Ecuador men and women tended to have different knowledge regarding the markets for assets. Moreover, men and women often have access to different kinds of information regarding assets. For example, urban women often had a

not available to answer the questionnaire together, then we wanted to be able to compare their responses.

The results of this survey are used for the data analyses in this dissertation and the qualitative fieldwork helps enhance the interpretation of the findings. The survey, known as the UF-FLACSO 2010 Ecuador Household Asset Survey (EAFF, Encuesta de Activos Florida-FLACSO), includes 2,892 households (Deere and Contreras 2011). A little over two-thirds of these households (68.5%) are dual-headed and 31.5% have a non-partnered head (24.8% female headed, and 6.7% male headed) (Deere and Contreras 2011: 19). The couple was interviewed together in about half of the dual-headed households. In 189 dual-headed households (6.9% of the total) the second member of the couple was not interviewed due to one of several reasons: they were temporarily away, an appointment could not be arranged after three attempts, or they refused to be interviewed.

Outline and Objectives

Housing is a key asset in the wealth portfolio and as such is likely an especially important asset for women's empowerment and/or bargaining power within the home. Therefore, the focus of Chapter 2 is on gender differences in homeownership. This chapter first examines the differences in the likelihood of homeownership for men and women and then examines whether there are gender differences in housing wealth.

Then, Chapters 3 and 4 in turn focus on whether asset ownership and the relative wealth positions of husbands and wives is important in terms of decision-making as is suggested by the bargaining power framework. Chapter 3 focuses on whether couples

better idea of sales prices of dwellings recently sold in their neighborhood than did men; whereas in rural areas, men tended to have a better idea of land prices than did women.

make egalitarian decisions about whether to work outside the home and how to spend one's own money, while Chapter 4 focuses on women's participation in agricultural decisions within landowning households.

It is expected that the analyses presented in the following three chapters will provide insight into the intra-household distribution of wealth and how it impacts household decision-making. As such it is hoped that we will gain a better understanding of the economic agents and activities within the black box known as the household.

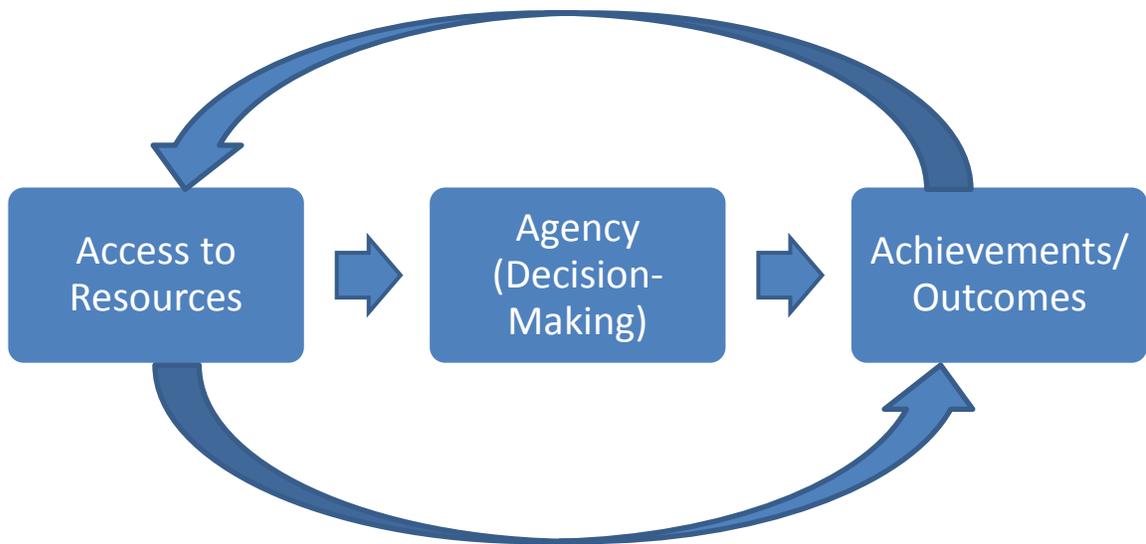


Figure 1-1. Empowerment framework (adapted from Kabeer 1999).

CHAPTER 2 IS THERE A GENDER GAP IN HOUSING? MARITAL PROPERTY RIGHTS IN ECUADOR

Housing is an important asset; across the globe it is the most commonly owned asset of value and as such is an important component of the household wealth portfolio (Robert Dietz and Donald Haurin 2003, Asena Caner and Edward Wolff 2004, Florencia Torche and Seymour Spilerman 2008, Eva Sierminska, Joachim Frick, and Markus Grabka 2010). In Ecuador, 60% of households own their home and on average housing accounts for 45% of households' wealth portfolios (see Figure 2-1). By sex, we find about 57% of men's wealth portfolio and 66% of women's are in housing (Deere and Contreras 2011). Moreover, homeownership often distinguishes the poor (or extremely poor) from the non-poor; this is illustrated in Figure 2-1 where we see that the lowest wealth quintiles have the least invested in housing at only 4%, and the richest two quintiles have the highest value invested in housing at 67%. Thus housing is an important asset to consider when exploring gender inequalities.

Ecuador provides an interesting case study to explore gender differences in homeownership. Like other South American countries, Ecuador's marital regime is that of partial community property. Interestingly, even though all the South American countries have the same marital regime, there are varying patterns of homeownership among the countries as shown in Table 2-1 (Deere, Alvarado, and Twyman 2012).¹

¹ The cited study used data from the 2005/2006 Ecuador Condiciones de Vida (Life Conditions) Survey, which only included titled homes and also used pre-coded responses such as household head, spouse, and others. As such this did not allow for all potential owners to be identified. The measures presented in this dissertation use the reported owner regardless of whether they held a title and the owners question was open ended so that the respondent could report any and all owners (with space in the questionnaire for up to three owners plus options for all household members or all children).

Ecuador has one of the highest rates of joint home ownership in Latin America as well as a fairly equal gender distribution of homeowners.

In this chapter, we use individual level data to examine the extent of gender equality of homeownership in Ecuador. Specifically, the following questions are addressed: 1) what is the likelihood of homeownership for men and women; and 2) are there gender differences in the housing wealth owned by men and women? The next section reviews the literature regarding homeownership. Then, we explain the data and methods. For the analysis we first compare the factors that predict the likelihood of homeownership for men and women. And second, since focusing only on the likelihood of homeownership does not account for potential quality differences, we also examine the gender differences in housing wealth, which should give an indication of differences in housing wealth assuming that housing with higher quality will be valued higher than lesser quality housing.

Literature Review

Although homeownership can limit mobility and thus limit wage employment opportunities, there are several benefits to homeownership. Alan Gilbert (1999) identifies the benefits of homeownership to the poor in an informal (or self-help) settlement in Bogotá, Colombia. The residents see homeownership as a good investment in terms of safety/security, having something to leave to their children, a safeguard in old age, and not having to pay rent. He also discusses how an owned home can be a source of income; either by renting out rooms or as a place for income-generating activities (home-based businesses). Similarly, Marianne Fay and Caterina Ruggeri Laderchi (2005) discuss the benefits of homeownership in Latin America.

Besides the benefits listed above, they also mention that housing can be used as collateral for obtaining a loan.

Owning a home is especially important for women. It provides economic independence and security as well as contributing to physical and emotional well-being. In couple headed households,² homeownership may improve a woman's fallback position and thus her bargaining power within the home. This is because if the household dissolves, a woman who is the sole homeowner will still have a place to reside and raise her children. There is a debate in the literature about whether individual or joint ownership is best for women in terms of empowerment and/or bargaining power within the home; much of this debate is centered around land and the issue of titling. Agarwal (1994) argues for independent land rights for women in South Asia. On the other hand, Deere and León (2001) stress the importance of either individual or joint titles in Latin America; they argue that given the legal marital regimes in Latin America that upon divorce half of the marital property belongs to the woman and as such even joint titles will be empowering. In one of the few studies regarding housing, Namita Datta (2006) found that joint titles had positive effects on women's empowerment in an informal settlement in India; their participation in decision-making increased and they had an increased sense of security and self-esteem among other benefits.

Despite the importance of housing, few studies have conducted gender analyses of homeownership and thus little is known about the gender inequalities of homeownership. Most of the literature focuses on racial differences in homeownership

² During the survey, the "headship" terminology was avoided because of the notion that "household head" refers to an adult male except in households where there is not one. Instead the survey focuses on interviewing the two principal adults. Households in which an adult couple lives are considered "dual headed" by the couple.

in the U.S. (see Donald Haurin, Christopher Herbert, and Stuart Rosenthal 2007 for a review) with few studies focused on gender differences (Stanley Sedo and Sherrie Koussoudji 2004 is an exception). And, there is even less on gender and homeownership in Latin America. This is at least partially due to a lack of data. Deere, Alvarado, and Twyman (2012) examined 167 household surveys for 23 Latin American countries and found that only 9 countries had data regarding home ownership at the individual level, which is needed for a gender analysis.

The few studies that look at gender inequality in housing typically focus on the barriers to homeownership by women. Housing is a relatively expensive asset, which may prohibit women, especially poor, single mothers from obtaining ownership. Also gender wage gaps may prevent some women from generating the savings needed to purchase a home. During fieldwork in Ecuador, we found that homes in the popular sector are usually built rather than purchased and that they are typically built brick by brick as small amounts of money can be put together to buy materials. Construction is often carried out by household members, family, and friends. Poor, single women may lack the time, skills, and social capital that are necessary for home construction as Faranak Miraftab (2001) found in Mexico; they may also be less likely to own a lot on which to construct a home.

Other barriers to female homeownership include discriminatory housing policies and mortgage lending practices. Deere and León (2001) explain how titling policies may impact female property ownership in Latin America. They explain that titles are often issued to men as heads of households even when women participate in land invasions and contribute their earnings and savings towards home construction. Although the

marital regime in Ecuador and other South American countries is such that any property acquired while married is legally joint property, by issuing titles only in men's names, women may have difficulty proving their property rights if the household dissolves due to separation, divorce, or death. Deere and León (2001) argue that joint titling would reinforce the legal marital regime and help overcome this type of discrimination towards women.

Mortgage lending discrimination is another barrier to homeownership by women. Although no studies were found regarding this in Latin America (perhaps because mortgages are still uncommon), in the U.S., Judith Robinson's (2002) study indicated that discrimination in mortgage lending varies by household composition, gender, and race. She found that single mothers of all racial groups fared worse in the mortgage market than single fathers. Her analysis suggests that mortgage lending to dual-headed households depends on race and the employment status of women; white households are at a disadvantage when the woman works while African American households do better in the mortgage market when the woman works.

Furthermore, even studies that include gender typically use the sex of the head of the household instead of the sex of the owner(s). One argument for using the household as the unit of analysis, is that housing is a resource used by all household members and therefore cannot easily be disaggregated (Faranak Miraftab 1998). This argument seems most relevant when analyzing access to housing, but less so for issues of ownership. Another reason households are used as the unit of analysis is simply because there is a lack of individual-level data on owners (Néstor Gandelman 2008).

There are several limitations of using household-level data to analyze the gender gap in homeownership. First, households do not own things, people within them do. This is important because household composition changes over time. Household members come and go; children grow up and form households of their own and households may dissolve due to death, separation, or divorce. In such instances there are implications for asset owners and non-owners.

Another limitation to using the household as the unit of analysis in gender analyses is that households do not have a sex. In order to overcome this, these analyses typically use the sex of the household head. However, this results in an analysis more of household type/structure than of gender. Furthermore, Gandelman (2008) argues that such analyses face an endogeneity problem; not only does the sex of the head influence homeownership but also homeownership may influence the sex of the head of household. This is especially true of female headed households which are typically defined by the absence of a male breadwinner; in such cases women may choose to head their own households when they own a home but may not when they do not own a home, choosing instead to live with relatives. In such cases, they become “nested” female heads that are overlooked in typically household surveys since they do not fit the definition of a separate household, which is defined as those who live under the same roof and share meals. Donald Haurin and Stuart Rosenthal (2007) address the problem of how household formation impacts homeownership rates and thus propose a model that simultaneously predicts headship (or household formation) and the housing tenure question. In doing this they use individual-level data and find that lower headship rates corresponds to lower homeownership rates. Similarly, Maria

Concetta Chiuri and Tullio Jappelli (2003) stress the importance of using individual-level data on homeownership when it exists since explanatory variables (such as age and gender) are measured at the individual-level.

As explained by Haurin, Herbert, and Rosenthal (2007) homeownership studies typically use one of four conceptual approaches. Two of these focus on the demand side of homeownership, using either the user cost approach or the investment and consumption demand approach. The other two focus on the supply side, using either the availability of housing approach or the availability of credit approach. The main idea of the user cost framework is that an individual will be a homeowner when the benefits of ownership outweigh the costs. Many studies in the US compare owner costs to rental costs; however, there are other tenure choices in Ecuador that are as relevant as renting; Table 2-2 shows that while 60% of households own their home, 21% rent and 20% have another tenure status such as borrowed or received for services.³

The investment and consumption approach is another demand side approach that is used to distinguish between investment and consumption reasons for purchasing a home. In this approach it is assumed that if investment demand is large relative to consumption demand, then the household will own their home; whereas if consumption demand is large compared to investment demand, then the household will be less likely to own (Haurin, Herbert, and Rosenthal 2007). As shown in Table 2-3, only 23% of homes in Ecuador are purchased; most (65%) are constructed. Moreover, there is not always a strong market for selling homes. For these reasons, this approach may not be

³ Torche and Spilerman (2005) refer to "...two customary tenure arrangements in Latin America: dwellings provided by a family member or friend (most frequently as 'long term loan'); and dwellings provided by an employer, an arrangement frequent among rural workers and manual employees in remotely located manufacturing or extractive plants."

appropriate in the case of Ecuador. Furthermore, investment demand is typically modeled using tax costs, transaction costs, maintenance costs, depreciation rates, and appreciation rates, which are not available for the current analysis of Ecuador.

The supply side approach implicitly assumes that access to credit is necessary for homeownership; it specifically focuses on access to credit and potential discrimination in the mortgage market. In Ecuador mortgages are uncommon; as shown in Table 2-2, 60% of homes are owned but less than 4% are currently mortgaged. Furthermore as shown in Table 2-4, only 24% of homes were acquired with some kind of formal loan (from IESS--the Ecuadorian Institute of Social Security,--a private institution, direct financing, or an employer loan). This approach also requires data on the housing market, such as the number of houses for sale and their prices, which we did not obtain for Ecuador.⁴

All of these approaches implicitly assume that the household is a static unit that will either own or rent a home. However, the number of households in a society changes over time and may be influenced by the supply and price of housing as well as by career changes, marriage, separation, divorce, and death. Thus, household formation and dissolution is also an important consideration for homeownership studies (Haurin and Rosenthal 2007). This seems to be a very important consideration in Ecuador where many young people continue to live with parents even after getting married or forming a consensual union (at least until they can acquire a home of their own). Furthermore, as mentioned above, a household level analysis generally assumes that the number of households in society is fixed and that the supply and demand

⁴ We discussed the availability of the data with various real estate agents and property registrars while doing fieldwork, but obtaining the data was infeasible due to financial and time constraints.

variables do not influence the number of households, otherwise there would be an endogeneity problem in the model (as discussed by Haurin and Rosenthal 2007 and Gandelman 2008). However, by using the individual as the unit of analysis, the endogeneity problem is eliminated. This is because the number of individuals in society is not directly influenced by the supply and demand of housing. Unlike household level analyses, an individual level analysis will not hide any potential homeowners. For example, a single-mother may either live with relatives or create her own household by living independently; a household-level analysis would ignore the woman living with relatives but consider her if she lived independently. On the other hand, the individual level analysis would take her into account in either situation.

Data and Methods

This study uses data regarding homeowners, housing values, and household and individual characteristics collected in the UF-FLACSO 2010 Ecuador Household Asset Survey. The sub-sample used in this paper is limited to the 7,432 adults (those of 18 years of age or older) in the sample of 2,892 households.⁵ In order to address the question of gender differences in homeownership, first binary dependent variable regression models are used to examine if there are differences in the variables that predict the likelihood that men and women are homeowners. The dependent variable for this set of models is whether the individual is a homeowner or not.⁶ The second set of models analyzes an individual's housing wealth as a continuous variable using

⁵ There is missing information about the past migration status of one adult, who is therefore not included in the sample for the regression analysis, making the sample size 7,431.

⁶ Couples were asked about who owned the principal dwelling together when feasible; otherwise each partner reported on who the homeowners were. In the case of disagreements, we have first checked whether there is a title to the home reported and if so, whose name is listed on the title (as reported by the first respondent). If there was no title, then we took all listed owners as reported by either respondent.

ordinary least squares regression. The dependent variable is the individual's housing wealth, which is calculated by dividing the total housing value, as reported in response to the question, "How much would you receive for your dwelling if you sold it today," by the total number of owners.⁷

The following paragraphs describe the explanatory variables included in the models. A list of the variables and their definitions are given in Table 2-5. In the U.S. many studies have assumed that the costs, benefits, and affordability of homes vary by race; that is they assume that the weight of the explanatory variables and the overall outcome may differ by race due to discrimination. Sex is another variable that can be used for discrimination analysis, but is not often emphasized in these studies (exceptions do exist; see for example Sedo and Kossoudji 2004). For the independent variables, we draw on the few gender studies as well as the race studies. Typical variables used to predict homeownership include: income, race, gender, age, housing characteristics, marital status, family size, and location (see Haurin, Herbert, and Rosenthal 2007).

It is expected that the relative costs and benefits of homeownership will change over the course of the life-cycle. For this reason, age, household size and composition (in terms of the number of children and adults in the household), and marital status may impact homeownership. In Ecuador marital status likely impacts how the home is owned, that is whether it is owned as individual or joint property since property purchased during marriage is considered joint property; this will also impact who is or is not a homeowner. The qualitative fieldwork indicated that homes were typically acquired

⁷ If there was a disagreement between the owners about the housing value, then the values were adjusted by taking the average to get a "final home value".

during marriage or consensual unions and that few homes (unlike land) were inherited. Given the partial community marital regime, we would thus expect that most couples own their homes jointly and that both would therefore be owners.

Data on income is not available in the dataset; however, there are several variables related to socio-economic status. Human capital in terms of education, which is generally associated with income levels, is likely an important factor affecting homeownership. There is also data about the person's wealth level; for the analyses in this chapter, we use non-housing wealth. It is expected that non-housing wealth will be associated with both the likelihood of homeownership and housing wealth. Furthermore, information about whether someone in the household receives a government subsidy or transfer payment (*bono* in Spanish) is available. This should be a good indicator of low income levels since its receipt is supposedly based on income levels; however, as described by Veronica Argudo (2012), leakage means that many non-poor households receive the *bono* in Ecuador. Finally, an indicator of earnings is whether the person is employed in a remunerated activity. Unfortunately, it is not feasible to determine if such employment opportunities are formal or informal or to otherwise group them in meaningful ways to capture differences in the level of potential earnings.⁸

Location is another variable that will impact the costs and benefits of homeownership. For example, in Ecuador there is little to no housing rental market in rural areas,⁹ which limits tenure options. Therefore, a dummy variable is included to

⁸ Various employment categories were considered; however, none of them were found to distinguish between different potential earnings.

⁹ This fact was often mentioned in focus group discussions during fieldwork.

indicate rural/urban areas. Also included is a regional variable for Sierra/Coast to control for other potential regional differences.

Migration and remittances can aid in the construction of a home; therefore, a variable that identifies past international migrants is included in the model. As explained by Krystal Anderson (2012) there are a variety of estimates of the number of Ecuadorians living overseas varying from 7% reported by FLACSO-UNFPA (2008) to 10 to 15% estimated by Brad Jokisch (2007); Anderson states that Jokisch's estimate of 10 to 15% is likely a better estimate since the FLACSO-UNFPA data only considers migrants who left between 1999 and 2007. During focus group discussions and interviews, women mentioned that migration was a strategy for acquiring homes; we could also see the evidence in terms of newly constructed homes in several areas where international migration rates were high (Carmen Diana Deere 2010a).

Since homeownership is widely distributed in Latin America and thus a good indicator of inequality in Latin America (Torche and Spilerman 2008). However, housing quality and hence the value of homes owned varies widely; therefore, housing wealth, which gives an indication of the quality of homes owned by men and women, will provide more information about inequality than a study of homeownership alone. Few studies have examined the question of the determinants of housing wealth. A few exceptions include studies by James Long and Steven Caudill (1992), Samuel Myers and Chanjin Chung (1996), and Chenoa Flippen (2001) all of which examined the racial gaps in housing values and/or equity in the US. Each of them used similar variables to those mentioned above.

Even though housing wealth is likely a better indicator of inequality than income levels (Torche and Spilerman 2008), some question whether there are markets for homes, especially those in the many informal settlements of Latin America. Latin America is characterized by high rates of urbanization that has led to numerous informal settlements. In Latin America, Torche and Spilerman (2008) report three fourths of the population live in urban areas. In Ecuador the rate is not quite that high but it is still predominately urban with about 63% of the population living in urban areas.¹⁰ Our analysis of invasions indicates that less than 1% of homes are acquired through invasions and another 1% by governmental re-location programs. However, when we consider how the housing lot was acquired, the proportion of invasions increases to to 5%. As explained by Torche and Spilerman (2008) these rates of invasion are likely underestimated for a couple of reasons; first respondents may not want to admit that invasion was the form of acquisition, and second they may consider it as having been inherited if the home or land has been in the family for more than one generation.

Gilbert (1999) suggests that many homes in informal settlements are not sold precisely because they are informal (Gilbert 1999) and the owners do not hold titles. During our survey, some respondents were reluctant to give a value; their initial response was that they had no desire to sell their home. We persisted in asking the question in the hypothetical and usually got an answer. If the respondent still insisted that their home could not be sold, we reported that there was no housing market in the area, this typically occurred in rural areas. Overall, in only 1.6% of households was no housing market reported and another 1.3% reported that they did not know the value of

¹⁰ Fascícula Nacional: Resultados del Censo 2010 de población y vivienda en el Ecuador. INEC. http://www.inec.gob.ec/cpv/descargables/fasciculo_nacional_final.pdf.

their home, indicating that at most 2.9% of respondents could not give an estimate of their home's value. However, as indicated by Gilbert (1999) and others it may in fact be difficult to sell homes in such areas and as such our estimates may overestimate housing wealth in terms of the market value; on the other hand, as indicated by these same authors, homes are still valuable to the owners and as such the estimated values at least give us an idea of their valuations.

Besides the variables already discussed, the housing wealth model also includes the number of other owners. Since total housing value is divided among all homeowners one may expect that the value belonging to each individual will decrease with the number of owners; however, it could also indicate greater housing wealth since people can afford more together than separately. Some past studies indicate that couples own higher valued homes than single owners (Flippen, 2001). Similarly others have found that in the U.S. married individuals have more than twice the wealth (measured as net worth) as single people (Lucie Schmidt and Purvi Sevak 2006 and Alexis Yamokoshi and Lisa Keister 2006); so we might expect their housing wealth to follow a similar pattern.

Results

Descriptive statistics are presented in Tables 2-6, 2-7, and 2-8. Homeownership seems to be distributed fairly equally by gender in Ecuador; as shown in Table 2-6, 36% of women and 34% of men are homeowners. This is likely due to the partial community property marital regime, which implies that assets purchased during marriage are legally joint property. Considering all homeowners—both individual and joint owners—46% are men and 54% are women (see Table 2-6), which is similar to the sex ratio of adults in the sample (47% men and 53% women). At nearly 41%, Ecuador has one of the

highest rates of joint ownership in Latin America (see Table 2-1), which seems to suggest that the marital regime is being enforced. Of owned homes, 16% are owned by an individual man, 30% by an individual woman, 41% are jointly owned by a couple and 13% have another type of joint ownership (see Figure 2-2 and Deere and Contreras 2011).

Overall 35% of adults are homeowners. Marital status is an important variable; qualitative fieldwork indicated that housing is typically acquired after marriage or forming a consensual union. Furthermore, given the marital regime it is expected that married couples will be more likely than those in a consensual union to own a home jointly (although if the marital regime were enforced, then we would expect no difference).¹¹ Thirty-eight percent of the sample are married and 22% are in consensual unions; 24% are single, 2% divorced, 8% separated and 6% widowed.

Past migration, conditional cash transfer payment, employment, years of schooling, and non-household wealth are included as explanatory variables; since income data was not collected in the survey, these variables give an idea about poverty and potential earnings. About 3% of our sample are returned migrants; meaning that they migrated outside of the country for work and returned to Ecuador. Twelve percent receive a conditional cash transfer payment. Although we did not collect income data, we did ask about employment status. Here we measure employment as whether the

¹¹ Consensual unions and marriages have the same marital regime regarding property rights when the couple has been in a monogamous relationship for at least two years.

person is employed in a remunerated activity;¹² 68% of the sample are employed; 81% of men and 56% of women.

On average, the adults in the sample have completed nine years of schooling. The mean average non-housing wealth is \$3,697 but the median is only \$410 indicating a skewed distribution. The average age was 40, with a range from 18 to 99. Mestizos¹³ are the largest ethnic group, comprising 89% of the sample. Indigenous people account for 5% of the sample and other ethnicities, including afro-Ecuadorians, for 7%. On average there are four people per household, two children and three adults. Thirty-two percent of the sample lives in rural areas; and, 53% live in the coastal region, with the other 47% living in the highlands (known as the sierra).

As shown in Table 2-8, the mean reported sales value of owned homes is \$25,675 and the median \$15,000; there are 2 owners per owned home on average. The mean housing wealth for an owner is \$16,601 with a median of \$10,000 (Table 2-7); which is slightly higher than half of the reported value per home (roughly \$12,800 for the mean and \$7,500 for the median).

Comparing Owners and Non-Owners

The descriptive statistics reported in Tables 2-6, 2-7, and 2-8 are presented by sex and by owners and non-owners to get an initial idea of differences between the groups. There is no noted difference among homeownership status for the different ethnic groups. There are some differences by marital status. More married men and women are likely to be owners than non-owners; however lower percentages of single people

¹² The person is considered employed if they reported that they had worked in the past 12 months except if they were an unpaid family worker.

¹³ This category includes those people who classify themselves as either mestizo or white since they are culturally and socially similar in Ecuador.

and those in a consensual union are homeowners than non-owners. Widowed women may be slightly more likely to be homeowners than non-owners but there does not seem to be much difference for men. Furthermore, there does not seem to be a difference for those who are separated or divorced.

Not much difference is noted for past migrants. There is a slightly higher percentage of women receiving the government transfer payment who are owners than non-owners (27% compared to 16%) but not much difference for men (6% for owners and 2% for non-owners). There does not seem to be much difference between those who are employed and those who are not. A greater percentage of rural residents are owners than non-owners; but little difference in terms of ownership for coastal and highland residents.

As shown in Table 2-7 on average men and women in the sample are about the same age (40) and have similar levels of education (about 9 years). Men have \$4,347 of non-housing wealth on average while women have \$3,128. Comparing owners, the data suggests that owners are older (about 50) than non-owners (about 35) on average. Owners tend to have less schooling, 7.6 years on average compared to non-owners, who have 9.6 on average. This could be because in general older people have less education than younger people and we saw that owners are older than non-owners. Finally, owners have more non-housing wealth at \$6,197 on average compared to non-owners with \$2,336.

Multivariate Analysis

Although the comparison of owners and non-owners discussed above, provides some insight into differences between these groups, it does not provide a complete picture. In order to more fully understand these differences, multivariate analysis in the

form of regressions is warranted. First, the regression results for the pooled sample, which includes both men and women is presented and then to further examine gender differences, the models for the samples of men and women are presented separately. In each case, the coefficients are reported in the results tables; the odds ratios can be calculated by taking the exponent of the coefficient ($\exp(\beta)$).

Table 2-9 reports the estimated coefficients for a logit model of the likelihood of homeownership for adults in Ecuador (the pooled sample). In this model there is a weakly statistically significant difference between the likelihood that men and women are homeowners.¹⁴ If anything, women are slightly more likely than men to own homes in Ecuador, holding all else equal (women have 1.1 times the odds of men of being a homeowner).

There is a non-linear relationship between age and homeownership as expected. There is no difference in the probability of homeownership among the ethnic groups considered. Single people, those in consensual unions, the widowed, and the divorced and separated are all less likely than those who are married to own a home. Those receiving the conditional cash transfer payment are more likely to own a home than those who do not receive it. Non-housing wealth increases one's likelihood of homeownership. Employment and the number of children do not impact homeownership but as the number of adults increases, the likelihood of homeownership decreases. Furthermore, rural and coastal residents are more likely than urban or highland residents to own a dwelling.

¹⁴ The female dummy variable is nearly significant with a p-value of 0.103.

Although this pooled dataset, which includes both men and women, shows no statistically significant difference in the likelihood or probability that men and women own homes, there may be different factors associated with homeownership by men and women. In order to examine whether there are such gender differences, separate models are used to generate results for men and women (Table 2-10). The results for men are similar to the overall model; age has a positive but non-linear relationship, there are no differences between ethnic groups, married men are more likely than others to be homeowners, higher non-housing wealth increases men's likelihood of ownership, and rural and coastal residents are more likely to own than urban and highland residents. In contrast with the overall model, receiving a conditional cash transfer payment does not impact men's likelihood of homeownership.

The results for women are also quite similar to the overall model; age, marriage, receiving the government conditional cash transfer, non-housing wealth, self-employment in a professional career, number of adults, and rural and coastal residents are all correlated with greater likelihood of being a homeowner. However, past migration is also associated with a greater likelihood of homeownership for women.

The last column of Table 2-10 shows the Wald chi-square test for differences between the models for men and women. This test indicates that being in a consensual union, receiving a conditional cash transfer payment, and living in a rural area have gender differences. While both men and women in consensual unions are less likely than those who are married to be a homeowner, the difference for men is even greater than that for women. While men in a consensual union have only 0.4 times the odds as married men of being a homeowner, for women it is 0.6 times the odds. Similarly there

is no statistically significant difference between men who do and do not receive the conditional cash transfer payment; however, for women it is a positive predictor of homeownership. And, although rural positively predicts homeownership for both men and women, men in rural areas have greater odds (2.3 times the odds as urban residents) than women (1.7 times the odds).

In order to control for potential unobserved household effects influencing the model, a conditional logit was also used. The biggest drawback to using this type of model is that it cannot include individuals living in households where there is no variation in the dependent variable; thus, households in which all or none of the adults are owners cannot be included when estimating the model. (Also, none of the household level explanatory variables can be included.) The results are shown in Table 2-11 and are similar to those reported above. This model also indicates that there is no statistically significant difference between men's and women's likelihood of homeownership. However, in this model being employed is a positive predictor of homeownership.

In order to understand gender differences using this model, we included two gender variables. The first is a dummy variable that takes the value of 1 if the person is female and 0 if male. The second variable is an interaction term between the female dummy and the number of male adults. This variable gives information about household composition since the household variables of number of children and number of adults (both household level variables) cannot be included as explained above. If there are no adult men in the household then this variable will take the value of 0 and therefore the coefficient estimate drops out. However, if there are adult men in the household then

the coefficient estimate for being female changes since both coefficients must be taken into account. The coefficient estimates imply that while women living with no men in the household, would have 1.1 times the odds of a man of owning a home, the odds increase to $(\exp(0.120+0.084))$ 1.2 times for women living with a man. This suggests that household composition is an important predictor of homeownership; it may support previous research which suggests that women often acquire housing through their relationship with men; however, the limitation of the model implies that single women (living with no other adults in the home) are excluded from the analysis and as such limits what we can conclude about women homeowners.

Table 2-12 presents the results of the OLS model of housing wealth for homeowners. Again, there is no statistically significant difference between the housing wealth owned by men and women. Age and ethnicity do not impact housing wealth. There is no difference between the housing wealth of homeowners who are in a consensual union and those who are married; however, widows and widowers have about \$10,580 more housing wealth than married homeowners. This could be because widows and widowers assume that they inherit the home from their deceased spouse even though this is not legally the case (unless there are no children or if the children are under age, in which case the living spouse has usufruct rights until the children come of age). Thus, this could indicate that widow(er)s could have reported that they alone own the home but legally the home belongs to the widow(er) and her/his children. Alternatively, husbands could have willed the house to their wives before death. Surprisingly, divorced and separated homeowners also have greater housing wealth than those who are married, by about \$6,588 for those who are divorced and \$4,604 for

those who are separated. This is likely because one of the partners will acquire the full value of the home upon separation or divorce by buying out the other, whereas when they are together they each own half of the value.

Each extra year of schooling increases housing wealth by about \$1300. Returned migrants have approximately \$7,312 more housing wealth than non-migrants.

Receiving the conditional cash transfer payment decreases housing wealth by about \$5,450, which makes sense given that it is a means tested program, implying that those receiving this payment should be below the poverty line or have a disability. Non-housing wealth is statistically significant; a thousand dollar increase in non-housing wealth correlates with a \$80 increase in housing wealth. Surprisingly, homeowners who are currently employed have \$2,245 less in housing wealth than those who are not employed. For every additional owner, housing wealth decreases by \$3,900. Rural homeowners have about \$8,200 less housing wealth than urban homeowners. And coastal homeowners have about \$8,400 less housing wealth than highland homeowners.

Table 2-13 gives the OLS results for housing wealth by the sex of the homeowner.¹⁵ As shown the statistically significant variables are similar for both men and women although some differences that stand out. Age, marital status, education, and past migration, receiving the transfer payment, and non-housing wealth have different correlations to housing wealth for men and women. Age is positively

¹⁵ Similar to the conditional logit, a fixed effects model was also used to control for household level effects in housing wealth (see Table 2-14). This model could not be run using only homeowners since there is not enough variation within households to run such a model; so, it includes all adults. If they are not homeowners, then they have zero housing wealth. This fixed effects model is then comparable to an OLS model with all adults included but not directly to the OLS model presented in Table 2-12, which considers only owners. Although the results of the OLS model with all adults are not presented here, the fixed effects model has similar results as that model (results available upon request).

associated with housing wealth and it is statistically significant for women but not for men. Widowed men (widowers) have \$17,100 more housing wealth than married men; widowed women own only \$9,300 more than married women. Furthermore, divorced and separated men are predicted to have greater housing wealth than married men; \$10,000 more for separated men and \$12,500 more for divorced men. However, there is no statistically significant difference between married women and either those who are separated or divorced. In terms of education, each additional year of schooling increases men's housing wealth by about \$1,521 but only \$1,080 for women. Female returned migrants have about \$11,400 more housing wealth than those who have not previously migrated but past migration has no statistically significant impact for men's housing wealth. Finally, there are statistically significant differences in terms of the relationship between non-housing and housing wealth. For men, every one thousand dollar increase in non-housing wealth is associated with only a \$61 increase in housing wealth, while for women it is \$127.

Discussion and Concluding Thoughts

This is one of the first gender analyses of homeownership and housing wealth in Latin America. As discussed above, Ecuador has a high rate of joint homeownership and a fairly equal gender distribution of homeownership. The regression analyses in this chapter suggest similar probabilities of homeownership and similar levels of housing wealth for both men and women in Ecuador; likely due at least in part to the near legal equality of property rights given by Ecuador's marital regime and specifically the importance of partial community property in terms of joint ownership. However, key gender differences in the predictors of homeownership and housing wealth were

identified. These differences may indicate differences in the processes of accumulation for men and women.

Past migration is important for women; it increases their probability of homeownership and the amount of housing wealth owned. However, past migration does not impact men's likelihood of homeownership or their housing wealth. This is likely related to the fact that women, especially single mothers, use migration as a strategy for acquiring homes, a point that was brought up during qualitative fieldwork time and again. Also, given that they leave children behind when they migrate, they likely have more incentive than many male migrants to return to Ecuador. More research is needed to more thoroughly test this hypothesis since there may be some latent variable coming into play; it takes a certain personality and/or set of circumstances for women to seek work through migration, which may also impact their probability of homeownership.

Receiving the government transfer payment is an important predictor for women's homeownership. Women who receive this payment are 1.4 times more likely than women who do not receive it to be a homeowner. We must be careful with causality here; this relationship could indicate one of two things (or a combination of both). First, it could be that women who receive the payment can better afford to acquire a home; perhaps the additional income enables them to purchase construction materials in order to build their homes slowly over time. Second, it could indicate that homeowners are more likely to receive the payment; perhaps there is some underlying issue with how the payment is distributed that favors homeowners. For example having a more permanent

residence may facilitate payment receipts. More research to disentangle the causality is warranted.

Marital status is also an important explanatory variable. Although a person in a consensual union is less likely than a married person to own a home, they own similar amounts of housing wealth (there is no statistically significant difference). Widows and widowers own more housing wealth than married individuals but this effect is also gendered. While widowers have about \$17,000 more in housing wealth than married men, widows only have about \$9,300 more than married women. Furthermore, while divorced and separated women have about the same housing wealth as married women, divorced and separated men have \$10,000 to \$12,500 more than married men. This implies that men gain housing wealth by divorcing or separating whereas women do not. Perhaps the men keep the house and thus gain the full value of the house that was shared before (and women will tend to acquire a similar amount of housing wealth as they had while married) or perhaps men move up in socio-economic status by buying a more valuable home while women do not. A limitation to these generalizations is that men who lose housing during divorce or separation are not included in the regression analysis of housing wealth since they are not owners; therefore men who are still homeowners (either keeping the marital home or purchasing a new home after the separation/divorce) are likely to own more in housing wealth than married men. But, what's surprising here is that there is no statistically significant difference for divorced or separated women compared to married women.

More education implies greater housing wealth for both men and women. However, for men each additional year of schooling correlates to an additional \$1,521 in

housing wealth; while for women it correlates to an additional \$1,080. In terms of housing wealth, it seems that education does not have the same return on investment for men and women (assuming that increased housing wealth is caused by more education).

Further research is needed to clarify the impact of employment and job category on both homeownership and housing wealth. Additional research on the form of acquisition and processes of accumulation may also lead to interesting gender differences. Finally, more work is warranted to determine the impacts of homeownership and/or housing wealth; for example how does homeownership or housing wealth impact women's empowerment within the home, community and/or state in terms of decision-making and bargaining power? This is addressed in more detail in the following two chapters.

Although this study helps explain the situation in Ecuador, similar studies in other South American countries would be particularly useful in explaining the wide range of ownership patterns identified in previous studies. It seems that Ecuador's marital regime—partial community property—and the fact that it is known and enforced through mechanisms such as the “doble firma” have led to a fairly equal distribution of homeownership and housing wealth. However, research in other countries would help verify this by addressing the following questions. Do other countries with the partial community property marital regime also have similar rates of homeownership and housing wealth for men and women? If so, this could indicate that the marital regime is promoting gender equality. If not, perhaps there are monitoring and enforcement issues that need to be addressed and these should be compared across countries. For

example, do the other countries have the “doble firma” like Ecuador? Are there other mechanisms that make people aware of their rights as well as enforcing them?

Addressing these questions in various countries would go a long way in determining the impact of the marital regime and enforcement mechanisms in promoting gender equality in property rights.

Furthermore, the results presented in this chapter indicate several gender differences in terms of the predictors of homeownership and housing wealth. Similar studies in other countries could also compare these results and what that indicates for gender equality. Perhaps patterns would reveal gender differences in terms of how dwellings are acquired and quality differences.

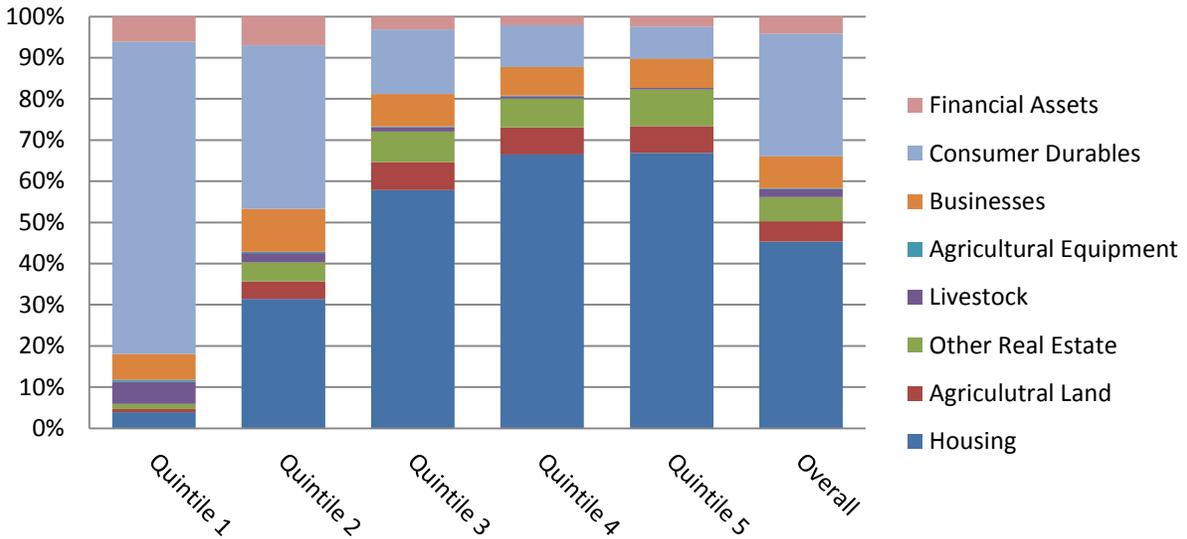


Figure 2-1. Wealth portfolios by wealth quintile and overall, Ecuador 2010. Percent of wealth in each asset category. Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 2-1. The household distribution of homeownership by sex (of owner-occupied homes)

Country & Survey Year	Women	Men	Joint	Total	N
Argentina 2001	21.7	37.7	40.7	100%	4.8 million
Chile 2003	40.5	56.1	3.4	100%	2.7 million
Ecuador 2005	21.4	37.3	41.3	100%	1.1 million
Guatemala 2000	24.8	72.7	2.5	100%	1.1 million
Honduras 2004	38.0	59.0	3.0	100%	0.5 million
Mexico 2004	33.9	62.8	3.3	100%	18.1 million
Nicaragua 2005	46.1	47.4	6.3	100%	0.8 million
Panama 2003	41.9	42.3	15.9	100%	0.3 million
Paraguay 2000	32.5	64.1	3.5	100%	0.4 million

Source: Deere, Alvarado, and Twyman (2012)

Table 2-2. Distribution of dwelling tenure by household in Ecuador, 2010

	Owned & Paid	Owned & Mortgaged	<i>Sub- Total Owned</i>	Rented	Other	Total	No. obs. (n)
Sierra	50.5	5.0	55.5%	25.8	18.7	100%	1,391
Costa	62.5	1.6	64.1%	15.8	20.1	100%	1,501
Total	56.7	3.2	59.9%	20.6	19.5	100%	2,892

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 2-3. Form of dwelling acquisition by rural and urban households in Ecuador, 2010

Form of acquisition	Urban (n = 1045)	Rural (n = 682)	Total (n = 1727)
Purchase	30	14	23
Construction	59	75	65
Gift/Donation/Inheritance	10	10	10
Other	1	2	2
Total	100%	100%	100%

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 2-4. Type of financing for purchased or constructed homes (n = 1,528)

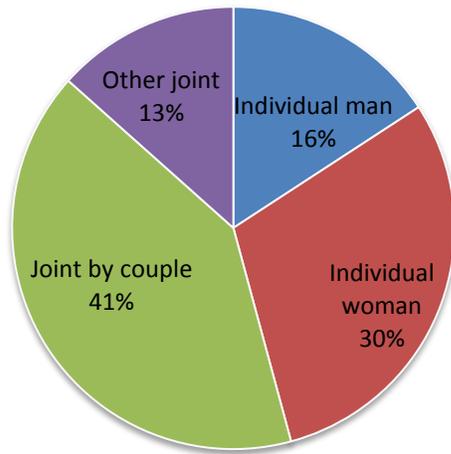
Type of financing	n	%
Savings	1,266	82.9%
Remittances	14	0.9%
MIDUVI	140	9.2%
IESS loan	93	6.1%
Loan from private institution	239	15.6%
Informal loan	47	3.1%
Direct financing	8	0.5%
Work loan	21	1.4%
Other	47	3.1%

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Note: Does not sum to 100% because households could finance with multiple sources.

Table 2-5. List of variables and their definitions.

Variable Name	Operational Definition
Owner	Binary dependent variable; 1 if individual is an owners, 0 otherwise
Housing Wealth	Dependent variable; sales value of home divided by number of owners
Female	Dummy variable; 1 if individual is a female, 0 otherwise
Age	Age in years
Age ²	Age squared
Ethnicity	Dummy variables of self-reported ethnicity
Mestizo	1 if Mestizo or white, 0 otherwise (base category)
Indigenous	1 if Indigenous, 0 otherwise
Other	1 if reported another ethnicity: Afro-Ecuadorian, Arab, Mulato, or any other ethnicity listed, 0 otherwise
Marital Status	Dummy variables of current marital status
Married	1 if currently married, 0 otherwise (base category)
Single	1 if single and never married or in consensual union, 0 otherwise
Consensual Union	1 if currently in a consensual union, 0 otherwise
Widowed	1 if widowed, 0 otherwise
Divorced	1 if divorced, 0 otherwise
Separated	1 if separated, 0 otherwise
Years of schooling	Number of years of formal schooling completed; pre-school is not included, adult education and literacy classes are included such that every 2 years are counted as one year.
Returned migrant	Dummy variable; 1 if person ever migrated to another country for work, 0 otherwise
Receives transfer payment	Dummy variable; 1 if person receives the "bono", 0 otherwise
Non-housing wealth	Sales value of all physical and financial assets except housing owned by the person; the value of assets owned by more than one person is divided equally among all the owners
Employed (not employed)	Dummy variable; 1 if the person reported that s/he was currently employed and remunerated (unpaid family labourers are not included); 0 otherwise
Number of children (<18)	Number of children under 18 years of age in the household
Number of adults	Number of adults aged 18 or over in the household
Rural	Dummy variable; 1 if household is in a rural area (with less than 5,000 residents), 0 otherwise/urban
Coast	Dummy variable; 1 if household is in a coastal province (Esmeraldas, Guayas, Los Rios, Manabi, El Oro, Santa Elena, or Santo Domingo), 0 if household is in a highland/sierra province (Azuay, Bolivar, Canar, Carchi, Cotopaxi, Chimborazo, Imbabura, Loja, Pinchincha, Tungurahua)
Number of owners	Number of homeowners of an owned home



Source: Deere and Contreras, 2011

Figure 2-2. Form of homeownership, Ecuador 2011

Table 2-6. Descriptive statistics for categorical variables, composition (percent) of adult sample in Ecuador 2010

	Total Sample (n=7,431)			Homeowners (n = 2,621)			Non-Homeowners (n = 4,810)		
	Women (n=3,959)	Men (n=3,472)	Total (n=7,431)	Women (n=1,428)	Men (n=1,193)	Total (n=2,621)	Women (n=2,531)	Men (n=2,279)	Total (n=4,810)
Owners	36%	34%	35%	100%	100%	100%	0%	0%	0%
Sex									
Women	100%	0%	53%	100%	0%	54%	100%	0%	53%
Men	0%	100%	47%	0%	100%	46%	0%	100%	47%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
Ethnicity									
Mestizos	89%	88%	89%	88%	87%	88%	89%	89%	89%
Indigenous	5%	5%	5%	5%	5%	5%	5%	4%	4%
Other Ethnicity	7%	7%	7%	7%	8%	7%	6%	7%	7%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
Marital Status									
Married	36%	41%	38%	50%	64%	56%	28%	29%	29%
Single	21%	28%	24%	6%	6%	6%	29%	39%	34%
Consensual Union	20%	23%	22%	17%	20%	18%	22%	25%	23%
Widowed	9%	3%	6%	14%	4%	9%	6%	2%	4%
Divorced	3%	1%	2%	2%	1%	2%	3%	1%	2%
Separated	11%	4%	8%	12%	5%	8%	12%	4%	8%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
Past migrant	2%	3%	3%	3%	4%	3%	2%	3%	2%
Receives transfer payment	20%	4%	12%	27%	6%	18%	16%	2%	9%
Remunerated Employment									
Employed	56%	81%	68%	58%	84%	70%	55%	80%	67%
Not employed	44%	19%	32%	42%	16%	30%	45%	20%	33%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
Lives in Rural household	32%	33%	32%	40%	42%	41%	28%	28%	28%
Lives in Coastal household	51%	54%	53%	53%	55%	54%	50%	54%	52%

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 2-7. Descriptive statistics for continuous variables of adult sample in Ecuador, 2010

	n	Minimum	Maximum	Mean	Std. dev.	Median
Adult Sample (n = 7,431)						
Age	7,431	18	99	40.400	17.162	37.00
Yrs of schooling	7,431	0	21	8.932	4.690	9.00
Non-housing wealth	7,431	0	596	3.697	15.548	0.41
Adult Men (n = 3,472)						
Age	3,472	18	99	40.302	17.361	36.5
Yrs of schooling	3,472	0	20	9.118	4.548	9
Non-housing wealth	3,472	0	596	4.347	19.305	0.395
Adult Women (n = 3,959)						
Age	3,959	18	99	40.485	16.988	37
Yrs of schooling	3,959	0	21	8.768	4.805	9
Non-housing wealth	3,959	0	284	3.128	11.237	0.435
Owners (n = 2,621)						
Housing wealth	2,621	0.033	400	16.601	22.782	10
Age	2,621	18	95	50.393	15.492	50
Yrs of schooling	2,621	0	20	7.632	4.716	6
Non-housing wealth	2,621	0	596	6.197	22.833	0.854
Non-Owners (n = 4,810)						
Age	4,810	18	99	34.955	15.500	30
Yrs of schooling	4,810	0	21	9.640	4.521	10
Non-housing wealth	4,810	0	207	2.336	9.177	0.266

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 2-8. Descriptive statistics for continuous variables of household sample in Ecuador, 2010

	N	Minimum	Maximum	Mean	Std. dev.	Median
Household Characteristics						
All Households (n = 2,891)						
Number of household members	2,891	1	15	4.171	1.897	4
Number of children	2,891	0	8	1.601	1.448	1
Number of adults	2,891	1	9	2.570	1.202	2
Number of adult men	2,891	0	6	1.201	0.823	1
Number of adult women	2,891	0	7	1.369	0.772	1
Owned homes (n = 1,734)						
Number of homeowners per owned home	1,734	1	10	1.667	0.874	2
Market value of owned homes	1,734	0.088	400	25.675	30.919	15

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 2-9. Logistic regression results for model of homeownership in Ecuador, 2010

	Coef. (β)	Std. Err. of β
Intercept	-5.205 ***	0.277
Individual Characteristics		
Female	0.107	0.066
Age	0.188 ***	0.010
Age ²	-0.001 ***	0.000
Ethnicity		
(Mestizo)		
Indigenous	0.010	0.147
Other	0.043	0.114
Marital Status		
(Married)		
Single	-1.351 ***	0.106
Consensual Union	-0.726 ***	0.080
Widowed	-0.657 ***	0.125
Divorced	-1.348 ***	0.206
Separated	-0.839 ***	0.106
Years of schooling	-0.010	0.007
Returned migrant	0.160	0.163
Receives transfer payment	0.270 ***	0.091
Non-housing wealth ^a	0.011 ***	0.003
Employed (not employed)	0.079	0.072
Household Characteristics		
Number of children (<18)	-0.005	0.022
Number of adults	-0.167 ***	0.023
Rural	0.671 ***	0.066
Coast	0.345 ***	0.064
Number of cases (n)	7431	
Likelihood ratio chi-square (df)	2349.21 (19)***	
Pseudo R ²	0.244	

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

*p < 0.1, **p < 0.05, and ***p < 0.01

a) Non-housing wealth is in thousands of dollars (USD, which is the currency in Ecuador)

Table 2-10. Logistic regression results for models of homeownership in Ecuador, 2010

	Model II--Men		Model III--Women		Chi-square for difference
	Coef. (β)	Std. Err. of β	Coef. (β)	Std. Err. of β	
Intercept	-4.957 ***	0.420	-5.272 ***	0.369	0.318
Individual Characteristics					
Age	0.180 ***	0.016	0.197 ***	0.014	0.712
Age ²	-0.001 ***	0.000	-0.002 ***	0.000	1.447
Ethnicity					
(Mestizo)					
Indigenous	0.134	0.222	-0.092	0.197	0.579
Other	0.076	0.167	0.015	0.156	0.072
Marital Status					
(Married)					
Single	-1.485 ***	0.161	-1.216 ***	0.145	1.541
Consensual Union	-0.910 ***	0.114	-0.554 ***	0.112	4.953 **
Widowed	-0.778 ***	0.249	-0.509 ***	0.149	0.855
Divorced	-1.552 ***	0.476	-1.284 ***	0.231	0.257
Separated	-0.860 ***	0.199	-0.784 ***	0.127	0.105
Years of schooling	-0.012	0.011	-0.010	0.010	0.010
Returned migrant	-0.043	0.219	0.454 *	0.249	2.250
Receives transfer payment	-0.098	0.225	0.368 ***	0.104	3.530 *
Non-housing wealth ^a	0.010 ***	0.003	0.013 ***	0.004	0.399
Employed (not employed)	-0.051	0.150	0.117	0.084	0.961
Household Characteristics					
Number of children (<18)	0.029	0.032	-0.039	0.030	2.344
Number of adults	-0.188 ***	0.034	-0.152 ***	0.031	0.635
Rural	0.818 ***	0.099	0.546 ***	0.090	4.121 **
Coast	0.386 ***	0.097	0.315 ***	0.087	0.294
Number of cases (n)	3472		3959		
Likelihood ratio chi-square (df)	1224.89 (18)***		1146.46 (18)***		
Pseudo R ²	0.274		0.222		

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

*p < 0.1, **p < 0.05, and ***p < 0.01

Table 2-11. Conditional logit regression results for model of homeownership in Ecuador, 2010

	Model I--All obs.	
	Coef. (β)	Std. Err. of β
Personal Characteristics		
Female	0.120	0.219
Female*number of male adults	0.084	0.109
Age	0.241 ***	0.020
Age ²	-0.002 ***	0.000
Ethnicity		
(Mestizo/white)		
Indigenous	2.151	1.434
Other	0.097	0.448
Marital Status		
(Married)		
Single	-1.528 ***	0.238
Consensual Union	-0.677 **	0.311
Widowed	-1.284 ***	0.268
Divorced	-2.167 ***	0.437
Separated	-1.061 ***	0.272
Years of schooling	0.010	0.019
Past migrant	0.309	0.368
Receives transfer payment	0.334 **	0.167
Non-housing wealth ^a	0.050 ***	0.011
Employed (not employed)	0.315 **	0.135
Number of cases (n)	3739	
Likelihood ratio chi-square (df)	1707.39 (16)***	
Pseudo R ²	0.603	

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

*p < 0.1, **p < 0.05, and ***p < 0.01

Table 2-12. Ordinary least squares regression of housing wealth (in thousands of USD) of homeowners in Ecuador, 2010

	Model I--All obs.	
	Coef.	Std. Err.
Intercept	7.977 *	4.348
Personal Characteristics		
Female	0.380	0.859
Age	0.217	0.149
Age ²	0.001	0.001
Ethnicity		
(Mestizo)		
Indigenous	-1.856	1.845
Other	0.068	1.473
Marital Status		
(Married)		
Single	3.217 *	1.732
Consensual Union	-0.060	1.111
Widowed	10.580 ***	1.477
Divorced	6.588 **	3.091
Separated	4.604 ***	1.455
Years of schooling	1.310 ***	0.095
Returned migrant	7.312 ***	2.074
Receives transfer payment	-5.453 ***	1.127
Non-housing wealth	0.080 ***	0.017
Employed (not employed)	-2.245 **	0.918
Household Characteristics		
Number of children (<18)	0.137	0.284
Number of adults	0.384	0.315
Number of owners	-3.891 ***	0.399
Rural	-8.186 ***	0.843
Coast	-8.370 ***	0.860
Number of cases (n)	2621	
F statistic (df)	56.82 (20)***	
Adjusted R ²	0.30	

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

*p < 0.1, **p < 0.05, and ***p < 0.01

Table 2-13. Ordinary least squares regression of housing wealth (in thousands of USD) by sex of homeowners in Ecuador, 2010

	Model II--Men		Model III--Women		Chi-square
	Coef.	Std. Err.	Coef.	Std. Err.	
Intercept	10.907	0.241	5.017	5.467	1.158
Personal Characteristics					
Age	0.064	0.002	0.430 **	0.190	5.074 **
Age ²	0.003	2.848	-0.002	0.002	0.000
Ethnicity					
(Mestizo)					
Indigenous	-0.904	2.848	-3.035	2.385	0.329
Other	1.778	2.316	-1.361	1.877	1.109
Marital Status					
(Married)					
Single	4.174	2.933	2.809	2.147	0.141
Consensual Union	-0.832	1.699	0.631	1.457	0.428
Widowed	17.112 ***	3.088	9.280 ***	1.668	4.979 **
Divorced	12.496 ***	7.565	4.945	3.217	0.844
Separated	10.096 ***	2.899	2.688	1.650	4.933 **
Years of schooling	1.521 ***	0.148	1.080 ***	0.123	5.224 **
Returned migrant	2.874	3.076	11.36 ***	2.805	4.154 **
Receives transfer payment	-8.867 ***	2.720	-5.297 ***	1.260	1.418
Non-housing wealth	0.061 ***	0.021	0.127 ***	0.033	2.857 *
Employed (not employed)	-3.939 **	1.918	-1.088	1.016	1.725
Household Characteristics					
Number of children (<18)	0.649	0.440	-0.152	0.372	1.937
Number of adults	0.148	0.498	0.466	0.400	0.247
Number of owners	-4.563 ***	0.608	-3.365 ***	0.525	2.225
Rural	-8.424 ***	1.321	-7.881 ***	1.082	0.101
Coast	-7.559 ***	1.369	-8.795 ***	1.101	0.495
Number of cases (n)	1193		1428.000		
F statistic (df)	28.02 (19)***		34.81 (19)***		
Adjusted R ²	0.30		0.310		

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

*p < 0.1, **p < 0.05, and ***p < 0.01

Table 2-14. Ordinary least squares regression of housing wealth (in thousands of USD) of homeowners in Ecuador, 2010 (with fixed effects)

	Model I--All obs.	
	Coef.	Std. Err.
Intercept	-7.063 ***	1.865
Personal Characteristics		
Female	0.374	0.385
Age	0.375 ***	0.069
Age ²	-0.001 *	0.001
Ethnicity		
(Mestizo)		
Indigenous	4.801	4.415
Other	0.645	1.830
Marital Status		
(Married)		
Single	-3.483 ***	0.776
Consensual Union	-2.622 ***	0.962
Widowed	4.280 ***	1.092
Divorced	-7.485 ***	1.707
Separated	-0.548	0.966
Years of schooling	0.128 **	0.065
Past migrant	1.247	1.374
Receives transfer payment	-2.107 ***	0.678
Non-housing wealth	0.114 ***	0.017
Employed (not employed)	-0.122	0.462
Number of cases (n)	7431	
Number of groups	2892	
F statistic (df)	59.48 (15)***	
Within group R ²	0.16	
Between group R ²	0.10	
Overall R ²	0.14	

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

*p < 0.1, **p < 0.05, and ***p < 0.01

CHAPTER 3 ASSET OWNERSHIP AND DECISION-MAKING IN DUAL-HEADED HOUSEHOLDS IN ECUADOR

As explained in Chapter 1, many studies about bargaining power and women's empowerment have focused on how women's income is related to welfare outcomes, such as changes in household budget shares, increased nutrition, health, and/or educational attainment of children. Although these studies provide evidence that women's resources are related to these welfare outcomes, they limit the type of resources to women's income and they focus on the outcome instead of the actual decision-making processes that lead to such outcomes. In order to overcome these limitations, in this chapter, we focus on the intra-household distribution of wealth and how it is related to how decisions are made within the household.

As discussed by Sunita Kishor and Lekha Subaiya (2008), women's participation in household decision-making is often used as an indicator of women's empowerment. Furthermore, it is widely recognized that the empowerment of women requires an increase in women's agency, that is, their "ability to define [their] goals and act upon them" (Kabeer 1999: 438). This aspect of empowerment is often measured in terms of women's participation in household decision-making. As explained by Kishor and Subaiya (2008) many studies measure women's empowerment as their autonomous decision-making, but others measure it as whether or not women participate in decisions at all, either alone or jointly. However, as they state, "...participation in decisionmaking is not one undifferentiated variable. For any decision, making the

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decision *alone*, making it *jointly* with a husband or someone else, or participating at all in the decision (*alone* or *jointly*), constitute unique variables with different correlates” (Kishor and Subaiya 2008: 41). Thus, it matters for quantitative analysis whether the focus is on women making decisions alone or jointly. The implications of this finding is that in the analysis of decision-making as a proxy for women’s agency it may not be very useful to aggregate women’s autonomous and joint decision-making together as a dependent variable on whether women participate at all; rather, each type of decision-making needs to be examined on its own.¹

It is often difficult to determine what form of decision-making (joint or alone) is more empowering for women and it depends on the starting point. It is often (implicitly) assumed that men make the household decisions autonomously (see for example Henrik Wiig 2012), and therefore women’s participation in any form is considered empowering. However, if women are traditionally making the decision autonomously, then her making that decision alone would not indicate empowerment. In such cases male involvement or a move from autonomous to joint decision-making may indicate a change in gender roles and could be a more empowering experience.² For example, it is conceivable that growing male involvement in what had been a female domain, such as a tendency towards joint decision-making regarding the household food budget, could be more gender progressive than female autonomy if it signals a change in the traditional division of labor, with men now more involved in domestic labor. Conversely,

¹ Of course in contexts where women rarely participate in household decisions at all it may be appropriate to consider whether women have “some say” in decision-making, as Anderson and Eswaran (2009) do in a study of a region in Bangladesh.

² The caveat to this assumption is that sometimes men begin to take over what has been traditionally female roles; such as in the cases of improved varieties of crops that go from subsistence crops and thus in the female domain to cash crops that are in the male domain.

a change from joint decision-making to autonomous decisions over income control, even if by both husband and wife, could signal a break-down in cooperation in which women are not necessarily better off, particularly if there are significant gender disparities in the amount of income each controls.

Most decision-making indicators of empowerment, such as those included in the DHS examined by Kishor and Subaiya (2008), include only questions regarding women's empowerment. Little to no attention has been given to men's participation in decision-making, probably because men's empowerment is not likely to be measured by their participation in household decision-making (even if marginalized groups of men warrant study of empowerment, it is not likely that their lack of empowerment is at the household level—it is more likely in the community, state, or market). However, wife's participation in men's decisions (within the household) could be an indicator of women's empowerment.

Since women's autonomous decision-making seems to be the norm in most studies, we start by analyzing women's autonomous decision-making regarding the decision about whether to work and how to spend her own income. We contribute to the literature on women's autonomy in decision-making by examining not only women's perceptions of their own decision-making but also men's perceptions of women's autonomous decision-making, since as discussed previously in Chapter 1, perceptions are important for bargaining power. Besides comparing the correlates of men's and women's perceptions of women's autonomous decision-making, we also examine the correlates of when the spouses agree about her autonomous decision-making. This

step allows us to understand the conditions under which the couple agrees about her autonomy.

However, since autonomous decision-making may not be the best indicator of women's empowerment, we also examine egalitarian decision-making by couples in terms of the decisions about whether to work and how to spend one's own income. Drawing on the framework developed by Diane Coleman and Murray Strauss (1990) regarding marital decision-making power, egalitarian households are defined as those in which the couple makes decisions together,³ as opposed to being male dominated (where most of the decisions are made by the man), female dominated (where most of the decisions are made by the woman) or characterized by divided power (where the man makes some decisions, and the woman makes others).

We define egalitarian decision-making in a strict way; it implies that both spouses report making their own decision jointly and they report that their spouse does the same. As such, this is a way to consider not only men's involvement in women's decision-making but also women's involvement in their husband's decisions.

Furthermore, as explained in Carmen Diana Deere and Jennifer Twyman (2012), "in the case of dual-headed households (those constituted by a husband and wife), is autonomy the appropriate measure of agency? Or is it when women are able to negotiate as equals with their partners, to reach truly joint decisions as a couple?"

In our analysis, for egalitarian decision-making within households to prevail both husbands and wives must report that they each make decisions jointly; moreover, we impose an even more restrictive condition-- that they agree that the other does in fact

³ As mentioned above, such joint decision making is defined restrictively in the sense that both spouses report that they themselves and their spouses make joint decisions.

make decisions jointly. This allows us to differentiate truly egalitarian households, from those where the couple disagrees on whether joint decision-making is the prevailing practice, along with those that report that decisions are taken autonomously by either the man or woman.

In summary this chapter contributes to the literature on women's empowerment as measured by her participation in household decision-making in several ways. First, it uses the intra-household distribution of assets and wealth as a key explanatory variable of women's participation in decision-making. Second, we compare men's and women's perceptions of women's autonomous decision-making. This has methodological implications as well as theoretical ones. Theoretically we know that men's and women's perceptions will impact bargaining power (Sen 1990, Katz 1991). This application will help us better understand the differences in perceptions by comparing the correlates of women's autonomous decision-making as reported by men and women.

Methodologically it is important to understand how collecting data from only one individual (the man or woman) may impact results. Third, we identify the correlates to men and women agreeing that the wife makes autonomous decisions. This allows us to understand under what conditions men and women have similar perceptions of the wife's autonomy. Fourth (and finally), we determine which variables predict egalitarian household decision-making. By examining both autonomous and egalitarian decision-making, we can identify any important differences that arise and hope to add to the debate in the literature about how best to capture decision-making as an indicator of women's empowerment.

Context

One of the main objectives of this study is to explore the relationship between asset ownership and decision-making. Ecuador is a particularly appropriate case to study this relationship because joint ownership of major assets among couples is quite common. Moreover, according to the results of the 2010 Ecuador Household Asset Survey, women own 52.2% of the gross physical and financial household wealth, a share approximately equal to their share of the population (Deere and Contreras 2011).

Furthermore, Ecuador is typically characterized by high levels of joint decision-making. During the qualitative fieldwork, nearly all responses to how household decisions were made were answered as “jointly” (either “juntos” meaning together or “pusimos de acuerdo,” we came to an agreement) indicating that there was some discussion in which both spouses participated. Further evidence of joint decision-making by couples is found in Ecuador’s Demographic and Maternal and Infant Health Survey (ENDEMAIN) for 2004, which included six questions about how household decisions were made. As shown in Table 3-1, the majority of partnered women responded that the decisions were made jointly by the couple. The highest rate of joint decision-making was regarding the decision to visit family at 79% and the lowest was regarding whether to work outside the home or study at 53%. Women were most likely to make the decision about when to take a child to a physician alone (29%) alone, followed by whether to work outside the home or study (24%). In terms of decision-making, Ecuador differs from many of the countries analyzed by Kishor and Subayia (2008); unlike most of the countries included in the DHS surveys, relatively few women in Ecuador report that their spouses make any of these six decisions alone, with the

highest reported share (22%) also being the decision on whether or not the wife works outside the home or studies.

Data

The subsequent analysis is based on 1,776 households with couples (where both partners responded to the decision-making questions), which corresponds to 3,552 adult men and women, age 18 and over. The household decision-making module included the following four questions regarding the participation of each person:

- Do (or did) you make the decision on whether or not to work?
- If you earn or receive income do you make the decision on how to spend this money?
- Do you make the decision to access health services for yourself?
- Do (or did) you make the decision on whether or not to use contraceptives or some form of family planning?

In the case of the first two decisions, regarding the decision to work and to spend one's income, each respondent was also asked their perspective on how his/her partner made this decision; thus the wording in the above questions changed from "you" to "your spouse". The potential responses included:

- Yes, alone
- Yes, jointly with... (ID or relational code solicited)⁴
- Yes, with permission from... (ID or relational code solicited)
- No, another person makes the decision... (ID or relational code solicited)
- Not applicable

⁴ The ID is the unique identifier of a household member, whereas the relational code refers to a non-household member. We collected the latter information in order to be able to capture extra-household economic relations with extended family members, including permanent migrants. The latter were defined as those who had lived outside the household for six months or longer, but during the past ten years contributed to the household economically with either remittances or gifts in kind.

The decision on spending one's own income contained one additional option, where the person could respond that they made the decision alone regarding a portion of their own income, but decided jointly over the other portion. This option was included since it is a fairly common practice in Ecuador for men to decide how much of their income to keep as their own discretionary income, and how much to turn over to his spouse for the household's expenses (the *gasto*).

Table 3-2 presents the basic descriptive data on the four household decisions with respect to each person's response about their *own* decision. Men reported that they alone made the decision on whether or not to work much more frequently than did women, 52% versus 32%. In contrast, the great majority of women reported that they made the decision on whether or not to work jointly with their partners (which might include an additional third person, as explained below). It was also more frequent for women than men to report that they asked permission or that the decision on whether or not they worked was made by their partner or another person; overall, however, these responses (including not applicable) characterized only 5% of the women. Our results differ from the ENDEMAIN 2004 survey in this regard, since in that survey 22% of the women reported that the decision on whether or not to work or to study was made by their partners (Table 3-1). We can only speculate whether this relatively higher share who reported that their partners make this decision is due to the inclusion of the decision to study in this earlier survey question.

With respect to the decision on how to spend the income that one earns or receives (such as wage income, the conditional cash transfer, or other non-labor income), a much higher share of women, 29%, reported that they alone make this

decision as compared to men, 19%. But, as expected, men more frequently than women reported that they made the decision alone over a portion of their income and jointly over another portion, 15% vs. 10%. Seven percent of the women as compared to only 1% of men reported that this decision was not applicable because they did not earn or receive any income.⁵ In the majority of households, these decisions were made jointly.

Our question differed from the one included in the ENDEMAIN 2004 survey, since in that survey the question elicited information on the broader decision over spending of the “household’s” income without specifying the source (her or his income). The majority of women (69%) reported making this decision jointly with their partners. A higher share of women did consider this decision to be made by their partner alone (19%) than by themselves alone (12%).

With respect to health care, in the 2010 survey a slightly higher share of women than men (43% vs. 39%) reported that they themselves alone made the decision on whether to seek health care for themselves; the majority of both men and women reported making this decision jointly.⁶ Also, the great majority of both men and women reported that they made the decision on whether or not to use family planning or contraceptives jointly, although women more frequently reported that they made this

⁵ A relatively high share of these partnered women do not currently work, 46%, as compared to only 5.5% of men. This suggests that a large number are receiving some form of non-labor income, since such relatively few women considered the question as not applicable.

⁶ The response to this question with respect to women can be compared with the results of the DHS surveys for Bolivia and Nicaragua. In both countries a higher share of women reported that they made the decision regarding their own health care autonomously (53 and 47%, respectively) than do so in Ecuador, and in these countries the share responding that they made the decision alone exceeded those making the decision jointly with their partner. On the other hand, in both countries around 10% responded that their husbands alone make the decision regarding the woman’s health care, a response that represented less than 1% of the total in Ecuador (Kishor and Subaiya 2008: 18).

decision alone (24 %) than did men (13%). Our findings on this latter question parallel those of the ENDEMAIN 2004 survey (Table 3-1).

The responses to the four decision-making questions in the 2010 survey lend support to the proposition that joint decision-making appears to be the norm in Ecuador. These data also suggest that women in Ecuador are more likely than their male partners to make decisions on their own, exceeding them in the share of autonomous decision-making for three of the four decisions. But do the partners in a couple make these decisions in a similar fashion (i.e. is there symmetry in decision-making within the household?).

Before addressing this question, the statistics presented in Table 3-3 give an indication of the prevalence of women's autonomous decision-making and a first look at the differences in perception of men and women. As shown, 32% of women report making the decision to work alone, while only 25% of men report that their wives' make the decision alone. The difference is even greater for the spending decision; 43% of women report making the decision alone compared to only 25% of men. The last column shows the percent of couple who agree that the wife makes the decision alone; only 13% agree about the decision to work and 18% about the spending decision.

Now, turning to the question of whether the partners both make decisions in a similar fashion (symmetrically), Table 3-4 presents the data on the distribution of responses of joint decision-making by men and women. In 22% of households each partner reports making their own decision on whether or not to work by themselves. The decision to seek health care is the only other decision where both partners report making the decision autonomously in a good share of households, 23%. There is much

greater symmetry in decision-making with respect to joint decision-making, being highest with respect to the use of contraception (69%), followed by spending one's own income (41%), seeking health care (39%) and the decision to work (35%). Where men and women differ most in how they each make decisions regarding themselves is on spending the income that they earn.

The category of joint decision-making employed thus far includes situations where the joint decision is made by the couple alone, by the couple plus someone else, and where the decision is made jointly by the respondent with someone besides their partner. As Table 3-5 shows in one percent or less of households the joint decision is made with someone besides the partner. A somewhat higher share of joint decisions is made by the couple along with an additional household member (such as a parent or child), but for no decision does this exceed three percent.⁷ In the subsequent analysis of egalitarian decision-making we exclude those cases of joint decision-making with someone other than a partner, but retain in the definition of the dependent variable joint decision-making which includes the spouse plus an additional household member.⁸

We now turn to the degree of agreement among couples on how each spouse makes the decision. This is the variable that has been used in recent analyses of household decision-making processes, but generally only focusing on the wife's decisions and whether her husband concurs or not with her perceptions. We gathered this more detailed information for only two decisions, the decision to work and to spend one's income.

⁷ In the questionnaire respondents could indicate up to three people with whom they made each decision.

⁸ Thus, if one spouse indicated making the decision jointly with his/her spouse and someone else while the other spouse indicated making the decision jointly only with his/her spouse, this was considered symmetric (i.e. that they both agreed that the decision was made jointly with the spouse).

As Table 3-6 shows with respect to the decision on whether or not to work, the degree of disagreement among couples is similar, 35%, whether considering the husband's perception of the wife's decision, or the wife's perception of the husband's decision. The greatest degree of disagreement is with respect to the decision regarding how one's income is spent, and particularly, how the husband views his wife's decision. In 57% of households husbands had a different perception than their wives. In contrast to what has been found in the literature, wives claim greater autonomy for themselves in the decision to spend their own income than perceived by their husbands. There was less disagreement in terms of wives' perceptions of their husbands' decisions on spending their own income, with only 34% of couples disagreeing.

Many of the disagreements seem to stem from a discrepancy over whether or not women have any of their own money to spend. About 29% of (520 out of 1776) women reported that they make the decision to spend their own income alone, while only 15% (275 out of 1776) husbands report that their wives alone made such a decision. Many of the husbands of wives reporting that they alone made the decision (165 out of the 520 or 32%) reported that this decision was not applicable for their wives presumably because the husbands did not know their wives had any money of their own to spend. A further analysis of the disagreements shows that while only 127 women considered the question not to be applicable because they did not earn or received any income to spend, 747 men reported that this question did not pertain to their wives. Men could be forgetting about the conditional cash transfer payment that is paid to women or women's income from informal employment. The greatest discrepancy between wives' perception of their husband's decision regarding income was in the number reporting that the

question was not applicable. Whereas only 18 men (1%) reported that they did not earn or receive any income, 95 women (5%) reported this answer for their husbands.

Finally, in Table 3-7 we present the results on egalitarian decision-making, those that meet the condition of both symmetry and agreement with respect to joint decision-making in the decisions to work and spend. In terms of the decision to work, in 78% of households characterized by joint decision-making, both partners report that the decision is made jointly both with respect to themselves and their partner. The decision on how income is spent is much more contentious, with only 42% of couples who both make the decision jointly also being in agreement with respect to their partner.

Conceptual Framework

Household decision-making processes are likely to vary by household and type of decision. In Ecuador for the decisions about whether to work and how to spend one's own income, we assume a bargaining process within the household; and as such we expect the intra-household distribution of assets and wealth to impact how these decisions are made. However, other factors are also likely to impact household decision-making processes; these are discussed in more detail below.

Socio-economic status and the intra-household distribution of assets and wealth. In most analyses of household decision-making, some measure of household socio-economic status is utilized to test for differences in women's participation at different points in the wealth or income distribution. In the DHS surveys, household wealth was constructed as an index of household ownership of selected assets and/or certain amenities. Kishor and Subaiya (2008) found that in the majority of countries and for most decisions, the wealth index has no net effect on women's autonomous decision-making. With respect to joint decision-making, the index is positive and

significant in only a handful of countries, but only for certain decisions. In Bolivia, for example, wealth is positively associated with joint decision-making in terms of visits to family or friends, and in Nicaragua, with joint decisions regarding women's own health care and large household purchases.

These surveys only included information about household level assets; however, the EAFF 2012 has the benefit of having been able to collect individual-level data on asset ownership and wealth. Thus, we can estimate both individual and household wealth directly, as well as women's share of couple wealth. In Ecuador, we expect in households where only women own assets (as compared to those where neither own assets) women will be more likely to make autonomous decisions and that households in which both own real estate will be more likely to make egalitarian decisions.

Ownership of the principal dwelling, agricultural land and/or other real estate should improve women's exit option from an unsatisfactory relationship (or fallback position), and strengthen her bargaining power in the marriage. We would expect the strength of a woman's fallback position to be positively related to household decision-making in a similar fashion to how a strong fallback position might deter intimate partner violence, as Pradeep Panda and Bina Agarwal (2005) have shown for Kerala, India.

Alternatively, it might not be just ownership of key assets per se, that influences whether decisions are made jointly, but the wife's wealth relative to her husband's. Since this should be directly related to her relative fallback position, we expect more equal shares of couple (or household) wealth to be positively associated with egalitarian decision-making.

Relative positions of spouses. We include control variables such as wife's age and education as well as the difference between spouses' age and education, their relative earnings and whether both spouses are of the same ethnicity in order to capture possible differences in factors that affect the bargaining process between spouses. Differences between spouses may affect their threat points and thus bargaining power within the home.

In many societies a woman's status in the household increases with age, in particular when she is beyond child-bearing age. Thus to the extent that household decision-making processes are negotiated, we might expect women's autonomous decision-making and couples' egalitarian decision-making to increase as women grow older. Kishor and Subaiya (2008:21) found, in their regression analyses of the DHS surveys for 23 countries, that the age of the woman was the covariate most consistently positive and significantly associated with women making four decisions alone (women's own health care, large household purchases, purchases for daily needs, visits to family or friends) in the majority of countries. However, the net effect of age on joint decision-making was found to be less consistent.

Countering this tendency, particularly in cross-sectional data, may be a cohort effect, with different norms governing gender relations within households among younger and older couples. Younger couples may be more open to alternative gender roles (R.S. Oropesa 1997). In Ecuador we thus expect the age variable to be indeterminate.

It may not be just the absolute age of the woman that is important in influencing decision-making, but rather the difference in the age between the husband and wife.

Drawing on Sen (1990), Kishor and Subaiya (2008: 31) note that “A person’s relative age is a resource which can affect the perception of strength when power and entitlements are negotiated within the ‘cooperative conflict’ context of the family.” Nonetheless, they find that in the majority of countries that they analyze, for most decisions, spousal age difference did not have a significant net effect on either autonomous or joint decision-making. Nonetheless, in the case of Ecuador, we hypothesize that the more equal in age are husband and wife, the more likely they are to be characterized by egalitarian decision-making. And conversely, the older the wife compared to the husband, the more likely she will be to make autonomous decisions.

While it is generally assumed that education is positively associated with women’s empowerment and participation in household decision-making, Kishor and Subaiya (2008) found that this relationship is more nuanced. They found that the share of women who participate in decision-making increases with the level of education, but varies depending on the particular decision and whether considering joint or autonomous decision-making. Summarizing both their bivariate and multivariate analyses, they found that the level of education tends to be positively associated with women making decisions alone regarding their own health care and daily household purchases. With respect to joint decisions, women’s level of education was most frequently positive and significant in terms of decisions regarding large household purchases and making visits to family and friends. We expect that the likelihood of women’s autonomous decision-making will increase with her education

Stan Becker, Fannie Foseca-Becker, and Catherine Schenck-Yglesias (2006) found that in Guatemala the level of both spouse’s education was associated with

women having some say in their index of household decision-making. We would also expect the level of both partner's schooling to be positively related to egalitarian decision-making since years of education may be associated with a greater willingness (or tolerance) to consider alternative points of view. Nonetheless, if the level or years of education of one partner significantly exceeds the other's, one might expect the partner with the greater degree of education to dominate in household decision-making. Thus we would also expect that the more equal the level of schooling attained by husband and wife, the more likely they are to be characterized by egalitarian decision-making.

Women's employment outside the home has been shown to be positively related to their status cross-culturally. Various studies have reported that women working for pay or earning an income to be positively associated with their participation in decision-making (Becker, Fonseca-Becker, and Schenck-Yglesias 2006, Shireen Jejeebhoy 2002). In their analysis of the DHS surveys, Kishor and Subaiya (2008) found that, holding other factors constant, women working for cash remuneration was positively associated with making decisions alone in the majority of countries. This covariate was associated with making decisions jointly in roughly half of the countries studied. Similarly, Anderson and Eswaran (2009) found that working off their husbands' farms was positively associated with women's autonomy in Bangladesh.

We expect that the labor force participation of women, as well as by both members of the couple, to be positively associated with egalitarian decision-making. But it may be that it is not just whether or not women are employed, or how much they earn, but rather how much they earn in relation to their partners that influences their participation in decision-making, and particularly, joint decision-making. We expect that the more

equal the earnings of the partner, the greater the likelihood that the couple is characterized by egalitarian decision-making. Although we do not have data on the amount or level of income, we did ask both partners who made the most income.⁹ We expect that in households where the wife earns the most, she will be more likely to make autonomous decisions and where the couple earns about the same they will be more likely to make egalitarian decisions.

In terms of ethnicity, indigenous couples have traditionally had relatively egalitarian relationships; however, indigenous women traditionally administer the family's budget (Sarah Hamilton 1998). Thus, for the spending decision we expect that indigenous women to be more likely to make decisions autonomously. However, the relationship for the work decision may be more egalitarian. Other ethnic differences may also be relevant so a categorical variable was created to identify any differences; therefore couples were classified into one of the following ethnic categories: both mestizo, both indigenous, both other ethnicity, or different ethnicities.¹⁰ It is expected that if both spouses are indigenous, then the wife may be more likely to make the spending decisions autonomously but that the couple will make the work decision in an egalitarian fashion. If they have different ethnicities, then they may be less likely to make egalitarian decisions.

Current and previous relationship status. We consider whether couples are formally married versus in consensual unions, since consensual unions in Latin America are common, and usually considered to be less stable than marriages (Dallan Flake and

⁹ This variable may be reflecting social norms of equality and as such may give an omitted variable effect of underlying norms and not necessarily an effect of income inequality.

¹⁰ For the different ethnicity category, men and women were first classified into mestizo, indigenous, or other. If they differed in terms of these 3 categories, then they were classified as "different ethnicities".

Renata Forste 2006). The effect of this variable likely depends on whether one is focusing on autonomous versus joint decision-making. Consensual unions might be associated with greater economic autonomy for women if they feel less constrained in seeking their partner's consent or agreement in household decisions. On the one hand, marriage may signify a greater degree of commitment by each partner to each other, and thus, willingness to compromise and reach decisions by consensus. We thus expect marriage as opposed to consensual unions to be positively associated with egalitarian decision-making and consensual unions with autonomous decision-making.

Whether a person (or both partners) is in a second marriage or union may also influence their willingness to negotiate, compromise and make decisions jointly; especially if the break-up of their previous relationship was associated with unequal gender relations within the household. Separated and divorced women may be particularly motivated to avoid a repetition of situations of domination (Deere, Contreras, Twyman 2010). We thus expect the wife or both members being in a second relationship to be positively associated with joint decision-making.

Household characteristics. In Ecuador most households are comprised of nuclear families but the presence of in-laws may be related to decision-making. Anderson and Eswaran (2009) find that the presence of a woman's mother-in-law has a negative effect on a woman's autonomy. It is unclear if this is just a South Asian phenomenon since it seems to be in this region that mothers-in-law seem to have a particularly strong influence on their daughter-in-laws. In Ecuador it is speculated that

extended family members¹¹ (of either the husband or wife) may impact a couple's decision-making strategies. Women in households in which her husband's family members reside may be less likely to make autonomous or joint decisions while if her family members reside in the household she may be more empowered to make autonomous decisions. On the other hand, the presence of such family members may mean that women and/or couples are more likely to make decisions with these other family members than making them alone.

Household location in terms of region (Coast/Sierra) and/or area (rural/urban) may also impact the bargaining positions of spouses. Rural to urban migration is sometimes associated with a breakdown in traditional norms, and particularly non-egalitarian power relations within households, particularly in Latin America (Oropesa 1997). Such is related both to the greater exposure to information and alternative life styles in urban areas and the greater flexibility in gender roles that is sometimes required by differential labor market opportunities for men and women. But the impact of this variable probably depends on the extent to which households in rural areas are male-dominated. The ethnographic literature for Ecuador suggests that at least in the highlands, gender relations in rural indigenous households are relatively egalitarian (Hamilton 1998). We thus expect the effect of locale to be indeterminate with respect to joint decision-making.

Methods

We use binary dependent variable logistic regression models to identify the key factors associated with women's autonomous decision-making (as reported by women

¹¹ Extended family members included are parents and siblings. For the category "other relative", it could not be determined if that person was a relative of the husband or wife and was therefore not included. Furthermore, children, stepchildren, and grandchildren were not included.

and men) and with couple's egalitarian decision-making.¹² The decisions regarding whether to work and spending one's own money are modeled separately. For the models of autonomous decision-making, the dependent variable takes the value of 1 when the wife (husband) reports that she makes the decision alone and 0 otherwise. Similarly, for the models of egalitarian decision-making, the dependent variable takes a value of 1 when the couple makes egalitarian decisions and 0 otherwise. As explained in more detail above, egalitarian decision-making implies that both spouses report that they both make a joint decision.

The dependent variables and their frequencies are shown in Table 3-8. First, following the literature, women's autonomous decision-making is defined as the wife making the decision alone for the work decision and that she makes the spending decision completely or partially alone. Separate models are used to model women's autonomous decision-making as reported by women themselves and by their husbands. As shown in Table 3-8, the model of autonomous decision-making as reported by the women themselves for the work decision includes 1757 women (19 women who reported "not applicable" were dropped from the sample) and of these, 32% reported that they made the decision alone. Only 25% of men report that their wives make the decision alone. The sample size for the spending decision is 1649 women and about 43% of these reported that they made the decision alone while only 25% of husbands reported that their wives made this decision alone.

Next, we expand on the traditional female autonomy model by adding the restriction that the husband agrees with his wife that she makes the decision

¹² In all models, those individuals who report that the decision is not applicable to them are dropped from the sample for the logistic regressions.

autonomously. The sample for this model is the same as the first two: 1757 women for the work decision and 1649 for the spending decision. Twenty-five percent of couples agree that the wife makes the work decision autonomously while only 18% agree that she wives make the spending decision autonomously.

Finally, since relative autonomy (being able to negotiate and make joint decisions) may be more important than making decisions alone, egalitarian decision-making, defined as both spouses making the decision jointly and reporting that their spouse does as well, is analyzed. In terms of the decision to work the sample size for this model is 1756 couples,¹³ of these 488 or 28% reported that the decision was egalitarian. Egalitarian spending decisions included only those reporting joint decisions; the partially joint, partially alone category was not included. The sample size is 1635 couples¹⁴ and of these 309 or 19% are classified as egalitarian.

Results

Descriptive statistics of the independent variables are presented in Tables 3-9 and 3-10. As shown in Table 3-9 only about 35% of couples reside in a rural area; most (65%) are urban. About 53% of couples live in the Coast and the other 47% in the Sierra. Wives have extended family members present in 4.5% of households and husbands extended family members are present in 4.1% of households. Only one household included extended family members of both the husband and wife. The majority of couples are both mestizo; 4.9% of partners are both indigenous, 5.6% are both of another ethnicity, and 3.4% have different ethnicities.

¹³ As reported above 19 women and 1 man reported that this decision was not applicable reducing the sample size by 20 from 1776.

¹⁴ Of the 1776 couples in the sample, 141 of them reported that the decision was not applicable for at least one of the partners.

About 35% of couples are in consensual unions and 65% are married. A total of 23% of couples in the sample were in a previous relationship; in 7% of the couples, only the wife had been in a previous relationship, in 9% only the husband had, and in 8% both the husband and wife had been previously married or in a consensual union.

The employment variable is defined as anyone who is economically active; it is included only when modeling the decision to spend one's own money. In about 47% of couples, both partners work; in 4% only the wife works and in 45% only the husband works (and in 4% neither work).¹⁵ Seventy-four percent of couples agreed that the husband earned the most income. Only 7% of couples reported that the wife made the most income and in 10% they reported earning the same amount. In the other 10%, partners disagreed about who made more.

We also explore whether it matters whether only the husband or wife owns a major asset versus both of them owning assets, either individually or jointly. In 8% of households only the wife owns real estate, in 12% only the husband owns, in 46% both own and in 34% neither own.¹⁶ Table 3-10 shows that on average, women hold 46% of couples' wealth. This is measured as the wife's wealth divided by the couple's wealth (wife's plus husband's wealth). We also control for socio-economic status by

¹⁵ When dropping those who reported "not applicable" we compared those to the "employed". Employment was determined by one who reported working but was not classified as an unpaid family laborer. For the work decision, we found 142 men (out of the 1776 in this sample) were unemployed but only one of these reported that the work decision was not applicable. In the case of women, 823 were unemployed but only 19 reported the work decision was not applicable. These differences in unemployment and the work decision being not applicable are likely due to the fact that the work question was asked in terms of "whether or not to work" so even if they are not working they are reporting on the decision not to work.

¹⁶ In some households, spouses reported different owners of such assets. In these cases, a reconciliation process was used to determine the "final owners". In this process, we first checked whether or not there was a title and if so the owners reported as being on the title were considered the owners. If there was no title, all owners listed by either spouse were considered owners. These "final owners" are used in the analysis.

considering the couple's wealth¹⁷ to see whether the wealth level makes a difference in how decisions are made. The mean wealth of couples is US\$23,310 but with a wide range from \$9 to \$619,400 and a median of just over \$8,000.

The average age of women in the sample is 41; while the average age of men is 45. The average age difference between husbands and wives in the sample is four years (in other words, men are on average four years older than their wives). Both men and women have about 8 years of schooling on average. The average difference in years of schooling is 0.4; so men have only slightly more education on average.

The results of the various logistic regression models are presented in Tables 3-11 through 3-18 and are discussed below model by model. The coefficients are reported in the results tables; the odds ratios can be calculated by taking the exponent of the coefficient ($\exp(\beta)$). The first specification (Model I) in each table is the baseline model since it does not include the variables on asset ownership or intra-household distribution of wealth. Then model II includes whether the wife, husband, both, or neither are asset owners. Finally, model III includes the variable regarding the wife's share of the couple's wealth.

Women's Autonomous Decision-making as Reported by Women Themselves

Work decision. Table 3-11 Model I shows that woman's age, rural households, both partners having been in a previous relationship, and women earning the most are associated with women's autonomous decision-making. As women age, they are more

¹⁷ The previous version of this chapter used the "bono", a conditional cash transfer, as a proxy for poverty; however, many non-poor households receive the bono (Argudo, 2012), thus the wealth of a couple is likely a better indicator of their socio-economic status.

likely to make the decision about work alone.¹⁸ Women living in rural households are less likely than women in urban households to make the decision to work alone; specifically the odds ratio can be calculated as $\exp(-0.512)$, which is 0.6. Thus, women in urban households are 1.7 (1/0.6) times more likely to make the decision alone than women in rural households. Women in households in which both partners had been in a previous relationship are more likely to make an autonomous decision than when neither partner had been in a previous relationship (1.5 times the odds). (This is only statistically significant in the baseline model; in the others it is no longer significant at the 0.10 level.) Women in households in which the wife earns the most are more likely to make the decision alone than in households in which the man earns the most (they have 2 times the odds). Also, if the couple disagrees about who earns the most, women are more likely (they have 1.6 times the odds) to make an autonomous decision than in households in which the man earns the most.

Models II and III give similar results. The differences are that the previous relationship variable is no longer statistically significant and the coast (compared to the highland) variable is now significant; women in households located in the coastal region are less likely than women in highland households to make the decision alone. In Model II, we find that women in households in which only the wife owns real estate (housing, land, or other real estate) are more likely than women in households in which neither partner owns real estate to make the decision alone. If both partners own real estate women are less likely to make the decision to work autonomously.

¹⁸ Note that woman's age is also included in the age difference variable so that to get the coefficient estimate on woman's age we must also take into account the age difference using the following calculation: $\beta_{f_age} - \beta_{age_diff} = 0.021 - -0.002 = 0.023$. Also a test of joint significance found that the age variables are jointly statistically significant at the 0.01 level ($p = 0.000 < 0.01$).

Model III shows that as the wife's share of couple's wealth increases she is less likely to make the decision alone.¹⁹ We can use the coefficients on the female share and female share squared variables to calculate the share at which women are least likely to make the decision autonomously ($-\beta_{f_share}/2\beta_{f_share2}$). This calculation reveals that women are least likely to make the decision about whether or not to work alone when their share of the couple's wealth is 38%. At amounts less than and greater than 38% they are more likely to make the decision alone.

Spending decision. Table 3-12 shows the results for women making the decision about spending their own money autonomously. In the baseline model (Model I) the following variables are significant: woman's age, rural, coast, marital status, wife having extended family members in the household, ethnicity, employment, and earnings. Older women are more likely to make the decision on how to spend their own money autonomously.²⁰ Women in rural households are less likely to make the decision alone than women in urban households; and, women in coastal households are more likely than women in highland households to make the decision alone. Women who have extended family members (parents or siblings) living in their households are more likely than women without extended family members present in their households to make the decision alone. This may indicate that extended family members make women feel they have greater bargaining power (or are more empowered). Women in households in which both partners are classified as "other ethnicity" (Afro-Ecuadorian being the greatest proportion of these) are less likely to make the decision alone than women in

¹⁹ A test of joint significance also reveals that the two variables (female share and female share squared) are jointly significant with a p-value of 0.000.

²⁰ Test of joint significance of woman's age and age difference indicates joint significance with a p-value of 0.025.

households in which both partners are mestizo; however there is no statistically significant difference between mestizo and indigenous couples. Women in households in which the wife only or both partners are employed are more likely to make the decision alone than women in households in which only the husband is employed; but, there is no statistically significant difference between women in households in which neither are employed and those in which only the husband is employed. Women in households in which both partners earn about the same are less likely to make the decision alone than women in households in which the man earns the most; they are likely making joint decisions. Women in households in which the partners disagree about who earns the most are more likely to make the decision alone than women in households in which the man earns the most.

Models II and III have similar results to those reported above for model I except that the consensual union variable is not statistically significant in either model II or III, the wife only being employed is not statistically significant in Model III, and the earning the same variable is not statistically significant in Model II. Model II adds the asset ownership variables and we find that women in households in which the wife only owns real estate are more likely to make the decision alone than women in households in which neither own real estate. Also, women in households in which both partners own real estate are less likely to make the decision alone than women in households in which neither own real estate. There is no statistically significant difference between households in which only men own and those in which neither own.

Model III includes the variables of female share of couple's wealth. The results indicate that as the woman's share increases, she is less likely to make the decision

alone. Women are least likely to make the decision alone when they own about 33% of couple's wealth (holding all else equal). At lower and higher shares, women are more likely to make the decision alone.

Comparison of the Work and Spending Decision Models (as Reported by Women)

Comparing the work and spending decision models as reported by women (see Tables 3-11 and 3-12), we find some similarities and some differences. First, the models are similar in terms of the sign and significance of the variables related to woman's age, rural locale, earning the same, disagreement about earnings, real estate ownership, and female share of couple's wealth. Thus, indicating that these variables do not depend on the decision being considered. So, for both decisions, as women get older they are more likely to make the decisions alone. Rural women are less likely than urban women to make the decision alone perhaps supporting the ethnographic research that indicates rural highland households being relatively egalitarian (Hamilton 1998).

The correlates for the decisions differ in terms of the following variables: coast, consensual union, wife has extended family members, both other ethnicity, both have been in a previous relationship, and woman earns the most. For the decision to work, the coastal variable was significant for models II and III. Women living in the coastal region were less likely to make the work decision alone but more likely to make the spending decision alone than women in the highlands. There was no difference between women in consensual unions and married women for the work decision; but, women in consensual unions were more likely to make the spending decision alone than married women (this variable was only significant in the baseline model for the spending decision). The wife having extended family members present was negatively associated with women making the work decision alone but was not statistically

significant; however, in the spending decision this variable was positive and significant. Women who live with extended family members (parents and/or siblings) are more likely to make the decision about how to spend their own money alone compared to those women who do not live with extended family members. Although women in households in which both partners were classified as “other” ethnicities were less likely to make the spending decision alone than women in households in which both partners were classified as mestizo, there was no statistical significance for the work decision. When both partners had been in a previous relationship, women were more likely to make the decision to work alone (for the baseline model) but there was no statistically significant difference in terms of the spending decision. Also, women in households in which the wife earned the most were more likely to make the work decision alone than women in households in which the husband earned the most but there was no significant difference for the spending decision.

Women’s Autonomous Decision-making as Reported by Men

Work decision. As shown in Table 3-13, which gives the results for the models of women’s autonomous decision-making as reported by their husbands, the following variables are significant: woman’s age, rural, and woman earns the most. Similar to the women’s models, as women get older they are more likely to make the decision to work alone. Women in rural households are less likely to make the decision alone than women in urban households. And, women in households in which the wife earns the most are more likely than women in households in which the husband earns the most to make the decision to work alone. Model II includes the real estate ownership variables, which are not statistically significant. Also in this model, rural is no longer statistically different than urban. Model III includes the female share of couple’s wealth and this

variable indicates that as women's share increases, women are less likely to make the decision alone until reaching 68% (the point at which women are least likely to make the decision alone).

Spending decision. The results for women making autonomous decision about spending their own money as reported by men are presented in Table 3-14. In these models, we find that woman's age, rural, coast, wife having extended family members, ethnicity, and employment are statistically significant variables related to women making the spending decision alone. Again, as women get older they are more likely to make the decision alone. Women in rural households are less likely than those in urban households to make the decision alone but women in coastal households are more likely than women in highland households to make the decision alone. Women who have extended family members residing in their households are less likely to make the decision alone than women who do not have extended family members living with them. Women in households in which both partners are classified as other ethnicity are less likely than those in households in which both partners are classified as mestizo to make the decision alone. Women in households in which the wife only works, both work, or neither work are more likely than women in households in which only the husband works to make the decision alone.

Models II and III give similar result as those reported above but in model II we also find that women in households in which the wife only owns real estate are more likely than women in households in which the husband only owns real estate to make the decision alone. Model III include the female share of couple's wealth but this variable is not statistically significant.

Comparison of the Work and Spending Decision Models (as Reported by Men)

Comparing the work and spending decision models for women as reported by men (see Tables 3-13 and 3-14) we find many more significant variables for the spending decision than the work decision. The only variables that are significant in both models are women's age and rural. Woman's age is positively associated with women making the decisions alone and women in rural households are less likely than women in urban households to make the decisions alone.

The following variables differed in terms of significance and/or sign for the two decisions: coast, wife has extended family members in the household, both other ethnicity, and woman earns the most. Women in coastal households were more likely than women in highland households to make the decision about spending autonomously whereas there was no difference for the work decision. Women in households with extended family members of the wife present are less likely to make the decision about spending autonomously than women in households without extended family members of the wife present; but there is no statistically significant difference for the work decision. Women in households in which both partners are classified as other ethnicity are less likely than women in households in which both partners are mestizo/blanco to make the decision to spend autonomously; but, there is no difference for the work decision. Finally women in households in which the wife earns the most are more likely than women in households in which the husband earns the most to make the work decision alone. This variables was not statistically significant for the spending decision; although the spending decision models included employment variables which were significant—women in households in which the wife only, both, or neither partner

worked were more likely than women in households in which the husband only worked to make the spending decision autonomously.

Differences between Men's and Women's Models of Autonomous Decision-making

Work decision. Comparing Tables 3-11 and 3-13, the differences between men's and women's models of the work decision can be identified. The effect of the household being in a rural area is negatively associated with women's making the decision alone in both the men's and women's models; however, the magnitude is greater in the women's model than in the men's model. Furthermore, women who live in the coastal region are less likely than women living in the highlands to make the decision alone; however in the men's model there is no difference between living on the coast or in the highlands.

In the women's model, both partners having been in a previous marriage or consensual union is related to a greater likelihood of her making the decision alone; but, the men's model does not indicate any difference between this group and neither having been in a previous relationship. Also, the women's model suggests that disagreeing over the amount of earnings is correlated to a greater likelihood of making the decision alone; whereas the men's model does not indicate any difference between disagreeing and the men earning the most.

The asset ownership variables were significant in the women's model. Women only owning as compared to neither owning real estate implies a greater likelihood of women making the decision alone; and both owning implies a lower likelihood of women making the decision alone. However, in the men's model these asset ownership variables are not significant. This seems to indicate that women with assets are empowered to say that they make the decision alone but women's asset ownership

does not seem to impact men's perceptions of women's empowerment. And, while the women's model suggests that women are least likely to make the decision alone when they own about 38% of the couple's wealth, the men's model suggests a higher level, of 69%. This may indicate that men view joint decision-making to occur at these higher levels of women's share of couple wealth; if they are least likely to make an autonomous decision, then they would be more likely to make a joint decision at that point. So, while women may perceive joint decision-making to occur most often when she owns 38%, men do not think joint decision-making occurs until she owns 69% of wealth. This may relate to the number of disagreements about how decisions are made as well.

Spending decision. The men's and women's models of the spending decision can be compared by examining Tables 3-12 and 3-14. In the women's model, women with extended family in the household are more likely to make an autonomous decision than women without extended family members present. In the men's model, the opposite result is found; women with extended family members present in the household are less likely to make an autonomous decision; perhaps he views her as making decisions with her family members.

The women's model indicates that in households in which either the woman alone or both partners are employed the women are more likely to make autonomous decisions than in households in which only the husband is employed. This supports previous studies that show the importance of women's employment for her bargaining power within households. In the men's model, households in which the woman alone, both partners, or neither partner works implies that the woman is more likely to make

the decision alone. So, the woman's model indicates the importance of women working; all categories in which women work are significantly different than just the man working. On the other hand, the men's model indicates the importance of the man working; that is if the man works, the wife is less likely to make the decision alone (because in the men's models the neither category is statistically different than the men only category); although when they both work she is more likely than when only he works to make the decision autonomously.

In the women's model if both earn about the same amount, then women are less likely to make the decision alone (in the baseline model). If they disagree about who earns the most, women are more likely to make the decision alone. Thus, disagreement about who earns the most may be an indicator of separate spheres. None of these variables are statistically significant in the men's model.

Also, in the women's model, both owning real estate is associated with women being less likely to make the decision alone whereas in the men's model it is not statistically significant. Similarly, the women's model indicates that the female share of couple's wealth is statistically significant and that women owning about 33% of couple's wealth are least likely to make the decision alone. In the men's model, the woman's share of couples wealth at which she is least likely to make the decision alone is 56%; however, it is not statistically significant. What does such imply for household bargaining power? If women are perceiving that their share does influence decision-making (even if they do not consciously acknowledge this) but men do not, do they really have the bargaining power given that bargaining power depends on the relative positions of men and women?

Husband and Wife Agree that She Makes the Decision Autonomously

Work decision. Table 3-15 presents the results for the models of women's decision-making about whether to work when both spouses agree that she makes the decision autonomously. Woman's age, rural, both indigenous, and woman earning the most are statistically significant variables. As women get older the couple is more likely to agree that she makes the decision alone. Couples are less likely to agree about her autonomous decision-making in rural households than in urban households. In households in which both partners are indigenous couples are more likely to agree that the wife makes the decision autonomously than in households in which both partners are mestizo. Also, couples which agree that the woman earns the most are more likely to agree that she makes the decision autonomously.

Models II and III have similar results. Model II adds the variables about real estate ownership, none of which are statistically significant. Model III adds the variables about female share of couple's wealth; in this specification we find that as women's share increases, the couple is less likely to agree that she makes the decision autonomously up until the woman owns 56% of the couple's wealth at which point the probability that they both report that she makes an autonomous decision begins to increase again.

Spending decision. The results for the couples agreeing that women make the spending decision autonomously are reported in Table 3-16. Woman's age, rural, coast, ethnicity, and employment are statistically significant variables. Couples are more likely to report that the wife makes the decision autonomously the older the woman is. Couples in rural households are less likely than those in urban households to report that the wife makes an autonomous decision. Also, couples in coastal regions are more likely than those in the highlands to report that the wife makes an autonomous decision.

Couples of other ethnicities are less likely than mestizo couples to report that the wife makes the decision autonomously. And, couples in households in which the wife only, both partners, or neither partner is employed are less likely to report that the wife makes an autonomous decision than couples in households in which only the husband works.

Models II and III find similar results as those in Model I. In Model II we find that couples in households in which only the wife owns real estate are more likely to report that the wife makes autonomous decisions than couples in households in which only the husband works. Model III presents the results when including the wife's share of the couple's wealth; which is not statistically significant.

Comparison of the Work and Spending Decision Models—Agree Autonomous

Comparing Tables 3-15 and 3-16 we find a few similarities and several differences. Women's age and rural are predictors of both the decision to work and to spend. As women's age increases, couples are more likely to report that she makes the decisions autonomously. Also, couples living in rural areas are less likely to agree that the wife makes an autonomous decision than couples living in urban areas.

Although couples on the coast are more likely than those in the highlands to agree that the wife makes the decision alone, there is no difference between coastal and highland couples in terms of the work decision. When both partners are indigenous the wife is more likely to make an autonomous decision about work (and her husband agreeing) than when both partners are mestizo; but, there is no difference in terms of the spending decision. However, for the spending decision, couples in which both partners are classified as other ethnicity are less likely to agree that the wife makes an autonomous decision about spending than mestizos but there is no difference for the work decision. Couples in which the woman earns the most are more likely to report the

wife making an autonomous decision about work than couples in which the husband earns the most. The earnings variables are not significant for the spending decision. However, the spending decision models include employment variables, which are all significant. Finally, the asset ownership and wealth variables are different for the two decisions. Couples in which only the wife owns real estate are more likely to report an autonomous decision for spending than when the husband only owns real estate but there is no difference for the work decision. Finally, although the wife's share of couple's wealth is statistically significant for the work decision it is not for the spending decision.

Comparison of the Models of Agree Autonomous and those of Women and Men's Reporting

Work decision. Comparing Tables 3-11 and 3-15 we can identify the differences between women reporting autonomous decision-making with regards to the work decision and partners agreeing that the wife makes an autonomous decision. Woman's age, rural, woman earns the most, and female share of wealth are significant variables in both models. So, older women are both more likely to report that they make the decision alone and that their husbands agree that they do so. Also, women in rural households are less likely to report that they make the decision alone and that their husbands also report this. Women in households in which the woman earns the most are both more likely to make the decision alone and for their husbands to agree that they do so. As woman's share of the couple's wealth increases, the less likely she is to make the decision alone and for husband to agree. The difference with this variable is the estimated share at which the wife is least likely to make the decision alone. In the women's model we found that women are least likely to make the decision alone when

she owns about 38% of couple's wealth. However, couples agreeing that the wife makes the decision alone are least likely to occur when the wife owns 56% of the couple's wealth. This indicates that women must own more of the wealth for their husbands to recognize and agree that their wives are making the decision autonomously.

Comparing Tables 3-13 and 3-15 reveals differences between men's reporting of women's autonomous decision-making and couples agreeing about her autonomous decision-making in regards to the decision about whether to work. We again find that as women get older they are more likely to make the decision autonomously and for the husband to agree. Also, women in rural households are less likely than those in urban households to make the decision alone and for their husbands to agree. Women in households in which the woman earns the most are more likely than women in households in which the man earns the most to make the decision alone and for her husband to agree. And, in both models female share of couple's wealth is a significant variable. For the men's model women owning about 68% of couple's wealth are least likely to make the decision alone whereas in the agreement model, women owning about 56% of couple's wealth are least likely to make the decision alone. In neither model is real estate ownership significant.

Although both being indigenous is positive and significant in the agreement model it is not statistically significant in the men's model. This could indicate that indigenous couples are more likely to agree about the way decisions are made than are mestizo couples. This is explored more below in the results about egalitarian decision-making.

Spending decision. We compare Tables 3-12 and 3-16 to identify the differences between women's reporting about their own decision-making and couples agreement about women's autonomous decision-making. For both models women's age, rural, coast, both other ethnicity, wife only employed, both employed, and wife only owns real estate are statistically significant variables and have the same sign in both models.

The following variables are different between the two models: consensual union, wife has extended family members in household, neither being employed, earning the same, disagreeing about earnings, both own assets, and female share of couple's wealth. Although women in consensual unions are more likely to report that they make the decision autonomously than married women, there is no difference in terms of couples agreeing about the wife making the decision autonomously. Women in households in which the wife's extended family members live in the household are more likely to report making the decision autonomously; however, in these same households couples are less likely to agree that she makes the decision autonomously (although the variable is not significant in the agreement model). Women do not perceive that they are more likely to make the decision autonomously when neither work (as compared to when only the husband works) but for agreement neither working is significantly different than the husband only working. Both owning assets is associated with a lower likelihood of women making the decision alone but not statistically different for agreement that she makes it alone. Also, while women reported that they were less likely to make the decision alone the greater their share of couple's wealth, this variable was not significant for the agreement model.

We can also compare men's reporting of women's autonomous decision-making to couples agreeing that the wife makes the decision autonomously by looking at Tables 3-14 and 3-16. These two models are more alike than the models of agreement and women's reporting of themselves. The only difference between the results reported in Tables 3-14 and 3-16 is with regards to wife having extended family members present. Although the men's model indicates that this variable is negative and statistically significant, it is not significant in the agreement model (but it does have the same sign).

Egalitarian Decision-making

The results for the models of egalitarian decision-making (for the decision to work (or not) and for the decision about spending the income one earns or receives) are reported in Tables 3-17 and 3-18.²¹ The classification of egalitarian decision-making is quite restrictive in that it requires both spouses/partners to report that they each make the decision jointly and that their spouse concurs that they do so (both symmetry and agreement).

Work decision. In Table 3-17 Model I shows that the wife's age, rural, coast, both spouses being indigenous, and both spouses earning the same are statistically significant predictors of the likelihood of making the decision to work in an egalitarian fashion. Although the coefficient on wife's age is significant, after accounting for the fact that this variable is also part of age difference, the impact is nearly zero.²² Rural households have 1.4 times the odds ($\exp(0.319)$) of making the decision to work in an

²¹ We also ran the model with the dependent variable being only the wife making the decision jointly (when her husband was in agreement) and got similar results as those presented for the egalitarian decision-making model even though the sample size is considerably larger with this less restrictive condition.

²² Remember that age difference = man's age – woman's age, so to find the overall impact of wife's age one must use the formula from the first derivatives: $\beta_{f_age} - \beta_{age_diff}$.

egalitarian fashion as their urban counterparts. Couples in coastal regions have 1.2 times the odds of making an egalitarian decision than do couples in the sierra. Also, households in which both partners earn the same have 1.7 times the odds of making an egalitarian decision as do households in which the husband earns the most.

Model II adds variables for whether the wife, husband, or both own real estate. In this model we find similar results as in Model I. Furthermore, we find that couples in which only the wife is an owner of real estate are less likely to make the decision to work in an egalitarian fashion than in couples in which neither partner owns real estate. As expected, this is opposite of what we found in the models of women's autonomous decision-making.

Again Model III has similar results as that of Model I. It considers the intra-household distribution of wealth in terms of the female share of the couple's wealth. The wife's share of the couple's wealth is associated with an increased likelihood of an egalitarian decision up to a share of 0.41; it then declines. This means that the greatest likelihood of egalitarian decision-making for the decision to work is when women own 41% of the couple's wealth.

Spending decision. Table 3-18 reports the results for the model regarding the decision about spending one's own income.²³ Note that the pseudo R-square is higher for the spending model (at 0.16) than the work model. In model I, we find similar results as with the decision to work with a few additional variables becoming significant. The

²³ It should be noted that there is a potential endogeneity problem with models II and III since deciding how to spend one's income could impact asset ownership and/or the share of wealth belonging to the wife. We reviewed potential instrumental variables, including parents' asset ownership and education, but did not find any that correlated well to wife's asset ownership and/or share of wealth. Moreover, an argument could be made that our dependent variable is defined so restrictively—in terms of both symmetry and agreement in the decision to spend—that such a level of agreement would be unlikely to impact upon a woman's accumulation of assets and hence share of wealth.

wife's age is negatively correlated with the likelihood of an egalitarian decision-making process regarding the decision to spend one's own money. This could indicate that older women are more likely to make the decision alone (as indicated by the previous regression results) or that there is more disagreement between the spouses about how the decision is made. Rural couples have 1.6 times the odds of making the decision in an egalitarian fashion as urban women. When the couple lives on the Coast, the wife is less likely to make the decision jointly with her husband (0.6 times the odds) than those living in the highlands. In Model I couples in consensual unions are less likely than married couples to make an egalitarian decision; however, this variable is not significant in Models II or III. In households in which the wife has extended family members the couple is less likely to make an egalitarian decision. Also, when both partners are indigenous, the couple is less likely to make an egalitarian decision. However, if only the wife is employed or both spouses are employed, then they are more likely to make egalitarian decisions about spending than if only the husband is employed. If only the wife is employed, they have 2.4 times the odds of making egalitarian decisions as when only the husband is employed. If they are both employed, then they have 5.9 times the odds. Also, if the couple earns about the same amount, then they have 2.5 times the odds of making egalitarian spending decisions as when the husband makes the most income.

Model II shows the impact of asset ownership on the likelihood of egalitarian spending decisions. In this case we have the same variables significant as before with similar magnitudes (in terms of the odds ratio). We also find that when only the wife owns real estate they are less likely to make egalitarian spending decisions (with 0.56

times the odds) as compared to when the wife does not own real estate but this variable is not statistically significant at the 0.10 level. In these cases it is likely that the wife makes the decision alone or that they disagree as indicated in the previous regression results. If both spouses own real estate (either jointly or individually) then there is a greater likelihood that the couple makes an egalitarian decision (1.5 times the odds) compared to when neither owns real estate.

Finally, model III presents the results of how the wife's share of the couple's wealth is associated with egalitarian decision-making about spending. Again, the same variables are significant as before with similar magnitudes. The likelihood of egalitarian decision-making increases (at a decreasing rate) as the wife's share of wealth increases, until the wife's share is 48%, at which point the likelihood begins to decrease.

Comparison of the Work and Spending Decision Models—Egalitarian

Comparing Tables 3-17 and 3-18 we can identify differences in terms of egalitarian decision-making for the work and spending decisions. The two decisions are similar in terms of the following variables: woman's age, rural, coast, earn the same, and female share of wealth. They are different in several key ways. First, for the spending decision women having extended family members in the household is associated with couples being less likely than those without the wife having extended family members in the household to make an egalitarian decision; however this variable is not statistically significant for the work decision. In terms of ethnicity, couples in which both partners are indigenous are more likely to make the work decision in an egalitarian fashion but less likely to make the spending decision in an egalitarian fashion. This seems to support the ethnographic research that suggests indigenous households in the highlands of Ecuador are relatively egalitarian and that women have traditionally managed the

household budget (Hamilton 1998). Also, when both partners are classified as other ethnicity, they are more likely than mestizo couples to make an egalitarian decision with regards to spending but there is no difference between mestizo and other ethnicity couples in terms of the work decision.

Furthermore, couples in which the wife only owns real estate are less likely than couples in which neither own real estate to make an egalitarian decision in regards to the work decision but there is no statistically significant difference in terms of the spending decision. Whereas both owning real estate is a statistically significant predictor of an egalitarian spending decision (as compared to neither owning), it is not statistically significant for the work decision. The wife's share of couple wealth follows a similar pattern for both egalitarian work and spending decisions; it increases and then decreases at a point somewhat near equal wealth levels. For the work decision, couples are most likely to make an egalitarian decision when the wife owns about 41% of couple wealth; whereas for an egalitarian spending decision the greatest likelihood is when the wife owns 48% of couple wealth.

Discussion and Concluding Thoughts

Similar to the literature discussed above, the results indicate different predictors of household decision-making processes depending on the decision, whether the focus is on women making the decision autonomously or the spouses making the decision in an egalitarian manner, and whether we are considering women's own responses or men's responses about their wives.

There were some consistently different results when comparing models of autonomous decision-making with egalitarian decision-making. While women's age was positively correlated to her autonomous decision-making (in all specifications of

autonomous) it is negatively correlated to egalitarian decision-making. This implies that as women get older they are more likely to make decisions alone and less likely to make egalitarian decisions. In rural households women are less likely to make autonomous decisions and couples are more likely to make egalitarian decisions. In households in which only women own real estate it is more likely that women make autonomous decisions and less likely that the couple makes egalitarian decision-making. Also, the female share of household wealth is negatively correlated with women's autonomous decision-making to a point where the wife owns between 33% and 68% of the couple's wealth; and positively related with egalitarian decision-making to a point where the wife owns between 41% and 48%.

For the work decision, a woman earning the most is correlated with a greater likelihood of her making an autonomous decision (as compared to when the man earns the most). However, egalitarian decisions are correlated with the couple earning about the same.

For the spending decision, women on the coast are more likely to make an autonomous decision, and couples are less likely to make an egalitarian decision. Also, when both spouses are classified as "other ethnicity" women are less likely to make an autonomous decision and couples are more likely to make an egalitarian decision.

Interestingly the variable "both indigenous" was positively related to the work decision in terms of both egalitarian and agreement that women make the decision autonomously. This variable was not significant for the other specifications of women's autonomous decision-making. This may indicate that indigenous couples are more likely

to agree about how the decision is made (either by the woman alone or by the couple jointly).

This study offers evidence that women's command over resources in dual-headed households is strongly associated with how couples make decisions. We found that in households where only the wife owns real estate, she is more likely to make autonomous decisions regarding whether to work and how to spend her own income. Moreover, households where both husband and wife own real estate, either jointly or individually, are positively and significantly associated with the likelihood of egalitarian decision-making among couples. Furthermore, the female share of couple wealth was positively related to egalitarian decision-making and negatively correlated to autonomous decision-making by women, indicating that the more wealth equality in the household, the more likely decisions are to be made in an egalitarian fashion, while inequality that favors women is more likely to lead to her making autonomous decisions. The level of earnings of each spouse, specifically, where this is roughly equal, and employment in the case of the spending decision, are also important indicators of egalitarian decision-making.

Although this study suffers from limitations similar to other studies that look at household decision-making, especially that of potential endogeneity, we have demonstrated the usefulness of approaching household decision-making from a gender perspective, one that takes into account both men's and women's perspectives on how they themselves as well as their spouses make decisions. Also, we have contributed to the previous literature on women's empowerment and bargaining power in several ways. First, we found that the intra-household distribution of assets and wealth are

important correlates of both autonomous and egalitarian decision-making. Future work should consider including measures of assets and wealth as well as income when examining women's empowerment and bargaining power.

Second, men's and women's perceptions about the wife's autonomous decision-making were compared. As suggested by Sen (1990) and Katz (1991), men and women have different perceptions about how much their contributions (herein measured as their assets and wealth) impact bargaining power. We found that men and women do perceive different levels of autonomy depending on who owns real estate and the wife's share of couple's wealth. While the women's models associated autonomous decisions with only the wife owning real estate (compared to neither owning real estate); the men's models did not find such a relationship. It seems that men do not perceive wife's real estate ownership as contributing to her autonomous decision-making (except in the case of the spending decision, where it is slightly significant at the 0.1 level). Also, women associated both owning real estate to a lower likelihood of autonomous decisions but the men's model did not find a statistically significant relationship. So, men do not seem to perceive real estate ownership to correspond to their wives' bargaining power in terms of autonomous decision-making.

Third, we also looked at what explains husbands and wives agreement about her autonomous decision-making, which is described in detail above. In terms of the asset and wealth variables, only the wife owning real estate is positively associated with the couple agreeing that she makes an autonomous decision regarding spending her own money; however, there is no such relationship for the work decision. For the work decision, the female share of couple wealth follows a similar pattern, in that the

likelihood of a wife's autonomous decision is higher at low shares and decreases until reaching 56% and then begins to increase again. But, the wife's share of couple wealth is not significant for the spending decision.

And finally, we identified differences between women's autonomous decision-making and couple's making egalitarian decisions. In terms of wealth, we find that in general women's ownership of real estate is positively related to autonomous decision-making but is at least weakly associated with egalitarian decision-making. On the other hand, both owning real estate is weakly related to a greater likelihood of egalitarian decision-making. As expected, we got opposite signs on the wife's share of couple wealth for autonomous and egalitarian decision-making; these results suggest that couples are most likely to make egalitarian decisions when wealth is distributed fairly equally, whereas women are more likely to make autonomous decisions when the wealth is not distributed equally, especially if she owns most of the wealth.

Egalitarian decisions were defined in a restrictive manner that considered both symmetry and agreement; nonetheless, they capture well the content of egalitarian gender relations within dual-headed households. In the context of Ecuador, both spouses participation in the decisions about each partner's employment and spending decisions is likely to indicate fairly equal bargaining power and could thus be empowering for women, since they are able to negotiate as equals with their husbands not only in terms of their own employment and spending decisions but also in terms of their husbands' decisions regarding employment and spending.

Table 3-1. Women's responses to how household decisions are made, Ecuador 2004

Decision	Her alone	Spouse alone	Couple jointly	Other	No response	Total
To visit family	10.1	10.2	79.0	0.2	0.4	100%
When a child needs to see a physician	28.6	5.4	61.3	0.7	4.1	100%
How to discipline children	19.2	7.6	68.1	0.7	4.4	100%
Use of contraception	16.0	5.7	69.6	1.3	7.4	100%
How to spend household income	12.0	19.2	68.6	0.1	0.2	100%
Whether to work or study	23.7	21.6	53.3	0.2	1.2	100%

Source: ENDEMAIN 2004

N = 6256 married women or those in consensual unions, age 15 to 49.

Table 3-2. How each spouse reports making their respective decision, Ecuador 2010

	a) Whether or not to work				b) If earn or receive income, how to spend				c) To seek health care for themselves				d) Whether or not to use contraception			
	Man	%	Woman	%	Man	%	Woman	%	Man	%	Woman	%	Man	%	Woman	%
Alone	926	52	565	32	330	19	520	29	700	39	755	43	238	13	422	24
Part alone and part jointly	-	-	-	-	264	15	182	10	-	-	-	-	-	-	-	-
Joint	840	47	1120	63	1154	65	941	53	1048	59	987	56	1455	82	1337	75
Asks permission	8	0.5	55	3.1	-	-	-	-	10	0.6	22	1.2	16	0.9	8	0.5
Someone else makes decision	1	-	17	1	10	0.6	6	0.3	17	1	11	0.6	66	3.7	8	0.5
Not applicable	1	-	19	1.1	18	1	127	7.2	-	-	-	-	-	-	-	-
Total	1776	100	1776	100	1776	100	1776	100	1775	100	1775	100	1775	100	1775	100

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 3-3. Women's autonomous decision-making as reported by her and her husband, Ecuador 2010.

Decision	Wife Reports Autonomous		Husband Reports that Wife Makes Autonomous Decision		Spouses Agree that Wife Makes Autonomous Decision	
	Autonomous	%	Decision	%	Decision	%
To work (n = 1,757)	565	32	437	25	236	13
To spend (n = 1,649)	702	40	404	25	296	18

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 3-4. Symmetry in decision-making – Whether both members of the couple make the decision regarding *themselves* in a similar fashion, Ecuador 2010

	a) Whether or not to work		b) If earn or receive income, how to spend		c) To seek health care for themselves		d) Whether or not use contraception	
Each alone	386	21.7	159	9.0	408	23.0	146	8.2
Each partly alone & partly jointly	-	-	96	5.4	-	-	-	-
Each makes jointly	627	35.3	736	41.4	699	39.4	1221	68.8
Each asks permission or someone else	1	0.1	4	0.2	1	0.1	1	0.1
Differ	762	42.9	781	44.0	667	37.6	407	22.9
Total	1776	100.0	1776	100.0	1775	100.0	1775	100.0

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 3-5. The distribution of joint decision-making, Ecuador 2010

Decision	Couple only	%	Couple plus someone else	%	With someone besides partner*	%	Total
To work	622	99.2	3	0.4	2	0.3	627
To spend	723	98.2	10	1.4	3	0.4	736
To access health services	674	96.4	16	2.3	9	1.3	699
To use contraception	1218	99.8	-	-	3	0.2	1221

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

*In the majority of these cases only one spouse reports making the decision jointly with someone else while the partner reports making the decision jointly with only the spouse.

Table 3-6. Degree of agreement by spouses on how partner makes the decision, Ecuador 2010

	a) Decision on whether or not to work				b) Decision on spending one's own income			
	Husband's perception of wife's decision	%	Wife's perception of husband's decision	%	Husband's perception of wife's decision	%	Wife's perception of husband's decision	%
Agree that spouse makes decision alone	236	13.2	506	28.5	171	9.6	149	8.4
Agree partly alone & partly jointly	-	-	-	-	62	3.5	117	6.6
Agree that joint decision	893	50.3	648	36.5	423	23.8	889	50
Agree that asks permission	14	0.8	-	-	-	-	-	-
Agree that someone else makes decision	3	0.2	-	-	-	-	3	0.2
Agree that N/A	-	-	-	-	103	5.8	14	0.8
Disagree	630	35.5	622	35.0	1017	57.3	604	34.0
Total	1776	100.0	1776	100.0	1776	100.0	1776	100.0

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 3-7. Symmetry and agreement: egalitarian decision-making, Ecuador 2010

Decision	Each partner says joint*		Partners agree that the other makes decision jointly (agreement)		Partners disagree that the other makes decision jointly	
	(symmetry)	%		%		%
To work	625	100	488	77.9	138	21.9
To spend	733	100	309	42.2	424	57.8

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Note: *May include others in addition to spouse; see Table 3-4.

Table 3-8. Descriptive statistics of the binary dependent variables, Ecuador 2010

Model--Dependent Variable	Decision to work		Decision to spend	
	Sample size (n)	% of sample	Sample size (n)	% of sample
Autonomous--Her reporting	1757	32.2%	1649	42.6%
Autonomous--His reporting (about her)	1757	25.2%	1649	24.5%
Husband and wife agree that she makes an autonomous decision	1757	13.4%	1649	18.0%
Egalitarian--Both make joint decisions and report spouse does also	1756	27.8%	1635	18.9%

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 3-9. Descriptive statistics for categorical variables, composition (percent) of sample of couples, Ecuador 2010 (n = 1,776)

	Percent of sample
Rural Household	35.1%
Coastal Household	52.9%
Couple in consensual union	35.3%
Wife has extended family members in household	4.5%
Husband has extended family members in household	4.1%
Ethnicity	
Both spouses mestizo/white	86.1%
Both spouses indigenous	4.9%
Both spouses another ethnicity	5.6%
Spouses are different ethnicities	3.4%
<i>Total</i>	<i>100.0%</i>
Previous relationship	
Wife only	6.5%
Husband only	9.3%
Both	7.6%
Neither	76.6%
<i>Total</i>	<i>100.0%</i>
Who is employed?	
Wife only	4.2%
Husband only	44.9%
Both	46.6%
Neither	4.4%
<i>Total</i>	<i>100.0%</i>
Who earns the most?	
Wife	6.6%
Husband	73.7%
They earn the same	9.6%
They disagree	10.0%
<i>Total</i>	<i>100.0%</i>
Real Estate Ownership	
Wife only owns real estate	8.0%
Husband only owns real estate	12.1%
Both own real estate	45.9%
Neither own real estate	34.0%
<i>Total</i>	<i>100.0%</i>

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 3-10. Descriptive statistics for continuous variables of sample of couples, Ecuador 2010

	n	Minimum	Maximum	Mean	Std. dev.	Median
Wife's age	1,776	18	90	41.3	14.20	39
Husband's age	1,776	18	93	45.33	15.28	43
Age Difference	1,776	-23	42	4.06	6.30	3
Wife's years of schooling	1,776	0	20	8.06	4.58	7
Husband's years of schooling	1,776	0	20	8.44	4.48	7
Difference in years of schooling	1,776	-11	14	0.38	3.50	0
Couple's wealth (in thousands of USD)	1,776	0.009	619.4	23.30	43.3	8.2
Wife's share of couple's wealth	1,776	0	1	0.462	0.246	0.497

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 3-11. Logistic regression results for models of autonomous decision-making for the decision to work; Ecuador, 2010

	(Baseline) Model I		Model II		Model III	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Intercept	-1.640 ***	0.307	-1.639 ***	0.308	-1.389 ***	0.346
Woman's age	0.021 ***	0.005	0.023 ***	0.005	0.021 ***	0.005
Age difference (man's age - woman's age)	-0.002	0.009	-0.001	0.009	-0.002	0.009
Woman's years of schooling	0.006	0.016	0.004	0.016	0.007	0.016
Schooling difference (man - woman)	-0.012	0.017	-0.014	0.017	-0.013	0.017
Rural (Urban)	-0.512 ***	0.122	-0.440 ***	0.124	-0.481 ***	0.124
Coast (Highlands)	-0.185	0.117	-0.203 *	0.119	-0.225 *	0.119
Consensual Union (Married)	0.156	0.139	0.078	0.140	0.079	0.141
Couple's wealth (in thousands of USD)	0.001	0.001	0.002	0.001	0.001	0.001
Wife has extended family in hh	-0.043	0.256	-0.131	0.265	-0.219	0.270
Husband has extended family in hh	-0.026	0.260	-0.014	0.260	-0.003	0.263
Ethnicity						
(Both mestizo/blanco)						
Both indigenous	-0.029	0.264	-0.020	0.261	-0.020	0.267
Both other ethnicity	-0.045	0.234	-0.067	0.236	-0.037	0.238
Different ethnicities	0.269	0.289	0.185	0.294	0.227	0.296
Previous Relationships						
(Neither in a previous relationship)						
Woman only has been in a previous relationship	0.322	0.210	0.274	0.211	0.262	0.211
Man only has been in a previous relationship	0.162	0.186	0.152	0.187	0.169	0.188
Both have been in a previous relationship	0.391 *	0.209	0.310	0.208	0.261	0.214
Who earns more						
(Man earns the most)						
Woman earns the most	0.692 ***	0.205	0.685 ***	0.206	0.708 ***	0.206

Table 3-11. Continued

	(Baseline) Model I		Model II		Model III	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Earn the same	-0.027	0.184	0.017	0.186	-0.010	0.187
Disagree about earnings	0.480 ***	0.166	0.520 ***	0.168	0.507 ***	0.166
Assets & Wealth						
(Neither own real estate)						
Wife only owns real estate			0.627 ***	0.196		
Husband only owns real estate			0.064	0.187		
Both own real estate			-0.368 **	0.145		
Woman's share of wealth					-2.414 ***	0.630
Woman's share of wealth squared					3.175 ***	0.619
Number of cases (n)	1757		1757		1757	
Likelihood ratio chi-square (df)	82.37 (19)***		107.06 (22)***		114.10 (21)***	
Pseudo R ²	0.0392		0.051		0.055	

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

*p < 0.1, **p < 0.05, and ***p < 0.01

Table 3-12. Logistic regression results for models of autonomous decision-making for the decision to spend; Ecuador, 2010

	(Baseline) Model I			Model II			Model III		
	Coeff. (β)	Robust Std. Err.		Coeff. (β)	Robust Std. Err.		Coeff. (β)	Robust Std. Err.	
Intercept	-1.108 ***	0.306		-1.116 ***	0.307		-1.049 ***	0.336	
Woman's age	0.013 ***	0.005		0.014 ***	0.005		0.013 ***	0.005	
Age difference (man's age - woman's age)	0.004	0.009		0.005	0.009		0.004	0.009	
Woman's years of schooling	-0.005	0.015		-0.006	0.015		-0.004	0.015	
Schooling difference (man - woman)	-0.007	0.017		-0.008	0.017		-0.006	0.017	
Rural (Urban)	-0.737 ***	0.118		-0.689 ***	0.121		-0.720 ***	0.119	
Coast (Highlands)	0.320 ***	0.116		0.311 ***	0.117		0.304 ***	0.117	
Consensual Union (Married)	0.254 *	0.135		0.202	0.136		0.222	0.136	
Couple's wealth (in thousands of USD)	-0.001	0.001		-0.001	0.001		-0.001	0.001	
Wife has extended family in hh	0.665 ***	0.255		0.624 **	0.255		0.578 **	0.255	
Husband has extended family in hh	0.031	0.267		0.034	0.269		0.048	0.267	
Ethnicity									
(Both mestizo/blanco)									
Both indigenous	-0.056	0.247		-0.055	0.246		-0.048	0.249	
Both other ethnicity	-0.409 *	0.235		-0.426 *	0.234		-0.403 *	0.234	
Different ethnicities	0.222	0.286		0.176	0.292		0.203	0.290	
Previous Relationships									
(Neither in a previous relationship)									
Woman only has been in a previous relationship	0.117	0.217		0.076	0.217		0.091	0.217	
Man only has been in a previous relationship	0.077	0.193		0.065	0.191		0.088	0.193	
Both have been in a previous relationship	0.158	0.213		0.103	0.213		0.105	0.216	
Who is employed?									
(Husband only)									

Table 3-12. Continued

	(Baseline) Model I		Model II		Model III		Robust Std. Err.
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)		
Wife only	0.534 *	0.318	0.540 *	0.321	0.483	0.321	
Both	0.494 ***	0.121	0.498 ***	0.122	0.482 ***	0.122	
Neither	0.363	0.291	0.350	0.291	0.352	0.292	
Who earns more (Man earns the most)							
Woman earns the most	0.154	0.248	0.142	0.249	0.171	0.249	
Earn the same	-0.320 *	0.185	-0.285	0.186	-0.316 *	0.186	
Disagree about earnings	0.317 *	0.175	0.349 **	0.176	0.329 *	0.174	
Assets & Wealth (Neither own real estate)							
Wife only owns real estate			0.430 **	0.209			
Husband only owns real estate			0.122	0.182			
Both own real estate			-0.234 *	0.141			
Woman's share of wealth					-0.847 **	0.617	
Woman's share of wealth squared					1.277 ***	0.616	
Number of cases (n)	1649		1649		1649		
Likelihood ratio chi-square (df)	117.96 (22)***		128.34 (25)***		123.28 (24)***		
Pseudo R ²	0.056		0.062		0.060		

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

*p < 0.1, **p < 0.05, and ***p < 0.01

Table 3-13. Logistic regression results for models of women's autonomous decision-making for the decision to work as perceived by husbands; Ecuador, 2010

	(Baseline) Model I			Model II			Model III		
	Coeff. (β)		Robust Std. Err.	Coeff. (β)		Robust Std. Err.	Coeff. (β)		Robust Std. Err.
Intercept	-1.836	***	0.320	-1.811	***	0.320	-1.497	***	0.350
Woman's age	0.015	***	0.005	0.016	***	0.005	0.015	***	0.005
Age difference (man's age - woman's age)	0.011		0.010	0.011		0.010	0.010		0.010
Woman's years of schooling	0.012		0.017	0.010		0.017	0.013		0.017
Schooling difference (man - woman)	-0.011		0.018	-0.014		0.018	-0.012		0.018
Rural (Urban)	-0.228	*	0.129	-0.195		0.132	-0.229	*	0.130
Coast (Highlands)	-0.180		0.128	-0.175		0.129	-0.180		0.128
Consensual Union (Married)	0.107		0.151	0.062		0.152	0.094		0.151
Couple's wealth (in thousands of USD)	0.000		0.001	0.001		0.001	0.000		0.001
Wife has extended family in hh	0.027		0.274	0.031		0.275	0.070		0.276
Husband has extended family in hh	-0.048		0.288	-0.051		0.291	-0.066		0.288
Ethnicity									
(Both mestizo/blanco)									
Both indigenous	0.350		0.258	0.342		0.260	0.328		0.260
Both other ethnicity	0.253		0.242	0.229		0.243	0.239		0.245
Different ethnicities	0.420		0.302	0.400		0.301	0.432		0.301
Previous Relationships									
(Neither in a previous relationship)									
Woman only has been in a previous relationship	0.096		0.235	0.073		0.238	0.077		0.236
Man only has been in a previous relationship	0.005		0.203	-0.023		0.202	-0.017		0.202
Both have been in a previous relationship	0.072		0.229	0.049		0.229	0.035		0.232
Who earns more									
(Man earns the most)									
Woman earns the most	0.419	*	0.214	0.418	*	0.217	0.449	**	0.216
Earn the same	0.225		0.185	0.260		0.186	0.269		0.185

Table 3-13. Continued

	(Baseline) Model I		Model II		Model III	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Disagree about earnings	-0.055	0.189	-0.022	0.189	-0.028	0.189
Assets & Wealth						
(Neither own real estate)						
Wife only owns real estate			0.003	0.223		
Husband only owns real estate			0.214	0.191		
Both own real estate			-0.221	0.153		
Woman's share of wealth					-1.353 **	0.648
Woman's share of wealth squared					0.994	0.660
Number of cases (n)	1757		1757		1757	
Likelihood ratio chi-square (df)	29.59 (19)*		34.89 (22)**		34.42 (21)**	
Pseudo R ²	0.015		0.018		0.018	

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

*p < 0.1, **p < 0.05, and ***p < 0.01

Table 3-14. Logistic regression results for models of autonomous decision-making for the decision to spend as reported by men; Ecuador, 2010

	(Baseline) Model I		Model II		Model III	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Intercept	-3.385 ***	0.397	-3.427 ***	0.400	-3.303 ***	0.425
Woman's age	0.018 ***	0.006	0.019 ***	0.006	0.018 ***	0.006
Age difference (man's age - woman's age)	0.004	0.010	0.005	0.010	0.004	0.010
Woman's years of schooling	0.009	0.018	0.009	0.018	0.009	0.018
Schooling difference (man - woman)	0.029	0.020	0.029	0.020	0.029	0.020
Rural (Urban)	-0.561 ***	0.149	-0.525 ***	0.151	-0.556 ***	0.149
Coast (Highlands)	0.458 ***	0.139	0.444 ***	0.140	0.459 ***	0.140
Consensual Union (Married)	0.177	0.160	0.154	0.162	0.171	0.161
Couple's wealth (in thousands of USD)	0.000	0.001	0.000	0.001	0.000	0.001
Wife has extended family in hh	-0.674 **	0.313	-0.712 **	0.318	-0.668 **	0.317
Husband has extended family in hh	0.291	0.326	0.300	0.326	0.289	0.326
Ethnicity						
(Both mestizo/blanco)						
Both indigenous	-0.212	0.320	-0.208	0.323	-0.217	0.320
Both other ethnicity	-0.876 ***	0.307	-0.891 ***	0.306	-0.875 ***	0.307
Different ethnicities	0.435	0.309	0.390	0.315	0.433	0.309
Previous Relationships						
(Neither in a previous relationship)						
Woman only has been in a previous relationship	-0.175	0.259	-0.196	0.258	-0.177	0.258
Man only has been in a previous relationship	-0.009	0.223	-0.002	0.222	-0.013	0.224
Both have been in a previous relationship	0.044	0.234	-0.004	0.233	0.033	0.236
Who is employed?						
(Husband only)						
Wife only	1.526 ***	0.350	1.523 ***	0.354	1.528 ***	0.351

Table 3-14. Continued

	(Baseline) Model I		Model II		Model III	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Both	1.982 ***	0.173	1.986 ***	0.175	1.986 ***	0.173
Neither	1.019 ***	0.344	1.015 ***	0.342	1.019 ***	0.344
Who earns more (Man earns the most)						
Woman earns the most	0.231	0.249	0.228	0.247	0.235	0.249
Earn the same	-0.128	0.208	-0.105	0.209	-0.120	0.208
Disagree about earnings	0.154	0.193	0.170	0.194	0.160	0.193
Assets & Wealth (Neither own real estate)						
Wife only owns asset(s)			0.388 *	0.227		
Husband only owns asset(s)			0.056	0.221		
Both own asset(s)			-0.114	0.170		
Woman's share of wealth					-0.398	0.751
Woman's share of wealth squared					0.337	0.741
Number of cases (n)	1649		1649		1649	
Likelihood ratio chi-square (df)	196.94 (22)***		197.08 (25)***		197.84 (24)***	
Pseudo R ²	0.143		0.146		0.144	

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

*p < 0.1, **p < 0.05, and ***p < 0.01

Table 3-15. Logistic regression results for models of women reporting autonomous decision-making for the decision to work and men agree; Ecuador, 2010

	(Baseline) Model I			Model II			Model III		
	Coeff. (β)		Robust Std. Err.	Coeff. (β)		Robust Std. Err.	Coeff. (β)		Robust Std. Err.
Intercept	-3.015	***	0.402	-2.999	***	0.403	-2.544	***	0.448
Woman's age	0.024	***	0.006	0.026	***	0.006	0.025	***	0.006
Age difference (man's age - woman's age)	0.004		0.012	0.005		0.012	0.003		0.012
Woman's years of schooling	0.011		0.022	0.008		0.022	0.012		0.022
Schooling difference (man - woman)	-0.013		0.024	-0.016		0.024	-0.015		0.025
Rural (Urban)	-0.609	***	0.175	-0.556	***	0.177	-0.600	***	0.176
Coast (Highlands)	-0.208		0.163	-0.213		0.164	-0.215		0.164
Consensual Union (Married)	0.312		0.193	0.240		0.194	0.277		0.192
Couple's wealth (in thousands of USD)	0.000		0.002	0.001		0.002	0.000		0.002
Wife has extended family in hh	-0.088		0.354	-0.098		0.357	-0.071		0.360
Husband has extended family in hh	0.049		0.362	0.068		0.364	0.041		0.362
Ethnicity									
(Both mestizo/blanco)									
Both indigenous	0.706	**	0.320	0.703	**	0.322	0.685	**	0.325
Both other ethnicity	-0.002		0.328	-0.043		0.329	-0.020		0.333
Different ethnicities	0.264		0.385	0.215		0.388	0.262		0.388
Previous Relationships									
(Neither in a previous relationship)									
Woman only has been in a previous relationship	0.198		0.295	0.161		0.298	0.168		0.295
Man only has been in a previous relationship	0.245		0.245	0.215		0.244	0.220		0.245
Both have been in a previous relationship	0.167		0.282	0.121		0.281	0.090		0.287
Who earns more									
(Man earns the most)									
Woman earns the most	0.772	***	0.250	0.764	***	0.255	0.807	***	0.253

Table 3-15. Continued

	(Baseline) Model I		Model II		Model III	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Earn the same	0.178	0.241	0.236	0.243	0.240	0.242
Disagree about earnings	0.146	0.228	0.194	0.228	0.187	0.228
Assets & Wealth						
(Neither own real estate)						
Wife only owns real estate			0.247	0.266		
Husband only owns real estate			0.309	0.236		
Both own real estate			-0.313	0.195		
Woman's share of wealth					-2.275 ***	0.804
Woman's share of wealth squared					2.031 **	0.818
Number of cases (n)	1757		1757		1757	
Likelihood ratio chi-square (df)	55.33 (19)***		63.12 (22)***		63.81 (21)***	
Pseudo R ²	0.038		0.045		0.044	

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

*p < 0.1, **p < 0.05, and ***p < 0.01

Table 3-16. Logistic regression results for models of women reporting autonomous decision-making for the decision to spend and men agree; Ecuador, 2010

	(Baseline) Model I			Model II			Model III		
	Coeff. (β)		Robust Std. Err.	Coeff. (β)		Robust Std. Err.	Coeff. (β)		Robust Std. Err.
Intercept	-4.098	***	0.455	-4.163	***	0.463	-4.071	***	0.487
Woman's age	0.019	***	0.006	0.021	***	0.007	0.020	***	0.006
Age difference (man's age - woman's age)	0.013		0.011	0.015		0.011	0.014		0.011
Woman's years of schooling	0.012		0.020	0.012		0.020	0.012		0.020
Schooling difference (man - woman)	0.021		0.023	0.021		0.022	0.021		0.023
Rural (Urban)	-0.728	***	0.175	-0.684	***	0.176	-0.716	***	0.176
Coast (Highlands)	0.585	***	0.154	0.565	***	0.154	0.578	***	0.155
Consensual Union (Married)	0.156		0.180	0.129		0.182	0.141		0.181
Couple's wealth (in thousands of USD)	-0.001		0.002	-0.001		0.002	-0.001		0.002
Wife has extended family in hh	-0.493		0.335	-0.527		0.340	-0.524		0.337
Husband has extended family in hh	0.387		0.346	0.405		0.345	0.395		0.346
Ethnicity									
(Both mestizo/blanco)									
Both indigenous	-0.263		0.384	-0.259		0.387	-0.260		0.385
Both other ethnicity	-0.555	*	0.325	-0.581	*	0.323	-0.551	*	0.324
Different ethnicities	0.149		0.369	0.082		0.376	0.138		0.370
Previous Relationships									
(Neither in a previous relationship)									
Woman only has been in a previous relationship	-0.046		0.276	-0.074		0.276	-0.053		0.275
Man only has been in a previous relationship	-0.128		0.243	-0.118		0.240	-0.123		0.244
Both have been in a previous relationship	0.206		0.257	0.144		0.255	0.179		0.259
Who is employed?									
(Husband only)									
Wife only	1.961	***	0.379	1.961	***	0.385	1.938	***	0.379

Table 3-16. Continued

	(Baseline) Model I		Model II		Model III	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Both	2.093 ***	0.209	2.098 ***	0.210	2.089 ***	0.208
Neither	1.244 ***	0.386	1.246 ***	0.384	1.241 ***	0.385
Who earns more						
(Man earns the most)						
Woman earns the most	0.147	0.264	0.144	0.264	0.155	0.265
Earn the same	-0.188	0.233	-0.152	0.234	-0.186	0.234
Disagree about earnings	0.254	0.202	0.279	0.203	0.258	0.202
Assets & Wealth						
(Neither own real estate)						
Wife only owns real estate			0.472 *	0.244		
Husband only owns real estate			0.143	0.245		
Both own real estate			-0.137	0.187		
Woman's share of wealth					-0.411	0.847
Woman's share of wealth squared					0.576	0.820
Number of cases (n)	1649		1649		1649	
Likelihood ratio chi-square (df)	173.33 (22)***		173.83 (25)***		173.39 (24)***	
Pseudo R ²	0.152		0.156		0.152	

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

*p < 0.1, **p < 0.05, and ***p < 0.01

Table 3-17. Logistic regression results for models of egalitarian decision-making for the decision to work; Ecuador, 2010

	(Baseline) Model I			Model II			Model III		
	Coeff. (β)		Robust Std. Err.	Coeff. (β)		Robust Std. Err.	Coeff. (β)		Robust Std. Err.
Intercept	-0.906	***	0.311	-0.911	***	0.312	-1.147	***	0.342
Woman's age	-0.009	*	0.005	-0.011	**	0.005	-0.009	*	0.005
Age difference (man's age - woman's age)	-0.011		0.009	-0.012		0.009	-0.011		0.009
Woman's years of schooling	0.025		0.016	0.026		0.016	0.025		0.016
Schooling difference (man - woman)	0.020		0.018	0.021		0.018	0.020		0.018
Rural (Urban)	0.319	***	0.123	0.267	**	0.126	0.299	**	0.123
Coast (Highlands)	0.206	*	0.120	0.210	*	0.122	0.223	*	0.121
Consensual Union (Married)	-0.190		0.138	-0.144		0.140	-0.147		0.139
Couple's wealth (in thousands of USD)	-0.001		0.001	-0.002		0.001	-0.001		0.001
Wife has extended family in hh	-0.213		0.274	-0.155		0.280	-0.124		0.280
Husband has extended family in hh	-0.071		0.268	-0.068		0.269	-0.073		0.269
Ethnicity									
(Both mestizo/blanco)									
Both indigenous	0.494	**	0.249	0.489	**	0.249	0.500	**	0.250
Both other ethnicity	0.053		0.241	0.055		0.242	0.055		0.242
Different ethnicities	-0.178		0.329	-0.119		0.335	-0.146		0.333
Previous Relationships									
(Neither in a previous relationship)									
Woman only has been in a previous relationship	-0.191		0.235	-0.162		0.236	-0.147		0.237
Man only has been in a previous relationship	-0.239		0.207	-0.232		0.207	-0.243		0.206
Both have been in a previous relationship	-0.269		0.238	-0.213		0.238	-0.181		0.240
Who earns more									
(Man earns the most)									
Woman earns the most	0.098		0.225	0.110		0.226	0.091		0.225
Earn the same	0.522	***	0.176	0.500	***	0.177	0.503	***	0.177
Disagree about earnings	-0.116		0.194	-0.135		0.195	-0.128		0.194

Table 3-17. Continued

	(Baseline) Model I		Model II		Model III	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Assets & Wealth						
(Neither own real estate)						
Wife only owns real estate			-0.432 *	0.247		
Husband only owns real estate			0.003	0.193		
Both own real estate			0.233	0.145		
Woman's share of wealth					1.754 ***	0.681
Woman's share of wealth squared					-2.162 ***	0.692
Number of cases (n)	1756		1756		1756	
Likelihood ratio chi-square (df)	36.69 (19)***		45.54 (22)***		48.22 (21)***	
Pseudo R ²	0.019		0.023		0.024	

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

*p < 0.1, **p < 0.05, and ***p < 0.01

Table 3-18. Logistic regression results for models egalitarian decision-making for the decision to spend and; Ecuador, 2010

	(Baseline) Model I		Model II		Model III	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Intercept	-2.117 ***	0.423	-2.083 ***	0.426	-2.562 ***	0.451
Woman's age	-0.018 ***	0.007	-0.022 ***	0.007	-0.019 ***	0.007
Age difference (man's age - woman's age)	-0.010	0.012	-0.011	0.013	-0.009	0.012
Woman's years of schooling	0.028	0.020	0.030	0.020	0.027	0.020
Schooling difference (man - woman)	0.032	0.022	0.035	0.022	0.032	0.022
Rural (Urban)	0.451 ***	0.157	0.352 **	0.162	0.419 ***	0.158
Coast (Highlands)	-0.443 ***	0.153	-0.456 ***	0.160	-0.437 ***	0.154
Consensual Union (Married)	-0.326 *	0.186	-0.252	0.191	-0.276	0.188
Couple's wealth (in thousands of USD)	0.000	0.002	-0.001	0.002	0.000	0.002
Wife has extended family in hh	-0.691 *	0.380	-0.646 *	0.385	-0.636 *	0.386
Husband has extended family in hh	0.052	0.358	0.087	0.351	0.058	0.358
Ethnicity						
(Both mestizo/blanco)						
Both indigenous	-0.751 **	0.319	-0.751 **	0.319	-0.720 **	0.319
Both other ethnicity	0.571 *	0.293	0.585 *	0.305	0.560 *	0.298
Different ethnicities	-0.353	0.442	-0.280	0.451	-0.362	0.448
Previous Relationships						
(Neither in a previous relationship)						
Woman only has been in a previous relationship	0.001	0.274	0.074	0.277	0.055	0.274
Man only has been in a previous relationship	-0.026	0.255	-0.001	0.257	-0.045	0.259
Both have been in a previous relationship	-0.126	0.342	0.045	0.340	0.006	0.347
Who is employed?						
(Husband only)						
Wife only	0.884 *	0.499	0.931 *	0.495	0.934 *	0.494

Table 3-18. Continued

	(Baseline) Model I		Model II		Model III	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Both	1.775 ***	0.192	1.779 ***	0.194	1.785 ***	0.192
Neither	0.703	0.463	0.748	0.466	0.707	0.467
Who earns more (Man earns the most)						
Woman earns the most	0.174	0.310	0.176	0.311	0.128	0.309
Earn the same	0.925 ***	0.207	0.881 ***	0.209	0.889 ***	0.209
Disagree about earnings	0.228	0.209	0.176	0.213	0.193	0.211
Assets & Wealth (Neither own real estate)						
Wife only owns real estate			-0.580	0.354		
Husband only owns real estate			-0.233	0.264		
Both own real estate			0.428 **	0.187		
Woman's share of wealth					2.539 ***	0.933
Woman's share of wealth squared					-2.633 ***	0.947
Number of cases (n)	1635		1635		1635	
Likelihood ratio chi-square (df)	193.43 (22)***		208.74 (25)***		197.54	
Pseudo R ²	0.153		0.163		0.158	

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

*p < 0.1, **p < 0.05, and ***p < 0.01

CHAPTER 4 LAND OWNERSHIP AND AGRICULTURAL DECISION-MAKING

Although land has been shown to be important for women's empowerment, few studies have explored how the form of women's land ownership (individual or joint) and other agricultural related assets are associated with their participation in agricultural decision-making. This may primarily be due to the way data is collected in large household surveys. Even when the data is collected (typically in small surveys), most gender analyses of land and agriculture focus on gender differences in productivity and/or efficiency but ignore the intra-household decision-making processes (which includes both how decisions are made within households and by whom) that may impact such differences. Furthermore, there is little information about how men's and women's perceptions regarding these issues differ. This chapter uses bargaining power theory to explore the relationship between agricultural decision-making and agricultural asset ownership by women. Bargaining power models of household decision-making suggest that asset ownership impacts bargaining power within the household. Thus, this chapter specifically focuses on the relationship between three measures of asset ownership—form of land ownership (individual or joint), agricultural equipment ownership, and wife's share of couple wealth—and agricultural decision-making within landowning households in which the wife is a landowner.

Gender and Agriculture

Little is known about the relationship between land ownership and agricultural decision-making by gender largely because of the lack of appropriate individual-level data on these variables. National agricultural censuses only collect data on the 'landholder,' implicitly assuming that on owner-operated farms the principal farmer is the

owner. While most of the Living Standard Measurement Studies (LSMS) surveys collect data on land tenure at the parcel level, these rarely ask who specifically in the household owns the plot. Moreover, information on farming practices in the LSMS surveys is gathered from only one person, the person who is considered to be the most knowledgeable or who reportedly makes the agricultural decisions, and at the farm rather than the plot level. It is thus difficult to establish if the landowner is, in fact, the person who manages the land parcel and who makes the majority of decisions regarding farm production. Furthermore, existing datasets rarely take into account that a land parcel might be jointly owned by a couple, that farm management might involve more than one person in the household, or that decision-making might vary according to the specific activity.

Until recently the relationship between women's ownership of land and decision-making had largely gone unexamined. Deere, Alvarado and Twyman (2012) explored this relationship with the LSMS datasets for Latin America and found these to be deficient for this task. Only two of the 167 questionnaires reviewed, for Honduras and Nicaragua, had collected data on both land ownership and farm management by sex. While data on land ownership was available at the parcel level, the information on the agricultural decision-maker was only gathered at the household level; moreover, detailed sex-disaggregated data was not gathered on any of the specific decisions that make up farm management. They found that women are a much lower share of the reported farm managers than of the parcel owners in both countries. Given the inappropriate way that data was gathered on decision-making it cannot be concluded

that female landowners do not always manage their own farms or are not involved in decision-making.

Land and Women's Empowerment

Although several studies have shown that land ownership empowers rural women, there are still several unanswered questions about the relationship between land ownership and empowerment. Empowerment is defined as “the process by which those who have been denied the ability to make strategic life choices acquire such an ability” (Kabeer 1999: 437). In her framework, Kabeer (1999) states that such choices require three inter-related and indivisible dimensions: resources, agency, and achievements. However, empowerment is often measured in terms of some outcomes (achievements) or agency, which is defined as “the ability to define one’s own goals and act upon them” (Kabeer 1999: 483), and is thus typically measured as participating in household decisions (either having the final say or participating in some way).

For example, some studies examine the relationship between women’s income and outcomes. Typically the outcome of interest is the change in household expenditure patterns. John Hoddinott and Lawrence Haddad (1995) found that as wives’ share of household income increased, the household budget share on food increased while that of alcohol and cigarettes decreased.

Other studies investigate the relationship between women’s asset ownership and a variety of outcomes. Land has often been the key asset of consideration since, as Agarwal (1994) argues, women’s land ownership is empowering because traditionally women have been denied land rights so that granting such rights gives them the ability to change existing power relations. Although Agarwal’s (1994) study was conducted in Southeast Asia, this line of reasoning has been used in other contexts/studies and it is

now a widely held belief that land is an important asset for empowering women. In Ghana, Cheryl Doss (2005) found that women's share of assets impact household expenditure patterns; and more specifically that as women's share of farmland increases, household food budgets also increase. In an econometric study of rural households in Nicaragua, Katz and Chamorro (2003) found that, holding other factors constant, female landowners administer a much larger share of household agricultural income than in farming households where women do not own land. Also Panda and Agarwal (2005) found that women who own land or housing are less likely to experience domestic violence than women who do not own such property. In Nepal, Keera Allendorf (2007) found that the children of women landowners are less likely to be severely underweight than the children of mothers who do not own land. And, in Brazil, Marrilee Mardon (2005) found that the children of lone mothers with land rights had higher levels of education than those without land rights.

Fewer studies link women's income and/or asset ownership directly to decision-making. When this link is made, it is typically about general household (or personal decisions) such as those typically asked in the DHS surveys: 1) their own healthcare, 2) large household purchases, 3) purchases for daily needs, and 4) visits to family and friends. For example, Allendorf (2007) found that women who own land in Nepal are more likely to have the final say in household decisions using these four decisions as an indicator.

However, there are even fewer studies that directly examine the link between asset ownership and decision-making related to the assets owned. The empowerment and bargaining power literature suggests that asset ownership will increase women's

say in household decisions but it does not tell us whether ownership will favor certain types of decisions over others.¹ It might be assumed that ownership of agricultural assets, such as land and agricultural equipment, would imply more say in agricultural decisions than in other areas; however, neither the bargaining power nor the empowerment frameworks makes this connection.

Furthermore there is a debate about whether joint or individual ownership is best for women's empowerment. This primarily comes out of the literature regarding land titling programs. While Agarwal (1994) argues for women's independent land rights, Deere and León (2001) contend that mandatory joint titling, which would reinforce the legal marital regime in many Latin American countries, could reduce inequalities in property ownership. Further support of joint titles is seen in Datta's (2006) study, which found that joint titling of homes empowered women in an urban setting of India. She claims that joint titles increased women's participation in household decisions as well as increased their security, access to knowledge, and self-esteem, all of which taken together indicate empowerment. Also Wiig (2012) finds that in Peru women in communities in which joint titling programs have occurred are more likely to participate in household decisions than women in communities with communal property. By examining how the form of ownership (either individual or joint) is related to the form of agricultural decision-making, our study will contribute to this debate.

Land and Development

Access to land has been shown to improve household welfare but the studies that find this typically ignore intra-household allocation issues and therefore fail to provide

¹ In an economic framework, the bargaining power theory may suggest that the types of decisions impacted by asset ownership will be determined by preferences (and utility maximization).

insight on how these intra-household relations are impacted by land ownership.

Frederico Finan, Elisabeth Sadoulet, and Alain de Janvry (2005) found that access to land significantly increases household earnings in rural Mexico. Furthermore, Agarwal (1994) citing Amartya Sen (1981) states that “a negative relationship between the incidence of absolute poverty and land access (owned or operated) has been noted in several studies; and landless laborers are found to be worse off than the near-landless during famines.” She goes on to explain that land directly impacts well-being through its productive capacity (it can provide food) and indirectly because it facilitates access to credit, can be sold or mortgaged during crises, and ownership of land (as well as other assets/wealth) strengthens support from family members.

Another major finding of Finan, Sadoulet, and de Janvry (2005) is that the welfare outcomes of access to land are likely dependent on access to complementary resources such as such as education and access to roads. The idea of complementary resources is quite compelling and could be expanded to include other resources such as key inputs (i.e. seeds, fertilizer, etc.), credit, and agricultural equipment. Although Finan, Sadoulet, and de Janvry (2005) use the household as the unit of analysis and thus ignore gender, others have considered gendered aspects of complementary resources. Ruth Meinzen-Dick et al. (2011) in their gender, assets, and agricultural programs (GAAP) framework, stress the importance of recognizing not only what resources women (and men) have access to and control over but also in which markets and other institutions they participate. Using this framework it is easy to identify that even women with land may not have the same access to input markets, credit, or agricultural equipment as do their male counterparts. This may explain the gender

differences in agricultural productivity that have been identified (discussed in more detail below).

In general, the literature on land and development ignores intra-household allocation issues and therefore does little to inform a gender analysis of land ownership and agricultural decision-making. The main question left unanswered is: Whose welfare within the household is improved by land ownership and how does it impact intra-household inequalities? Following the bargaining power framework, we argue that this depends on men's and women's relative bargaining power, which in turn is dependent on their relative wealth and asset ownership. This study will further explore this issue by directly examining how the form of women's land ownership, their ownership of agricultural equipment, and their share of wealth impacts agricultural decision-making. Although this does not directly answer the welfare question, it could be assumed that women who participate more in decisions will have greater welfare than those that do not since their preferences will be taken into account during the decision-making process.

Gender and Productivity

Much literature focuses on gender differences in agricultural productivity and efficiency, but typically ignores the intra-household decision-making processes that are likely to influence such gender differences. Women are often found to be less productive than men. For example, Stein Holden, Klaus Deininger, and Hosaena Ghebru (2011) found that female headed households were less productive than male headed households in Ethiopia. Amber Peterman, Agnes Quisumbing, Julia Behrman, and Ephraim Nkonya (2011) found lower productivity on female owned plots and in

female headed households (than male owned plots and male headed households) in Nigeria and Uganda.

However, these productivity differences are often attributed to gender differences in access to complementary resources such as irrigation, seed, chemical fertilizer, pesticides, extension services, etc. Hassan Aly and Michael Shields (2010) attributed women's lower productivity to a lack of access to irrigation and seeds. Robert Gilbert, Webster Sakala, and Todd Benson (2002) found that in Malawi when inputs were supplied to both men and women there were no productivity differences. In Zimbabwe, Sara Horrell and Pramila Krishnan (2007) found gender differences in productivity for cotton but not for maize or groundnuts once they controlled for input use. And, Addis Tiruneh, Teklu Tesfaye, Wilfred Mwangi, and Hugo Verkujl (2001) found that female headed households in Ethiopia had less gross output than male headed households and attributed the difference to limited input access by female headed households. Similarly Cheryl Doss and Michael Morris (2001) found that men and women adopt improved maize varieties and fertilizer at different rates due to differences in access to complementary resources such as land, labor, and extension services.

Many studies have shown that there is little difference in terms of men's and women's technical efficiency perhaps because they account for input differences (Peter Moock 1976, Akinwumi Adesina and Kouakou Djato 1997, Awoyemi Timothy and Adetola Adeoti 2006, and Arega Arlene, Victor Manyon, Gospel Omany, Hodeba Mignouna, Mpoko Bokanga, and George Odhiambo 2008). A few studies have found evidence of allocative inefficiencies within households (see Quisumbing 1996 for a review and Christopher Udry 1996). These imply that women's plots could be more

productive if they were farmed more intensively or in other words if more inputs (labor, fertilizer, etc.) were used on the women's plots. Such studies suggest a need for information about how resources are allocated within households.

Objectives

This chapter provides a first step in filling the gaps in the literature identified above. It examines the relationship between land ownership and farm management decisions. The main question of interest is: Is land ownership by women in dual headed households associated with their participation in agricultural decision-making? More specifically, the following questions will be addressed: 1) how likely are female land owners to be engaged in agricultural decision-making on their own plots; 2) is ownership of agricultural equipment associated with a greater likelihood of agricultural decision-making; 3) is the form of land and/or agricultural equipment ownership (either individual or joint) related to the likelihood that the woman will make the decisions alone or jointly; 4) what other factors (such as non-farm employment) are associated with women's active engagement in managing agricultural production; and 5) do men and women's perceptions about women's participation in agricultural decision-making differ?

Data

Data for the analyses presented in this chapter come from the EAFF 2012 individual questionnaire, which solicited information on the person's participation in major household and farm decisions, on their financial assets, and information related to marital and inheritance regimes.² The agricultural module included four questions

² In the case one of the partners had not been present for the household questionnaire, they were also asked in the individual questionnaire about the ownership and valuation of all of the assets which appeared in the household inventory as well as about any additional assets owned by someone in the household. For this analysis, the respondents' perceptions about land ownership and agricultural decision

regarding decision-making for each owned land parcel, referring to the previous 12 months: who in the household made the decision on what to plant; who made the decision on what inputs to use; if some of the harvest was sold, who made the decision on how much to sell; and who decided on how to spend the money generated from the sale.³ The question of “who” was asked in the plural in Spanish and space was provided for up to two people to be listed among those who made the decision. We also asked who in the household provided labor on the plot and who actually made the market sale.

Since Ecuador’s population is now largely urban, only 12.4% of households nationally reported that someone residing in the household owned land. Overall respondents provided information on a total of 513 owned land parcels. Of these, 29% were owned individually by men, 28.1% individually by women, 34.3% jointly by the principal couple, 2.0% jointly by other or all household members, and 6.6% were owned jointly by a household member with a non-household member.⁴

Since the bargaining power between spouses motivates the research, the subsequent analysis is restricted to those owned parcels whose owners are either married or in a consensual union. In such cases, we collected information on decision-making from both husbands and wives who were landowners. There are responses

making from the individual questionnaire are used but the agricultural equipment ownership variable and the wealth indicators were reconciled by considering both partners’ responses.

³ We also asked if anyone in the household had made an investment in land improvement in the past five years, and if so, who participated in this decision. Unfortunately, few such investments had been made. Only 15.7% of partnered men and 9.5% of partnered women reported having made any land improvements. Therefore, the responses to this question are not analyzed here.

⁴ These percentages are weighted, reflecting the sample expansion factors.

from landowning wives regarding 270 parcels.⁵ Of these, 85.9% were cultivated by someone in the household during the previous twelve months and thus decision-making information was collected. The final sample size for partnered women consists of decision-making on 228 owned parcels.⁶ Partnered men considered themselves owners of 295 parcels, of which 89.2% were reported as being cultivated by someone within the household in the last twelve months, giving a sample size of 261 parcels for partnered men.⁷ Then, considering whether both spouses reported agricultural decision-making on the same parcel, the sample is reduced to 180 parcels. We call this the paired sample since it includes the parcels reported on by the pair, both the husband and the wife, and as such is directly comparable.

Table 4-1 presents a cross-tabulation of the descriptive statistics of the data of interest as reported by the wife. First, note that while information on the decision on what to cultivate is provided for 228 agricultural plots, the number of observations then decreases for other decisions. Inputs were not used on over one-quarter of the plots reported on by women owners, and therefore they did not answer the question regarding who makes decisions on what inputs to use.⁸ Moreover, for half the parcels,

⁵ Responses to the agricultural decision-making module were restricted to those who answered that they were a landowner, owning land either individually or jointly with their spouse or another person. Wives and husbands did not always agree on the form of ownership of the parcel, thus comparable information on decision making is not available for those spouses who did not consider themselves to be a landowner; hence, male and female responses are not strictly comparable.

⁶ The final sample size was reduced from 232 to 228 due to non-responses on some of the decision-making questions and 2 plots that are reported as jointly owned by the woman and someone besides her spouse.

⁷ The final sample size was reduced from 263 to 261 due to non-response of some of the questions.

⁸ Unfortunately, it appears this question was interpreted as whether they used purchased inputs only, such as improved seed or inorganic fertilizer.

the decision on how much to sell was reported as not applicable, since none of the harvest of the previous year from that parcel was sold.

Considering the four decisions, irrespective of the type of plot ownership, partnered women landowners were least likely to participate in the decision regarding the use of the inputs (women had no say regarding 28.6% of the plots), and were most likely to participate in the decision about spending the income from crop sales from the plots which they owned (only 5.9% were not involved). The data presented in Table 4-1 show considerable variation, as expected, by type of decision and the form of ownership of the parcel.

On plots owned by partnered women, all four decisions were more likely to be made by women alone when women owned these parcels individually than when these were owned jointly with their partners, particularly the decisions regarding how much to sell and over the use of the proceeds from a sale. On the other hand, plots owned by women jointly with their partners were much more likely to be characterized by joint decision-making than those plots with sole female owners.

Models

The responses to the agricultural decision-making questions can be used to operationalize the term “farm management”. This is done by creating an index variable that takes into account each agricultural decision in which the household participates for each parcel. Four agricultural decisions were included in this index: what to plant/cultivate, what inputs to use, how much to sell, and how to spend the proceeds. Women’s participation includes her making the decision either alone or jointly; otherwise she is considered not to participate. Participation in a decision gives a score of one and non-participation a score of zero. The denominator is determined by the number of

decisions in which the household is reported as making (and is at least one because all households report making the cultivation decision). So, if a woman participates in the cultivation decision and selling decision but not the input use and spending decision she would get a score of 0.5 (two divided by four). If however, the household did not sell any of their harvest, they would only report on the cultivation and input use decision; in this example she would still get a score of 0.5 (one divided by two). Table 4-2 reports the frequency of the index scores, which range from zero (no participation—the wife does not participate in any of the agricultural decisions) to one (full participation—the wife is involved in every agricultural decision).⁹

Sub-samples and Dependent Variables

Note that three sub-samples are included in Table 4-2: 1) couples where both partners responded to the decision-making questions, 2) partnered women who responded, and 3) partnered men who responded. The person must have responded to the agricultural decision-making questions to be included in at least one of the sub-samples. So, they must have considered themselves an owner of the parcel and that someone in their household worked on the parcel in question. The design of the questionnaire had all others (i.e. non-land owning spouses) skip the agricultural decision-making questions. This limitation of the survey design is also the reason why only the paired sample is directly comparable; these are the only parcels on which both spouses reported how agricultural decisions were made (and as such both spouses consider themselves an owner even if they do not agree on who the owners are).

⁹ Note that the unit of analysis is the parcel; however, for clarity of prose the parcel level language is often excluded.

Women tend to report higher rates of participation for themselves than the men do about their wives. On average, women's responses indicate an index score of 0.75 while the men's index score for their wives' participation is lower at 0.69 in the paired sample. Similarly, 61% of women report full participation (an index score of one, meaning that they are participating in each decision that the household makes) while only 52% of men report that their wives fully participate (in the paired sample). In this sample, slightly more men report that their wives do not participate at all; 13% compared to 11% of the women. A chi-square test indicates that there are statistically significant differences in the distribution of men's and women's responses.

In the samples of all partnered men and women, the difference is even greater with 63% of women reporting full participation and only 44% of men reporting wives' full participation. Only 12% of partnered women report no participation but 25% of men report that their wives do not participate at all. However, this comparison comes with a caveat; most of these men and women are reporting about different parcels and the men reporting that their wives don't participate could include parcels that are not owned by the women, while all of the partnered women's responses are about parcels of which she considers herself an owner.

We ran two sets of index models; each set includes a model using the responses given by women and the other with responses given by men. First, the paired sample, which includes the parcels that both partners respond about agricultural decision-making, is used giving comparable results by gender. Second, another set of index models was run using all of the partnered men and women in separate models; these are not directly comparable since it refers to different parcels in the women's and the

men's models. These same samples of all partnered men and women were used in the logistic regression models of women's participation in the cultivation decision.

Independent Variables and Hypotheses

The key variables of interest are the form of land ownership, agricultural equipment ownership, women's share of wealth, whether the man or woman participates in field work on the plot, and whether either of them is employed off-farm. We would expect women who own land individually rather than jointly to be more involved in the decisions regarding their plots, if individual ownership is associated with a stronger fallback position and corresponding bargaining power within the household. We also include a variable indicating who within the household owns agricultural equipment; this includes everything from small agricultural tools like hoes and machetes to large equipment such as tractors and installations like barns or irrigation systems. While ownership of large agricultural equipment would imply a stronger fallback position; all types of agricultural equipment are complementary inputs for agricultural production and owners of any such equipment are likely to be participating in agricultural production. Thus it is hypothesized that women who own agricultural equipment are more likely to participate in agricultural decision-making. As with land ownership the form of agricultural equipment ownership, either joint or individual, may also be associated with how agricultural decisions are made.

Since the bargaining power framework posits that men's and women's relative positions are important for determining bargaining power, we also include the female share of couple wealth as a variable to measure their relative wealth positions. This variable is defined, as in the previous chapter, as the wife's wealth divided by the couple's wealth (husband's wealth plus wife's wealth). We would expect women's share

of couple wealth to be positively associated with their participation in decision-making. However, bargaining power theory does not indicate which decisions will be impacted so it is unclear how female share of couple wealth will be associated with agricultural decision-making.

As suggested in the literature on women's participation in agriculture in Latin America (see Deere and León 1982 and Brenda Kleysen and Fabiola Campillo 1996), we expect to find a positive association between women's direct involvement in fieldwork on their plots and their participation in decision-making. We also expect women's participation in decision-making to be positively related to their partner's participation in off-farm work, and negatively related to their participation in off-farm work.¹⁰

We also control for whether annual crops (vs. perennials, forage, or fruit trees) are grown on the parcel, couple's wealth, age, education, marital status, number of adults besides the principal couple in the household, ethnicity, and location. Couple's wealth is included as an indicator of their socio-economic status. Age and education variables include the wife's age and years of schooling and the difference between husband's and wife's age and schooling as other indicators of potential differences in their relative bargaining positions. Although the samples only include partners, a marital status variable that indicates whether the couple is married or in a consensual union is included to control for any possible differences that this might imply. The number of adults in the household besides the principal couple is included since if other adults are

¹⁰ Although we did not directly ask if the person was working off-farm, we assumed this to be the case if they reported working during the last year, did not report that they were an unpaid family laborer, and did not report working in an agricultural related occupation.

participating in agricultural decisions, the wife may be less likely to do so. We also control for ethnicity by including a dummy variable for whether the wife considers herself indigenous. Finally locational variables for rural/urban and Coast/Sierra are also included. The summary statistics all independent variables are presented in Tables 4-3 through 4-6 by the sub-sample considered.

Results

Tables 4-3 through 4-6 give the descriptive statistics. The average age of the partnered women in the samples is 51-53 and the average age difference between husbands and wives is about 4 years. On average, women have about 4 or 5 years of schooling (with a median of 6) and men have about 1 year more of schooling than their wives. There is about 1 other adult in the household besides the principal couple. On average couple wealth ranges from \$46,000-\$52,000 with a median of around \$18,000. Wives own about 41% to 50% of the couple's wealth on average; men report a lower share of wealth owned by women at 41%. This is likely because in the men's sample, the wives are typically not considered land owners but the husbands are while in the women's sample, all of the women consider themselves owners. The range for all samples considered is from about 0 to nearly 100%.

Table 4-6 presents the summary statistics for the categorical variables. In the paired sample, women report owning nearly 95% of the parcels jointly while 5% report individual ownership. The husbands in this sample report that their wives own 85% of the parcels jointly and the other 15% of the parcels are owned by the men alone. Considering all partnered women, 85% of the parcels are reported as jointly owned and 15% owned individually by women. And, considering all partnered men, 65% of the

parcels are owned jointly by the spouses while the other 35% are owned individually by the men (therefore husbands do not consider their wives owners of these plots).

In the paired sample, husbands report that crops are grown on 83% of their parcels while on the other 17% of parcels forages, perennials, or trees are grown. Similarly wives report that crops are grown on about 84% of their parcels. These percentages are slightly lower for the all partnered men and women samples; women report crops grown on 81.4% of their parcels while men report crops grown on 78% of their parcels.

Only one percent of parcels owned by those in the paired sample are owned by someone in a consensual union; 99% are owned by someone who is married. About 8% of the parcels are reported on by women in consensual unions when considering all partnered women. While 16% of parcels reported on by partnered men are owned by men in consensual unions. About 82% to 86% of parcels are reported on by rural residents; while about 14% to 18% of the parcels were owned by urban residents. Between 15% and 17% of the parcels are owned by coastal residents and the other 69% to 85% are owned by highland residents, which seems to indicate that there are more men than women who consider themselves land owners on the coast. Some 17% to 21% of the parcels were owned by indigenous women, while most were owned by those of other ethnicities (white, mestizo or AfroEcuadorian). About 9% to 12% of parcels are owned in households in which only the wife worked off-farm; while in many households (27% to 30%) only husbands worked off-farm, in 21% to 22% both worked off-farm, and in 39% to 43% neither worked off-farm.

In the paired sample, husbands and wives report similar levels of fieldwork participation. Women report that only the husband participates in fieldwork on about 28% of the parcels while men report that only they work on about 29%. Wives report that they alone participate in fieldwork on about 9% of the parcels while their husbands report that only the wife does fieldwork on about 6%. Husbands report a higher level of both doing fieldwork (65%) than do wives (63%). However, when looking at all partnered men and women we find more differences. The partnered women report that only the husband works on about 26% of the parcels, only the wives do fieldwork on 12%, they both work on about 60% and neither work on about 2%. All partnered men report that only husbands work on 40% of the parcels, only wives on 6% of the parcels, both on 53% of the parcels, and neither on about 1% of parcels.

In the paired sample only the husband owns agricultural equipment on about 29% of parcels, only the wife owns agricultural equipment on 5% of the parcels, both own agricultural equipment on about 52% of the parcels, and on 14% of parcels neither own agricultural equipment.¹¹ In the all partnered women sample, only husbands own agricultural equipment on 27% of the parcels, only wives on 7% of parcels, both on 52% of parcels, and neither on 13% of parcels. In the all partnered men sample, only husbands own agricultural equipment on 42% of parcels, only wives on 4% of parcels, both on 39% of parcels and neither on 14% of parcels.

¹¹ The reconciled/final agricultural equipment owners are used in this analysis; when there were disagreements about who the owners were, any owners reported by either spouse are considered owners.

Regression Results of the Paired Sample

Tables 4-7 through 4-11 give the various regression results of women's participation in agricultural decision-making. Each table presents 4 models; Model I is the baseline model which does not include any of the asset or wealth variables. Model II includes agricultural equipment ownership; Model III includes the female share of couple wealth; and finally Model IV includes both agricultural equipment ownership and female share of couple wealth. All four models are presented to illustrate that the results are stable; they do not change much with the different specifications and they illustrate the importance of including the asset and wealth variables.

Table 4-7 shows the ordinary least squares regression results of the index of women's participation in agricultural decision-making as reported by partnered women whose husband's also responded (the paired sample).¹² In Model I we find that women participate less in the decision-making when they are in a consensual union than when they are married (0.2 points less). Parcels on which only the wife participates in fieldwork are associated with a 0.6 point increase in women's participation in agricultural decision-making as compared to those parcels on which only the husband works. And, parcels on which both the husband and wife work have 0.5 point increase in women's participation as compared to those parcels on which only the husband works. None of the other variables are statistically significant at the 0.1 level.

Model II has similar results with the additional variable of the both owning agricultural equipment also being statistically significant. As in Model I women in

¹² These models include the joint land ownership variable. Alternative models that did not include this variable were also run and yielded similar results as those presented. (We included the joint land ownership variable because over 5% were still owned individually; and the variable is nearly significant with a p-value of about 0.15 (varies slightly by model).) Also, models of all partnered men and women were run with similar results as those presented.

consensual unions decrease participation by 0.2 points compared to married women. Only the wife participating in fieldwork is associated with an additional 0.63 points and both doing fieldwork is associated with a 0.5 point increase in women's participation compared to those parcels on which only husbands do fieldwork. Also, in this model we find that when both spouses own agricultural equipment, women are more likely to participate in agriculture decision-making (with a 0.1 point increase over those parcels on which only the husband owns agricultural equipment).

Model III, which includes the female share of couple wealth again has similar results. Women in consensual unions have an index score about 0.3 points lower than married women. The wife only participating in fieldwork is associated with a 0.6 point increase in the index, while both participating is associated with a 0.5 point increase over only the husband participating. The female share variable is negatively related to the wife's participation in decision-making; as the wife's share of couple wealth increases, her participation decreases.

Model IV includes both the agricultural equipment and female share variables. This model has similar results as those already discussed. Women in households in which both partners own agricultural equipment have a score of 0.1 points higher than those in households in which only the husband owns agricultural equipment, and the female share of couple wealth is again negatively associated with women's participation.

Table 4-8 reports the results of the index of women's participation in agricultural decision-making as reported by men in the paired sample; therefore, this table is directly comparable to the previous one. Model I results indicate that the following variables are

statistically significant for explaining women's index score for participation in agricultural decision-making: schooling difference, coast, neither working off-farm, wife only and both participating in fieldwork. As reported by men, a year increase in the difference between husband's and wife's years of schooling is associated with a 0.01 point decrease in her index score. Also, women living in the coastal region have a score 0.14 points lower than those in the highlands. When neither partner works off-farm the wife has a score 0.13 points less than when only the husband works off-farm. Only the wife doing fieldwork is associated with a score 0.6 points higher than when only the husband does fieldwork. And, both doing fieldwork is associated with 0.4 points more than only the husband doing fieldwork.

Model II gives similar results with the additional statistically significant variable of both owning agricultural equipment. Women in households in which both partners own agricultural equipment have an additional 0.1 points compared to women in households in which only the husband owns agricultural equipment. Models III and IV have similar results as those in Models I and II. Although in the women's model, the wife's share of couple wealth is negatively associated with her participation in agricultural decision-making, it is not statistically significant in the men's model.

Comparing Tables 4-7 and 4-8 we can see important similarities and differences in the results for the samples of paired men and women. Both suggest that women in households in which only the wife does fieldwork participate in agricultural decision-making more than in households in which only the husband does the fieldwork; and, that both doing fieldwork is associated with a higher index score than those where only the husband does fieldwork. Also, both the men's and women's results suggest that

both partners owning agricultural equipment is associated with a higher index score of about 0.1 points. This may suggest that both the husband and wife owning agricultural equipment is an indicator of the true farm family that makes egalitarian decisions.

Differences between the men's and women's model come about in terms of the following variables: consensual union, coast, neither working off-farm, and the female share of couple wealth. While the women's models suggest that women in consensual unions participate less in agricultural decision-making than do married women; in the men's models there were no statistically significant differences between women in consensual unions and marriages. Also, in the men's models, women on the coast had lower index scores than women in the highlands while no statistically significant differences existed in the women's models. Furthermore, the men's models suggest that women have lower index scores if neither partner worked off-farm as compared to when only the husband worked off-farm while this variable was not statistically significant for the women's models. And finally, the women's models suggest that the higher the wife's share of couple wealth, the lower the index score for women's participation in agricultural decision-making; however, this was not statistically significant for the men's models. This implies that women view their wealth share to impact their say in agricultural decisions but men do not. Overall, the differences suggest that men and women have different perceptions of women's participation in agricultural decision-making.

Regression Results of Women's Participation in the Cultivation Decision

Next, the cultivation decision is examined in more detail in order to more fully disentangle women's participation in a specific agricultural decision. The cultivation decision is examined because this is a decision made by all landowners in the sample

and it may be the most important decision the family farm makes especially in regards to a risky decision (Kleysen and Campillo 1996). Tables 4-9, 4-10 and 4-11 present these results; Table 4-9 gives the results of the logistic regression results of women's participation in the decision about what to cultivate as reported by women landowners. Table 4-10 presents the results of a multinomial of women's participation in the cultivation decision, this is done to see if there are differences between women making the decision alone or jointly (which are both considered participation in the logistic regression). Finally the binary logistic regression results reported by all partnered landowning women are compared to the results of all partnered men's perceptions of their wives participation in agricultural decision-making (Table 4-11).

As shown in Table 4-9 we find that joint land ownership and who participates in the fieldwork are predictors of women's participation in the cultivation decision for the women's sub-sample. Women who are joint owners are more likely than women who report individual ownership to participate in the cultivation decision. The multinomial logistic regression results in Table 4-10, show that joint landowners are more likely to make a joint decision than not participate in the decision-making process and that joint landowners are less likely to make the decision alone as compared to jointly. In other words, joint landowners are more likely to make a joint decision than to make the decision alone (and individual land owners are more likely to make the decision alone).

Furthermore, similarly to the index models, in the logit model we find that when the wife participates in fieldwork she is more likely to participate in the cultivation decision and when her husband participates in fieldwork she is less likely to participate in the

cultivation decision.¹³ The multinomial results further disentangle these differences.

When the wife does fieldwork she is more likely to make the decision alone or jointly as compared to not participating; but, there is no difference between her making the decision alone or jointly. Furthermore, the husband doing fieldwork is associated with women being less likely to make the decision alone than not participating and with her making the decision alone as compared to jointly. However, there is no statistically significant difference for women making the decision jointly or not participating when considering men doing fieldwork or not.

When only the wife owns agricultural equipment she is more likely to participate in the cultivation decision than when only the husband owns agricultural equipment. The multinomial results also indicate that women are more likely to make the decision either alone or jointly than not to participate; and, they are more likely to make the decision alone than jointly when they alone own agricultural equipment as compared to when their husbands alone own agricultural equipment.

Next, we present the men's logistic results of women's likelihood of participating in the cultivation decision. The results of the men's logistic model reported in Table 4-11 suggest that the following variables predict women's participation in the cultivation decision: joint land ownership, consensual union, number of adults besides the principal couple in the household, neither working off-farm, wife and husband doing fieldwork, and both owning agricultural equipment. The men's model indicates that women who

¹³ Notice that in the index models mutually exclusive household variables were used: only husband, only wife, both, and neither. However, in the logistic models of the cultivation decision, the wife only doing fieldwork perfectly predicted her participation in the cultivation decision and as such the model could not be estimated (by STATA). Therefore for the logistic regression models, these variables were reduced to two dummy variables; either the wife does fieldwork or not, and either the husband does fieldwork or not.

are joint owners are less likely than those who are not owners to participate.¹⁴ This is an unexpected result since we would expect that women landowners to be more likely to participate in agricultural decision-making; however, these results do not include all non-landowning women and therefore we cannot conclude that all women joint owners are less likely than all non-owning women to participate.

Women in consensual unions are less likely to participate in the cultivation decision than married women.¹⁵ Also, the number of adults in the household besides the principal couple is associated with lower likelihood of men reporting that their wives participate in the cultivation decision. This result was expected but it is interesting that it is only significant in the men's model and not the women's model. This suggests that men perceive other adult household members to be making the cultivation decision while women do not.

In terms of the asset and wealth variables, Models II and IV suggest that when both own agricultural equipment the wife is more likely to participate in the cultivation decision than when only men own agricultural equipment. This result is similar to the index models but different from the women's models of her participation in the cultivation decision. The women's models suggest that only women owning agricultural equipment is associated with an increased likelihood in women's participation of the cultivation decision (as compared to when only men own agricultural equipment). The wife's share of couple wealth is not statistically significant.

¹⁴ This variable is included differently in the two models because of the survey design; men and women were asked if they considered themselves an owner and only then did they precede to answer the agricultural decision making questions. Thus if the man reported that the wife was the only owner he did not answer who made the agricultural decisions.

¹⁵ Although this variable is not statistically significant at the 0.1 level in Models III and IV, it is still weakly significant with a p-value of about 0.12 in each of these models.

Model III indicates that indigenous women are more likely than non-indigenous women to participate in the cultivation decision. Neither spouse working off-farm is associated with women being less likely to participate in the cultivation decision than when only the husband works off-farm. And, like the women's model of participation in the cultivation decision, the men's model also suggests that women who do fieldwork are more likely to participate in the cultivation decision, while men's participation in fieldwork indicates a lower likelihood of women's participation in the cultivation decision.

Discussion and Concluding Thoughts

As shown in Table 4-1 most women landowners are involved in agricultural decision-making in Ecuador. Furthermore, there is a correlation between joint land ownership and joint decision-making as seen in the multinomial regression results for the decision about what to cultivate. However, in terms of the index of wife's participation in agricultural decision-making there was no difference between joint and individual land owners. Although the results of the men's perceptions about their wives participation in the cultivation decision suggests that women who are joint landowners are less likely than non-owners to participate in the cultivation decision, this does not compare all non-landowning women to all landowning women. A limitation of this study is that the agricultural decision-making questions were not asked of non-land owners, which would be needed to fully address the question of whether land ownership impacts how agricultural decisions are made.

In all models, agricultural equipment ownership (either by only the wife or by both spouses) was associated with women's participation in agricultural decision-making. In the index model, a woman who owns equipment along with her husband is more likely to participate in agricultural decision-making than a woman whose husband alone owns

agricultural equipment. Furthermore, for the cultivation decision both the men's and women's logistic models indicate that a wife who alone owns agricultural equipment is more likely than a woman whose husband alone owns agricultural equipment to make the decision either alone or jointly than not to participate. She is also more likely to make the decision alone than jointly. These results indicate the importance of complementary asset ownership. In fact, it may be that agricultural equipment ownership in some way defines who farmers are and thus who is making the agricultural decisions.

Another important correlate to female participation in agricultural decision-making is her participation in fieldwork. Women who do fieldwork are highly likely to be making agricultural decisions. Interestingly, the wife's share of couple wealth was either not significant (men's index model and all cultivation decision models) or negatively associated with women's participation in agricultural decision-making (women's index model). As discussed in Chapter 3, this variable was statistically significant and positively associated with egalitarian decision-making for the work and spending decisions. The negative relationship with women's participation in agricultural decision-making may indicate that as women's share of wealth increases, women may prefer to use any additional bargaining power in other ways. More research is needed to further explore this issue.

Land is an important resource and land ownership has been linked to development and poverty alleviation. However, past studies largely ignored the intra-household and gender aspects of land and agricultural decision-making. Agricultural related studies that do focus on gender tend to examine the gender differences in productivity and

efficiency but do not focus on who is making the decision so the underlying processes that lead to such differences are ignored. This paper used a bargaining power framework to explore the gendered relationship between form of land ownership and form of agricultural decision-making in order to directly address the question of whether who owns land is important to decision-making. The results presented in this chapter indicate that while the form of land ownership (joint or individual) generally did not impact women's participation in agricultural decision-making, it did make a difference in terms of how women participated in the cultivation decision; women who were joint owners were more likely to make the cultivation decision jointly while women who owned land individually were more likely to make the decision alone.

One important contribution of the research presented in this chapter, is that it uses individual level data about both land ownership and agricultural decision-making to explore the relationship between asset ownership (land and agricultural equipment) and farm management. This chapter highlights the importance of recognizing that owners and decision makers are not always the same. As shown in this chapter, although there is a correlation between ownership and decision-making it is not a perfect correlation; some non-owners participate in decision-making and some owners do not.

Furthermore, the differences between the men's and women's models indicate that predictors of women's participation in decision-making vary depending on who reported the information, men or women. This is an important result in terms of perceptions; as explained in Chapter 1, the husband's and wife's perceptions are important factors in determining bargaining power. Interestingly, it seems that they have different perceptions of what factors influence wives' participation in agricultural

decision-making. More research is needed in this area to examine how differences in perceptions may relate to disagreements about women's participation in decision-making.

Table 4-1. The participation of partnered female landowners in agricultural decisions by type of ownership and level of participation in decision-making as reported by partnered landowning women

		Form of Ownership		
		Individual Owner	Joint Owner	Total
Wife's participation in cultivation decision	Alone	47.4%	12.1%	17.7%
	Joint	25.8%	66.4%	60.0%
	No participation	26.8%	21.5%	22.3%
	Total	100.0%	100.0%	100.0%
	n =	35	193	228
Wife's participation in input use decision	Alone	45.1%	18.3%	23.0%
	Joint	24.5%	53.5%	48.4%
	No participation	30.4%	28.2%	28.6%
	Total	100.0%	100.0%	100.0%
	n =	27	137	164
Wife's participation in selling decision	Alone	58.7%	7.8%	14.7%
	Joint	22.6%	67.4%	61.3%
	No participation	18.7%	24.8%	24.0%
	Total	100.0%	100.0%	100.0%
	n =	15	100	115
Wife's participation in spending decision	Alone	66.9%	16.2%	23.1%
	Joint	26.1%	78.1%	71.0%
	No participation	7.0%	5.7%	5.9%
	Total	100.0%	100.0%	100.0%
	n =	15	100	115

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 4-2. Composition (percent) of sample of partnered women and men in each level of the index of women's participation in agricultural decision-making, Ecuador 2010

	Paired sample: both spouses report agricultural decision-making, n = 180		All self-reported landowners	
	Partnered women	Partnered men	Partnered women, n = 231	Partnered men, n = 261
No participation - 0.0	10.6	12.8	12.1	24.5
0.3	6.7	8.9	6.5	9.2
0.3	1.7	2.8	1.3	2.7
0.5	12.2	13.9	10.8	11.9
0.7	3.3	1.1	2.6	0.8
0.8	4.4	8.3	3.5	6.9
Full participation - 1.0	61.1	52.2	63.2	44.1
Total	100%	100%	100%	100%
Pearson Chi-Square	171.8***			

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 4-3. Descriptive statistics for continuous variables of paired sample, Ecuador 2010

	n	Minimum	Maximum	Mean	Std. dev.	Median
Wife's age	180	23	82	52.68	12.524	53
Husband's age	180	23	90	57.07	12.725	58.5
Age Difference	180	-7	29	4.39	5.479	3
Wife's Years of schooling	180	0	18	4.47	3.624	5
Husband's years of schooling	180	0	18	5.69	3.973	6
Difference in years of schooling	180	-9	12	1.22	3.364	0
Number of adults in household (besides principal couple)	180	0	6	1.039	1.266	1
Couple's wealth (thousands USD)	180	0.369	619	52.09	93.641	18.05
Wife's share of couple's wealth	180	0.014	1	0.478	0.152	0.499

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 4-4. Descriptive statistics for continuous variables of sample of parcels reported on by partnered women who report on agricultural decision-making, Ecuador 2010

	n	Minimum	Maximum	Mean	Std. dev.	Median
Wife's age	231	23	82	51.91	12.701	53
Husband's age	231	23	90	56.24	12.880	56
Age Difference	231	-7	29	4.32	5.415	3
Wife's Years of schooling	231	0	18	4.78	3.977	6
Husband's years of schooling	231	0	19	5.77	4.051	6
Difference in years of schooling	231	-12	12	1.00	3.350	0
Number of adults in household (besides principal couple)	231	0	6	1.11	1.267	1
Couple's wealth (thousands USD)	231	0.3595	619	46.19	84.608	17.34
Wife's share of couple's wealth	227	0.014	1	0.502	0.180	0.499

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 4-5. Descriptive statistics for continuous variables of sample of parcels reported on by partnered men who report agricultural decision-making, Ecuador 2010

	n	Minimum	Maximum	Mean	Std. dev.	Median
Wife's age	261	18	82	51.35	13.241	52
Husband's age	261	19	90	55.95	13.988	57
Age Difference	261	-10	29	4.60	5.683	4
Wife's Years of schooling	261	0	18	4.90	3.851	6
Husband's years of schooling	261	0	18	5.74	4.036	6
Difference in years of schooling	261	-9	12	0.84	3.480	0
Number of adults in household (besides principal couple)	261	0	6	0.96	1.212	1
Couple's wealth (thousands USD)	259	0.369	619	49.74	92.422	18.395
Wife's share of couple's wealth	261	0	1	0.41	0.214	0.493

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 4-6. Descriptive statistics for categorical variables, composition (percent) of samples, Ecuador 2010

	Paired sample (n = 180)	Partnered Women (n = 231)	Partnered Men (n = 261)
Wife is joint owner (individual owner)--reported by women	94.4%	84.7%	-
Wife is joint owner (not an owner)--reported by men	85.0%	-	64.8%
Crop grown on parcel (as compared to perennials, forage, or trees)—reported by women	83.9%	81.4%	-
Crop grown on parcel (as compared to perennials, forage, or trees)—reported by men	83.3%	-	78.2%
Consensual Union (marriage)	1.1%	8.2%	16.1%
Rural (Urban)	86.1%	84.9%	82.4%
Coast (Sierra)	15.0%	16.5%	30.7%
Wife is indigenous (Wife not indigenous)	20.6%	18.6%	16.9%
Off-farm Employment			
Husband only	26.7%	29.9%	27.2%
Wife only	9.4%	8.7%	12.3%
Both	20.6%	22.1%	19.2%
Neither	43.3%	39.4%	41.4%
<i>Total</i>	<i>100.0%</i>	<i>100.0%</i>	<i>100.0%</i>
Who participates in fieldwork--reported by women			
Husband only	28.3%	26.4%	-
Wife only	8.9%	11.7%	-
Both	62.8%	60.2%	-
Neither	0.0%	1.7%	-
<i>Total</i>	<i>100.0%</i>	<i>100.0%</i>	<i>-</i>
Who participates in fieldwork--reported by men			
Husband only	28.9%	-	39.9%
Wife only	6.1%	-	6.1%
Both	65.0%	-	53.3%
Neither	0.0%	-	0.8%
<i>Total</i>	<i>100.0%</i>	<i>-</i>	<i>100.0%</i>
Who owns agricultural equipment?			
Husband only	29.4%	27.3%	42.2%
Wife only	5.0%	7.4%	4.2%
Both	51.7%	52.0%	39.1%
Neither	13.9%	13.4%	14.6%
<i>Total</i>	<i>100.0%</i>	<i>100.0%</i>	<i>100.0%</i>

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Table 4-7. Ordinary least squares regression results for models of the index of women's participation in agricultural decision-making (as reported by women in the paired sample); Ecuador, 2010

	(Baseline) Model I		Model II		Model III		Model IV	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Intercept	0.325	0.203	0.341	0.207	0.460 **	0.216	0.490 **	0.218
Wife is joint land owner (individual owner)	0.135	0.105	0.147	0.117	0.128	0.106	0.137	0.119
Annual crop (perennial/forage/fruit trees)	0.019	0.056	-0.002	0.055	0.009	0.056	-0.013	0.055
Couple's wealth (in thousands of USD)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wife's age	-0.002	0.002	-0.003	0.002	-0.002	0.002	-0.003	0.002
Age Difference (husband - wife)	0.000	0.003	-0.001	0.003	0.000	0.003	-0.001	0.003
Wife's years of schooling	-0.004	0.006	-0.006	0.006	-0.003	0.006	-0.005	0.006
Schooling difference (husband - wife)	-0.001	0.007	-0.004	0.007	-0.001	0.007	-0.004	0.006
Consensual union (marriage)	-0.199 *	0.117	-0.214 *	0.111	-0.255 ***	0.089	-0.275 ***	0.085
Number of adults (besides principal couple) in the household	0.006	0.015	0.006	0.015	0.007	0.014	0.007	0.015
Rural (Urban)	0.051	0.073	0.062	0.075	0.048	0.074	0.057	0.077
Coast (Sierra)	-0.066	0.067	-0.072	0.065	-0.076	0.064	-0.086	0.061
Wife is indigenous (not indigenous)	0.027	0.041	0.021	0.042	0.018	0.041	0.009	0.042
Off-farm employment (Husband only)								
Wife only	0.091	0.070	0.107	0.074	0.091	0.071	0.110	0.075
Both	0.015	0.053	0.052	0.056	0.028	0.054	0.068	0.059
Neither	-0.041	0.046	-0.028	0.046	-0.026	0.047	-0.008	0.048
Participates in fieldwork (Husband only)								
Wife only	0.622 ***	0.064	0.630 ***	0.064	0.640 ***	0.063	0.650 ***	0.064
Both	0.523 ***	0.060	0.504 ***	0.061	0.536 ***	0.059	0.515 ***	0.059

Table 4-7. Continued

	(Baseline) Model I		Model II		Model III		Model IV	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Assets & Wealth (Husband only owns agricultural equipment)								
Wife only owns agricultural equipment			-0.047	0.066			-0.020	0.068
Both own agricultural equipment			0.096 **	0.045			0.109 **	0.046
Neither own agricultural equipment			0.068	0.075			0.074	0.073
Woman's share of wealth					-0.609 *	0.326	-0.681 **	0.328
Woman's share of wealth squared					0.486	0.315	0.536	0.324
Number of cases (n)	180		180		180		180	
F Statistic (df)	18.80 (17)***		18.42 (20)***		33.59 (19)***		110.27 (22)***	
Adjusted R^2	0.5956		0.610		0.605		0.621	

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

* $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$

Table 4-8. Ordinary least squares regression results for models of the index of women's participation in agricultural decision-making (as reported by men in the paired sample); Ecuador, 2010

	(Baseline) Model I		Model II		Model III		Model IV	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Intercept	0.453 **	0.185	0.515 ***	0.177	0.389 *	0.198	0.456 **	0.190
Wife is joint land owner (not an owner)	-0.021	0.046	-0.036	0.048	-0.046	0.051	-0.059	0.053
Annual crop (perennial/forage/fruit trees)	0.018	0.062	-0.009	0.060	0.025	0.061	-0.002	0.059
Couple's wealth (in thousands of USD)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wife's age	0.000	0.002	-0.001	0.002	0.000	0.002	-0.001	0.002
Age Difference (husband - wife)	0.003	0.004	0.000	0.004	0.003	0.004	0.001	0.004
Wife's years of schooling	-0.008	0.008	-0.010	0.008	-0.008	0.008	-0.011	0.008
Schooling difference (husband - wife)	-0.013 *	0.007	-0.016 **	0.007	-0.013 *	0.007	-0.015 **	0.007
Consensual union (marriage)	-0.185	0.152	-0.177	0.110	-0.126	0.177	-0.123	0.131
Number of adults (besides principal couple) in the household	-0.009	0.018	-0.017	0.019	-0.008	0.018	-0.015	0.019
Rural (Urban)	0.003	0.065	0.021	0.062	-0.005	0.065	0.013	0.063
Coast (Sierra)	-0.141 *	0.082	-0.154 **	0.082	-0.157 *	0.083	-0.169 **	0.083
Wife is indigenous (not indigenous)	0.067	0.051	0.049	0.051	0.079	0.052	0.061	0.052
Off-farm employment (Husband only)								
Wife only	0.089	0.078	0.095	0.075	0.083	0.080	0.089	0.077
Both	0.021	0.062	0.065	0.061	0.018	0.061	0.062	0.060
Neither	-0.132 **	0.059	-0.118 *	0.060	-0.134 **	0.058	-0.120 **	0.060
Participates in fieldwork (Husband only)								
Wife only	0.603 ***	0.063	0.652 ***	0.069	0.605 ***	0.064	0.652 ***	0.070
Both	0.439 ***	0.060	0.425 ***	0.060	0.426 ***	0.062	0.414 ***	0.062

Table 4-8.Continued

	(Baseline)	Model I	Model II	Model III	Model IV	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Assets & Wealth (Husband only owns agricultural equipment)						
Wife only owns agricultural equipment			-0.073	0.095		
Both own agricultural equipment			0.115 **	0.055		
Neither own agricultural equipment			-0.020	0.080		
Woman's share of wealth					0.206	0.407
Woman's share of wealth squared					0.049	0.357
Number of cases (n)	180		180		180	
F Statistic (df)	15.02 (17)***		16.38 (20)***		13.15 (19)***	
Adjusted R^2	0.482		0.507		0.491	

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

*p < 0.1, **p < 0.05, and ***p < 0.01

Table 4-9. Logistic regression results for models of women's participation in the decision about what to cultivate (as reported by women--sample of all partnered women); Ecuador, 2010

	(Baseline) Model I		Model II		Model III		Model IV	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Intercept	1.014	1.793	0.145	1.907	1.778	2.151	1.135	2.182
Wife is joint land owner (individual owner)	0.978 **	0.487	0.894 *	0.497	0.993 *	0.550	0.917	0.574
Annual crop (perennial/forage/fruit trees)	0.058	0.548	0.265	0.563	-0.024	0.559	0.184	0.581
Couple's wealth (in thousands of USD)	0.002	0.002	0.001	0.002	0.002	0.002	0.001	0.002
Wife's age	-0.012	0.023	-0.013	0.025	-0.008	0.023	-0.009	0.025
Age Difference (husband - wife)	-0.033	0.040	-0.022	0.042	-0.032	0.041	-0.020	0.044
Wife's years of schooling	0.013	0.076	0.013	0.080	0.015	0.076	0.017	0.078
Schooling difference (husband - wife)	-0.008	0.093	-0.023	0.094	-0.013	0.090	-0.029	0.091
Consensual union (marriage)	1.385	1.026	1.452	1.203	1.293	1.096	1.273	1.273
Number of adults (besides principal couple) in the household	0.032	0.163	0.052	0.161	0.053	0.168	0.071	0.162
Rural (Urban)	-0.640	0.767	-0.716	0.867	-0.711	0.823	-0.797	0.939
Coast (Sierra)	-0.720	0.703	-0.853	0.787	-0.740	0.675	-0.924	0.750
Wife is indigenous (not indigenous)	0.977	0.892	0.716	0.832	0.871	0.863	0.553	0.802
Off-farm employment (Husband only)								
Wife only	0.262	0.750	0.658	0.771	0.318	0.763	0.780	0.757
Both	-0.316	0.772	-0.146	0.837	-0.157	0.803	0.076	0.874
Neither	-0.509	0.575	-0.162	0.617	-0.366	0.586	0.026	0.592
Participates in fieldwork								
Wife (not wife)	3.658 ***	0.506	3.681 ***	0.562	3.729 ***	0.488	3.807 ***	0.546
Husband (not husband)	-1.814 ***	0.658	-1.667 **	0.667	-1.797 ***	0.644	-1.614 **	0.636

Table 4-9. Continued

	(Baseline) Model I		Model II		Model III		Model IV	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Assets & Wealth (Husband only owns agricultural equipment)								
Wife only owns agricultural equipment			2.019 **	0.927			2.125 **	1.048
Both own agricultural equipment			0.671	0.526			0.748	0.538
Neither own agricultural equipment			1.084	0.765			1.227	0.781
Woman's share of wealth					-3.605	4.664	-5.292	4.765
Woman's share of wealth squared					2.776	4.088	4.358	4.309
Number of cases (n)	228		228		225		225	
Likelihood ratio chi-square (df)	90.47 (17)***		104.47 (20)***		97.92 (19)***		106.06 (22)***	
Pseudo R ²	0.4693		0.483		0.470		0.486	

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

*p < 0.1, **p < 0.05, and ***p < 0.01

Table 4-10. Multinomial logistic regression results for models of women's participation in the decision about what to cultivate (as reported by women--sample of all partnered women); Ecuador, 2010

	Model IV					
	Alone (None)		Joint (None)		Alone (Joint)	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Intercept	7.698 **	3.642	0.146	2.184	7.552 **	3.515
Wife is joint land owner (individual owner)	-1.295 *	0.779	1.169 *	0.627	-2.464 ***	0.639
Annual crop (perennial/forage/fruit trees)	-1.265	0.796	0.305	0.558	-1.570 **	0.687
Couple's wealth (in thousands of USD)	0.005	0.004	0.001	0.002	0.004	0.004
Wife's age	-0.014	0.038	-0.008	0.025	-0.006	0.033
Age Difference (husband - wife)	-0.084	0.081	-0.012	0.045	-0.072	0.075
Wife's years of schooling	-0.055	0.117	0.020	0.077	-0.075	0.107
Schooling difference (husband - wife)	0.094	0.183	-0.037	0.091	0.131	0.169
Consensual union (marriage)	2.336	1.556	1.147	1.350	1.190	1.360
Number of adults (besides principal couple) in the household	-0.005	0.298	0.118	0.158	-0.124	0.286
Rural (Urban)	-1.743	1.532	-0.666	0.967	-1.077	1.247
Coast (Sierra)	-5.170 ***	1.638	-0.613	0.768	-4.557 ***	1.538
Wife is indigenous (not indigenous)	-0.606	1.124	0.638	0.800	-1.244	0.901
Off-farm employment						
Wife (not wife)	-0.530	1.116	0.491	0.517	-1.021	0.987
Husband (not husband)	0.329	0.799	-0.335	0.448	0.664	0.731
Participates in fieldwork						
Wife (not wife)	4.243 ***	1.457	3.689 ***	0.549	0.553	1.412
Husband (not husband)	-4.790 ***	1.016	-1.181	0.721	-3.609 ***	0.956
Assets & Wealth						
(Husband only owns agricultural equipment)						
Wife only owns agricultural equipment	4.544 ***	1.680	1.466	1.028	3.078 **	1.214
Both own agricultural equipment	-0.024	0.970	0.812	0.552	-0.836	0.834
Neither own agricultural equipment	0.083	1.411	1.370 *	0.762	-1.287	1.259

Table 4-10. Continued

	Alone (None)		Model IV Joint (None)		Alone (Joint)	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Woman's share of wealth	-10.898	9.667	-5.188	4.626	-5.710	8.717
Woman's share of wealth squared	8.489	7.738	4.165	4.318	4.324	6.791
Number of cases (n)			225			
Wald chi-square (df)			156.82 (42)***			
Pseudo R ²			0.4876			

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

*p < 0.1, **p < 0.05, and ***p < 0.01

Table 4-11. Logistic regression results for models women's participation in the decision about what to cultivate (as reported by men--sample of all partnered men); Ecuador, 2010

	(Baseline) Model I		Model II		Model III		Model IV	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Intercept	2.024	1.972	3.273	2.329	1.574	1.998	2.892	2.328
Wife is joint land owner (not owner)	-0.601	0.466	-1.065 **	0.469	-1.109 **	0.552	-1.480 ***	0.553
Annual crop (perennial/forage/fruit trees)	0.066	0.476	-0.241	0.522	0.075	0.504	-0.293	0.555
Couple's wealth (in thousands of USD)	-0.001	0.002	-0.002	0.002	-0.001	0.002	-0.001	0.002
Wife's age	0.006	0.023	-0.009	0.023	0.006	0.023	-0.009	0.024
Age Difference (husband - wife)	0.012	0.044	0.009	0.049	0.024	0.043	0.025	0.049
Wife's years of schooling	-0.043	0.085	-0.087	0.092	-0.051	0.090	-0.091	0.098
Schooling difference (husband - wife)	-0.008	0.073	-0.057	0.075	-0.014	0.079	-0.056	0.081
Consensual union (marriage)	-1.414 *	0.773	-1.546 *	0.864	-1.218	0.774	-1.363	0.875
Number of adults (besides principal couple) in the household	-0.335 **	0.149	-0.359 **	0.159	-0.311 **	0.151	-0.327 **	0.157
Rural (Urban)	0.407	0.484	0.306	0.503	0.315	0.478	0.176	0.513
Coast (Sierra)	-0.515	0.567	-0.465	0.541	-0.574	0.606	-0.547	0.570
Wife is indigenous (not indigenous)	1.114	0.761	0.769	0.676	1.462 *	0.834	1.091	0.740
Off-farm employment (Husband only)								
Wife only	-0.195	0.564	-0.032	0.584	-0.228	0.608	-0.027	0.623
Both	-0.310	0.531	0.076	0.545	-0.406	0.540	0.043	0.565
Neither	-1.391 ***	0.466	-1.120 **	0.523	-1.546 ***	0.462	-1.264 **	0.520

Table 4-11. Continued

	(Baseline) Model I		Model II		Model III		Model IV	
	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.	Coeff. (β)	Robust Std. Err.
Participates in fieldwork								
Wife (not wife)	3.236 ***	0.451	3.301 ***	0.508	3.376 ***	0.470	3.467 ***	0.513
Husband (not husband)	-2.484 **	0.988	-2.954 **	1.185	-2.628 **	1.081	-3.091 **	1.264
Assets & Wealth								
(Husband only owns agricultural equipment)								
Wife only owns agricultural equipment			0.693	0.764			0.832	0.730
Both own agricultural equipment			1.662 ***	0.501			1.697 ***	0.518
Neither own agricultural equipment			0.551	0.789			0.625	0.768
Woman's share of wealth					1.485	2.897	0.319	2.988
Woman's share of wealth squared					1.525	3.062	2.856	3.174
Number of cases (n)	259		259		259		259	
Likelihood ratio chi-square (df)	97.93 (17)***		93.90 (20)***		96.17 (19)***		93.52 (22)***	
Pseudo R ²	0.466		0.501		0.487		0.521	

Source: UF-FLACSO 2010 Ecuador Household Asset Survey

Notes: Reference categories given in parentheses

*p < 0.1, **p < 0.05, and ***p < 0.01

CHAPTER 5 CONCLUSION

This dissertation has examined the intra-household distribution of asset ownership and wealth as well as its relationship to how decisions are made within households. It does so by using individual level, sex-disaggregated data, which up until now has not been widely available, particularly nationally representative data. The main objectives of this dissertation have been to address the four gaps identified in the literature regarding women's empowerment and bargaining power within their households. As explained in the Introduction, the first gap was that many past studies linked resources to welfare outcomes without considering the decision-making processes that were assumed to precede such changes in welfare outcomes. Second, resources oftentimes were measured as income or occasionally as either access to or ownership of land. Third, the resources considered were limited to women's resources instead of the distribution of resources within the household even though the bargaining power model suggests spouses' relative positions are important. And fourth, even studies that directly examined the link between resources and decision-making typically focus only on women's autonomous decision-making or their participation without considering other ways in which household decisions may be made.

The main contribution of this dissertation has been linking the intra-household distribution of assets and wealth to various decisions and the ways in which they are made within the household. By doing so we have been able to address each of the four gaps discussed above. First, the direct link between resources (assets and wealth) has been examined instead of focusing on welfare outcomes. Second, we have used asset ownership and wealth instead of income as the main resources of interest. Third, by

focusing on the intra-household distribution of assets and wealth we have focused on the relative positions of the spouses instead of only focusing on women's resources. And finally, we have considered various decisions regarding the household and farm, and forms of decision-making: autonomous, egalitarian, and women's participation (either individually or jointly), as well as the perceptions of both men and women.

These issues have been explored in three essays. The first essay focused on the gender distribution of housing, an important asset in the composition of wealth in Latin America. It analyzed the factors that explain homeownership and housing wealth by gender. It showed that although there is gender equality in terms of homeownership and housing wealth in Ecuador, there are gendered differences in terms of the factors associated with the likelihood of homeownership and the factors associated with the amount of housing wealth. Overall it seems that men's and women's housing acquisition strategies differ. Oftentimes it is assumed that women accumulate assets, and particularly housing, through their relationships with men. Our results do not negate this assumption but they suggest that women may use other strategies for housing acquisition as well. For example, the results indicate that women are more likely to use international migration as a strategy for acquiring a home than men.

Other key differences between the factors associated with men's and women's likelihood of homeownership and amount of housing wealth includes whether the person receives the conditional cash transfer (*bono*), which is associated with an increased probability of homeownership for women but not for men and is associated with lower housing wealth for both men and women. Education is related to greater

housing wealth for both men and women but has a bigger impact on men's housing wealth than women's.

Marital status also seems to be an important indicator of homeownership and housing wealth; while those in a consensual union are less likely to be homeowners they have similar amounts of housing wealth as those who are married. Those who are single, widowed, divorced, or separated are all less likely to be homeowners than married people. These results indicate the importance of marriage in acquiring a home. They also suggest the importance of the marital regime since many of these homeowners are joint owners with their spouse. On the other hand married people tend to have less housing wealth than people of all other marital statuses. For homeowners, household dissolution seems to be increasing their housing wealth. However, taking the homeownership and housing wealth results together, we speculate that one spouse is gaining from household dissolution (due to separation or divorce) and the other is losing out. One spouse is likely to acquire the entire home and housing wealth while the other is no longer a homeowner (and thus not considered in the housing wealth models presented in Chapter 2).

The second essay examined how the intra-household distribution of assets and wealth were related to how decisions were made. Two key decisions were examined: the decision of whether or not to work and the decision about how to spend one's own money. Similar to previous research (see Kishor and Subaiya 2008) regarding women's participation in decision-making, we found that the predictors of decision-making varied by the decision being considered, by the form of decision-making (women's autonomous decision-making or couple's egalitarian decision-making), and by the

perceptions of men and women. Older women are more likely to make autonomous decisions and less likely to make egalitarian decisions. Women in rural areas are less likely than their urban counterparts to make autonomous decisions and couples residing in rural areas are more likely to make egalitarian decisions.

Only the wife owning real estate is associated with her autonomous decision-making and both owning real estate is associated with egalitarian decision-making. Similarly, women are more likely to make an autonomous decision when she earns more than her husband and couples who earn about the same are more likely to make egalitarian decisions than couples where the husband earns the most. Furthermore, while egalitarian decisions are most likely when the wife owns just under half the couple's wealth, autonomous decision-making by women are least likely at this level. Overall, the results of this essay support the hypotheses that the intra-household distribution of assets and wealth is associated with household decision-making; the wife only owning assets is related to her autonomous decision-making and a fairly equal distribution of wealth is associated with egalitarian decision-making processes.

The third essay investigated the relationship between the intra-household distribution of assets and wealth and agricultural decision-making. This chapter specifically dealt with women landowners' participation in agricultural decision-making. First, women's participation was measured in terms of an index based on four agricultural decisions. And second, women's participation was examined in more detail by focusing on the decision about what to cultivate, the main decision carried out by landowning households. Both of these measures were modeled separately according to

the responses given by men and women and thus give an idea of their differences in perceptions.

In this chapter we discovered that the form of women's land ownership (individual or joint) is not related to the index of women's participation in agricultural decision-making but is related to how the cultivation decision is made; women who owned land jointly are more likely to make the decision jointly while women who own land individually are more likely to make the decision individually. Both owning agricultural equipment was associated with women's participation in agricultural decision-making. More specifically, when only women owned agricultural equipment, they were more likely to make the agricultural decision about what to cultivate alone while when both partners owned agricultural equipment women were more likely to make the decision jointly.

One of the other main results from this chapter is that if a woman is engaged in fieldwork on her own land parcel, then she is highly likely to also be making the decisions regarding that parcel. Furthermore, we found some differences between the men's and women's models indicating that the results depend on the gender of the respondent. Such differences indicate the usefulness of collecting individual, sex disaggregated data from both men and women.

In both Chapters 2 and 3, we found that the intra-household distribution of assets, in terms of who owns assets (real estate and agricultural equipment), is an important explanatory factor in how couples make decisions regarding who works, how income is spent, and agricultural production. We found that the wife only owning real estate was associated with women's autonomous decision-making regarding work and spending

one's own income, both owning real estate was associated with egalitarian decision-making, and both owning agricultural equipment was associated with women's participation in agricultural decision-making.

Furthermore Chapters 2 and 3 explored the importance of the relative wealth positions of husbands and wives. In Chapter 2 we found that the wife's share of couple wealth is associated with egalitarian decision-making. The highest probability of egalitarian decision-making was found to be when women own approximately 41% to 48% of the couple's wealth depending on the decision under consideration (and holding all else constant). Also, as expected, women are least likely to make autonomous decisions when they own 33% to 68% of couple wealth, a range that includes the range of female share where the couple is most likely to make an egalitarian decision. These results indicate that households in which the woman owns more of the wealth, she is likely to make the decisions alone and in households in which wealth is distributed fairly equally, the couple will likely make egalitarian decisions. This supports the idea that relative positions of men and women are important in the bargaining power model of household decision-making.

The results of the agricultural decision-making chapter (Chapter 3) are not so clear cut. The most confounding results are 1) that according to male landowners in a couple, wives who are not also owners are more likely than women who are joint owners to make decisions regarding their husbands' parcels; and 2) the woman's share of couple wealth is not strongly correlated with agricultural decision-making and if anything there is a negative relationship, which suggests that as the wife's share increases, the likelihood of her participation in making the decision declines. These results may

suggest that women without property rights (the non-owners) feel a need to exercise a claim over their husbands' property and they do so by participating in the management of that parcel. On the other hand, women may be expressing a choice about which household decisions they participate in; and agriculture may not be the preferred arena of decision-making. However, more research is needed to further test these hypotheses; first, by collecting agricultural decision-making data from all men and women in land owning households regardless of whether they own the parcel, and second, by specifically asking women and men about the household decisions in which they most want or do not want to participate.

The equal distribution of housing within Ecuador (as shown in Chapter 1) and the fact that on average women own about 50% of couple's wealth suggest that the partial community property regime and its enforcement are generating gender equality in terms of property rights in Ecuador. The partial community property marital regime is being supported by policies that enforce this marital regime. For example, the double signature policy in Ecuador helps ensure that property (housing, land, other real estate, and stocks) is considered joint property when it is sold.

Further research is warranted in other countries with the partial community property marital regime to see what processes are contributing to the gender differences in property ownership and/or the different patterns of the form of ownership. As explained by Deere, Alvarado, and Twyman (2012), South American countries with the same marital regime exhibit a large range of joint homeownership rates by couples. More research is needed to assess what makes Ecuador and Argentina (see Table 2-1) unique in terms of joint homeownership; is it that these countries have mechanisms in

place to enforce the marital regime (such as the double signature) that other countries lack. Or, perhaps homes are more likely to be inherited or acquired while single in other countries while in Ecuador they are more likely to be acquired during marriage or in a consensual union.

The main limitation faced throughout this dissertation was that of potential endogeneity. Since asset ownership and wealth are likely to impact and be impacted by decision-making, it is difficult to determine the direction of causality. Does intra-household distribution of assets and wealth impact how decisions are made or does how decisions are made impact the intra-household distribution of assets and wealth? We acknowledge that it likely works both ways and because of this we cannot assess the impact of the intra-household distribution of assets and wealth on household decision-making processes. The most we are able to say is that there is a relationship or association between these variables. Further research is needed in this area; first to find sufficient instruments or other methods for determining the impacts and second to measure those impacts.

Overall, we have shown the importance of collecting individual, sex-disaggregated data about asset ownership and wealth. The results of this dissertation have shown that the intra-household distribution of assets and wealth are important indicators of how household decisions are made. It has also shown that it matters who you ask about how household decisions are made since the estimated coefficients in the models differ based on men's and women's responses. Furthermore, by collecting sex-disaggregated data about decision-making and the intra-household distribution of assets and wealth,

we have been able to directly examine the relationships between how couples make decisions and how assets and wealth are distributed between them.

LIST OF REFERENCES

- Adesina, Akinwumi and Kouakou Djato. 1997. "Relative Efficiency of Women as Farm Managers: Profit Function Analysis in Cote d'Ivoire." *Agricultural Economics* 16: 47-53.
- Agarwal, Bina. 1994. *A Field of One's Own: Gender and Land Rights in South Asia*. Cambridge: Cambridge University Press.
- Agarwal, Bina. 1997. "'Bargaining' and Gender Relations: Within and Beyond the Household." *Feminist Economics* 3(1): 1-51.
- Allendorf, Keera. 2007. "Do Women's Land Rights Promote Empowerment and Child Health in Nepal?" *World Development* 35(11): 1975-1988.
- Aly, Hassan and Michael Shields. 2010. "Gender and Agricultural Productivity in Surplus Labor, Traditional Economy: Empirical Evidence from Nepal." *The Journal of Developing Areas* 43(2): 111-124.
- Anderson, Krystal. 2012. "Who Goes Home: Return Migrant Decision-Making and the Impacts of Ecuador's Plan *Bienvenid@s a Casa*," Master's thesis, Latin American Studies, University of Florida: Gainesville.
- Anderson, Siwan and Mukesh Eswaran. 2009. "What Determines Female Autonomy? Evidence from Bangladesh." *Journal of Development Economics* 90: 179-191.
- Argudo, Veronica. 2012. "The Contribution of Growth and Declining Inequality to Poverty Reduction in Ecuador," Honor's thesis, Department of Economics, Tulane University: New Orleans.
- Arlene, Arega, Victor Manyong, Gospel Omany, Hodeba Mignouna, Mpoko Bokanga, and George Odhiambo. 2008. "Economic Efficiency and Supply Response of Women as Farm Managers: Comparative Evidence from Western Kenya." *World Development* 36(7): 1247-1260.
- Becker, Stan, Fannie Fonseca-Becker, and Catherine Schenck-Yglesias. 2006. "Husbands' and Wives' Reports of Women's Decision-making Power in Western Guatemala and their Effects on Preventive Health Behaviors." *Social Science and Medicine* 62: 2313-2326.
- Caner, Asena and Edward Wolff. 2004. "Asset Poverty in the United States, 1984-99: Evidence from the Panel Study of Income Dynamics." *Review of Income and Wealth* 50(4): 493-518.
- Carter, Michael and Elizabeth Katz. 1997. "Separate Spheres and the Conjugal Contract: Understanding the Impact of Gender-Biased Development." In L. Haddad, J. Hoddinott, and H. Alderman (eds.), *Intrahousehold Resource*

- Allocation in Developing Countries: Methods, Models, and Policies*. Baltimore, MD: John Hopkins University Press, pp. 95-111.
- CEPAR (Centro de Estudios de Población y Desarrollo Social). 2005. *Encuesta Demográfica y de Salud Materna e Infantil 2004* (ENDEMAIN 2004). Quito: CEPAR.
- Chiuri, Maria Concetta and Tullio Jappelli. 2003. "Financial Market Imperfections and Home Ownership: A Comparative Study." *European Economic Review* 47: 857-875.
- Coleman, Diane H. and Murray A. Straus. 1990. "Marital Power, Conflict, and Violence in a Nationally Representative Sample of American Couples." In Murray A. Straus and Richard J. Gelles (eds.), *Physical Violence in American Families*. New Brunswick, NJ: Transaction Publishers, pp. 287-304.
- Contreras, Jacqueline. 2010. "Mujeres, Activos y el Ciclo de Vida: Apuntes sobre la Provincia de Azuay." Working Paper. Gender and Culture Program. Quito: FLACSO-Ecuador.
http://www.flacsoandes.org/web/imagesFTP/14121.Ciclo_vida_Clase_media_Contreras.pdf. Accessed on July 10, 2012.
- Datta, Namita. 2006. "Joint Titling—A Win-Win Policy? Gender and Property Rights in Urban Informal Settlements in Chandigarh, India." *Feminist Economics* 12 (1-2): 271-298.
- Deere, Carmen Diana. 2010a. "Mujeres, Activos y el Ciclo de Vida: Apuntes sobre Tres Cantones de la Provincia de Pichinca." Working Paper. Gender and Culture Program. Quito: FLACSO-Ecuador.
http://www.flacsoandes.org/web/imagesFTP/14136.PICHINCHA_CicloVida_version_19_de_septiembre.pdf. Accessed July 10, 2012.
- Deere, Carmen Diana. 2010b. "Mujeres, Activos y el Ciclo de Vida: Apuntes sobre los Derechos de Propiedad y la Clase Media en Ecuador." Working Paper. Gender and Culture Program. Quito: FLACSO-Ecuador.
http://www.flacsoandes.org/web/imagesFTP/14124.Ciclo_vida_Clase_media_Deere.pdf. Accessed July 10, 2012.
- Deere, Carmen Diana and Cheryl Doss. 2006. "The Gender Asset Gap: What Do We Know and Why Does It Matter?" *Feminist Economics*, 12(1-2): 1-50.
- Deere, Carmen Diana and Jackeline Contreras. 2011. *Acumulacion de activos: una apuesta por la equidad*. FLACSO, Quito, pp. 46.
- Deere, Carmen Diana and Magdalena León. 1982. *Women in Andean Agriculture: Peasant Production and Rural Wage Employment in Colombia and Peru*. Geneva: International Labour Office.

- Deere, Carmen Diana and Magdalena León. 2001. *Empowering Women: Land and Property Rights in Latin America*. Pittsburg, PA: University of Pittsburg Press.
- Deere, Carmen Diana and Jennifer Twyman. 2012. "Asset Ownership and Egalitarian Decision-making in Dual-headed Households in Ecuador." *Review of Radical Political Economics*, 44 (3). Forthcoming.
- Deere, Carmen Diana, Gina Alvarado, and Jennifer Twyman. 2012. "Gender Inequality in Asset Ownership in Latin America: Female Owners versus Household Heads" *Development and Change*, 43(2): 505-530.
- Deere, Carmen Diana, Jacqueline Contreras, and Jennifer Twyman. 2010. "Property Rights and Women's Accumulation of Assets Over the Life Cycle: Patrimonial Violence in Ecuador." *ALASRU (Asociación Latinoamericana de Sociología Rural). Análisis latinoamericano del medio rural. Nueva época*. 5: 135-176.
- Dietz, Robert and Donald Haurin. 2003. "The Social and Private Micro-Level Consequences of Homeownership." *Journal of Urban Economics* 54: 401-450.
- Doss, Cheryl. 2005. "The Effects of Intrahousehold Property Ownership on Expenditure Patterns in Ghana." *Journal of African Economies* 15(1): 149-180.
- Doss, Cheryl and Michael Morris. 2001. "How Does Gender Affect the Adoption of Agricultural Innovations? The Case of Improved Maize Technology in Ghana." *Agricultural Economics* 25: 27-39.
- Ellis, Frank. 1988. *Peasant Economics: Farm Households and Agrarian Development*. Cambridge: Cambridge University Press.
- Fay, Marianne and Caterina Ruggeri Laderachi. 2005. "Relying on One's Self: Assets of the Poor." In Fay, Marianne (ed.), *The Urban Poor in Latin America*. Washington D.C.: World Bank.
- Finan, Frederico, Elisabeth Sadoulet, and Alain de Janvry. 2005. "Measuring the Poverty Reduction Potential of Land in Rural Mexico." *Journal of Development Economics* 77: 27-51.
- FLACSO-UNFPA (Facultad Latinoamericana de Ciencias Sociales-United Nations Population Fund). 2008. *Ecuador: La Migración Internacional en Cifras*. Quito: FLACSO.
- Flake, Dallan F. and Renata Forste. 2006. "Fighting Families: Family Characteristics Associated with Domestic Violence in Five Latin American Countries." *Journal of Family Violence* 21 (1): 19-29.

- Flippen, Chenoa. 2001. "Racial and Ethnic Inequality in Homeownership and Housing Equity." *The Sociological Quarterly* 42(2): 121-149.
- Friedemann-Sánchez, Greta. 2008. "Assets in Intrahousehold Bargaining among Women Workers in Colombia's Cut-Flower Industry." *Feminist Economics* 12(1-2): 247-269
- Gandelman, Néstor (2008). "Female-headed households and homeownership in Latin America," Inter-American Development Bank, Latin American Research Network, Washington D.C.
- Gilbert, Alan. 1999. "A home is forever? Residential mobility and homeownership in self-help settlements." *Environment and Planning A* 31: 1073-1091.
- Gilbert, Robert, Webster Sakala, and Todd Benson. 2002. "Gender Analysis of a Nationwide Cropping System Trial Survey in Malawi." *African Studies Quarterly* 6(1-2): 223-243.
- Hamilton, Sarah. 1998. *The Two-Headed Household: Gender and Rural Development in the Ecuadorean Andes*. Pittsburgh: University of Pittsburgh Press.
- Haurin, Donald R. and Stuart S. Rosenthal. 2007. "The influence of household formation on homeownership rates across time and space." *Real Estate Economics*, 35(4), 411-460.
- Haurin, Donald R., Christopher E. Herbert, and Stuart S. Rosenthal. 2007. "Homeownership gaps among low-income and minority households." *Cityscape: A Journal of Policy Development and Research*, 9(2), 5-51.
- Hoddinott, John and Lawrence Haddad. 1995. "Does Female Income Share Influence Household Expenditures? Evidence from Cote d'Ivoire." *Oxford Bulletin of Economics and Statistics* 57(1): 77-96.
- Holden, Stein, Klaus Deininger, and Hosaena Ghebru. 2011. "Tenure Insecurity, Gender, Low-Cost Land Certification and Land Rental Market Participation in Ethiopia." *Journal of Development Studies* 47(1): 31-47.
- Horrell, Sara and Pramila Krishnan. 2007. "Poverty and Productivity in Female-Headed Households in Zimbabwe." *Journal of Development Studies* 43(8): 1351-1380.
- Jejeebhoy, Shireen J. 2002. "Convergence and Divergence in Spouses' Perspectives on Women's Autonomy in Rural India." *Studies in Family Planning* 33 (4): 299-308.
- Jokisch, Brad. 2007. "Ecuador: Diversity in Migration." *Migration Information Source*. Retrieved July 1, 2012. (<http://www.migrationinformation.org/USfocus/display.cfm?ID=575>).

- Kabeer, Naila. 1999. "Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment." *Development and Change* 30: 435-464.
- Katz, Elizabeth. 1991. "Breaking the Myth of Harmony: Theoretical and Methodological Guidelines to the Study of Rural Third World Households." *Review of Radical Political Economics* 23(3 & 4): 37-56.
- Katz, Elizabeth. 1997. "The Intra-Household Economics of Voice and Exit." *Feminist Economics* 3(3): 25-46.
- Katz, Elizabeth and Juan Sebastian Chamorro. 2003. "Gender, Land Rights, and the Household Economy in Rural Nicaragua and Honduras." Paper presented at the annual conference of the Latin American and Caribbean Economics Association, Puebla, Mexico, October.
- Kishor, Sunita and Lekha Subaiya. 2008. "Understanding Women's Empowerment: A Comparative Analysis of Demographic and Health Surveys (DHS) Data." DHS Comparative Reports No. 20. Calverton, MD: Macro International Inc.
- Kleysen, Brenda and Fabiola Campillo. 1996. "Productoras de Alimentos en 18 Países de América Latina y el Caribe: Síntesis Hemisférica." In B. Kleysen (ed.), *Productoras Agropecuarias en América del Sur*. San José, Costa Rica: BID and IICA, pp. 37-114.
- Long, James and Steven Caudill. 1992. "Racial Differences in Homeownership and Housing Wealth, 1970-1986." *Economic Inquiry* 30(1): 83-100.
- Lundberg, Shelly and Robert Pollack. 1994. "Noncooperative Bargaining Models of Marriage." *The American Economic Review* 84(2): 132-137.
- Manser, Marilyn and Murray Brown. 1980. "Marriage and Household Decision-Making: A Bargaining Analysis." *International Economic Review* 21(1): 31-44.
- Mardon, Merrilee. 2005. "Three Essays on Gender, Land Rights and Collective Action in Brazil's Rural Political Economy," PhD dissertation, Economics Department, University of Massachusetts: Amherst.
- McElroy, Marjorie and Mary Jean Horney. 1981. "Nash-Bargained Household Decisions: Towards a Generalization of the Theory of Demand." *International Economic Review* 22(2): 333-349.
- Miraftab, Faranak. 1998. "Complexities of the Margin: Housing Decisions by Female Householders in Mexico." *Environment and Planning D: Society and Space* 16: 289-310.

- Miraftab, Faranak. 2001. "Risks and Opportunities in Gender Gaps to Access Shelter: A Platform for Intervention." *International Journal of Politics, Culture and Society* 15(1): 143-160.
- Moock, Peter. 1976. "The Efficiency of Women as Farm Managers: Kenya." *American Journal of Agricultural Economics* 58(5): 831-835.
- Myers, Samuel and Chanjin Chung. 1996. "Racial Differences in Home Ownership and Home Equity Among Preretirement-Aged Households." *The Gerontologist* 36(3): 350-360.
- Oropesa, R.S. 1997. "Development and Marital Power in Mexico." *Social Forces* 75 (4): 1291-1318.
- Panda, Pradeep and Bina Agarwal. 2005. "Marital violence, human development and women's property status in India." *World Development* 33(5), 823-850.
- Peterman, Amber, Agnes Quisumbing, Julia Behrman, and Ephraim Nkonya. 2011. "Understanding the Complexities Surrounding Gender Differences in Agricultural Productivity in Nigeria and Uganda." *Journal of Development Studies* 47(10): 1482-1509.
- Quisumbing, Agnes. 1996. "Male-Female Differences in Agricultural Productivity: Methodological Issues and Empirical Evidence." *World Development* 24(10): 1579-1595.
- Quisumbing, Agnes. 2010. "Gender and Household Decision-Making in Developing Countries: A Review of Evidence," in Sylvia Chant ed. *The International Handbook of Gender and Poverty: Concepts, Research, Policy*, pp. 161-166. Cheltenham: Edward Elgar.
- Quisumbing, Agnes and John Maluccio. 2003. "Resources at Marriage and Intra-household Allocation: Evidence from Bangladesh, Ethiopia, Indonesia, and South Africa." *Oxford Bulletin of Economics and Statistics* 65(3): 283-327.
- Robinson, Judith. 2002. "Race, Gender, and Familial Status: Discrimination in One US Mortgage Lending Market." *Feminist Economics* 8(2): 63-85.
- Rowlands, Jo. 1997. *Questioning Empowerment: Working with Women in Honduras*. Atlantic Highlands, N.J.: Humanities Press International.
- Schmidt, Lucie and Purvi Sevak. 2006. "Gender, Marriage, and Asset Accumulation in the United States." *Feminist Economics* 12(1-2): 139-166.

- Sedo, Stanley A. and Kossoudji, Sherrie A. (2004). "Rooms of One's Own: Gender, race and home ownership as wealth accumulation in the United States," IZA Discussion Paper. Institute for the Study of Labor (IZA), Bonn, Germany, pp. 38.
- Sen, Amartya. 1981. *Poverty and Famines: An Essay on Entitlement and Deprivation*. Oxford: Clarendon Press.
- Sen, Amartya. 1990. "Gender and Cooperative Conflict," in Irene Tinker, ed. *Persistent Inequalities*, pp. 123-149. New York: Oxford University Press.
- Sierminska, Eva, Joachim Frick, and Markus Grabka. 2010. "Examining the gender wealth gap." *Oxford Economic Papers* 62: 669-690.
- Timothy, Awoyemi and Adetola Adeoti. 2006. "Gender Inequalities and Economic Efficiency: New Evidence from Cassava-Based Farm Holdings in Rural South-Western Nigeria." *African Development Review* 18(3): 428-443.
- Tiruneh, Addis, Teklu Tesfaye, Wilfred Mwangi, and Hugo Verkuil. 2001. *Gender Differentials in Agricultural Production and Decision-Making Among Smallholders in Ada, Lume, and Gimbichu Woredas of the Central Highlands of Ethiopia*. Mexico, D.F.: International Maize and Wheat Improvement Center (CIMMYT) and Ethiopian Agricultural Research Organization (EARO).
- Torche, Florencia and Spilerman, Seymour (2008). "Household wealth in Latin America." In: James B. Davies (Ed.), *Personal wealth from a global perspective*. Oxford University Press, New York.
- Townsend, Janet, Pilar Alberti, Marta Mercado, Jo Rowlands, and Emma Zapata. 1999. *Women and Power: Fighting Patriarchies and Poverty*. London: Zed.
- Twyman, Jennifer. 2010. "Género, Activos y Ciclo de Vida: Una Comparación de Cinco Cantones de la Provincia de Manabí de Ecuador." Working Paper. Gender and Culture Program. Quito: FLACSO-Ecuador.
http://www.flacsoandes.org/web/imagesFTP/14840.Jennifer_Twyman.pdf.
 Accessed July 10, 2012.
- Udry, Christopher. 1996. "Gender, Agricultural Production, and the Theory of the Household." *The Journal of Political Economy* 104(5): 1010-1046.
- Valentine, Gill. 1999. "Doing Household Research: Interviewing Couples Together and Apart." *Area* 31 (1): 67-74.
- Wiig, Henrik. 2012. "Do joint land titles induce Peruvian women to take part in decision-making?" Paper presented at 2012 Latin American Studies Association (LASA) International Congress, San Francisco, CA, May 23-26, 2012.

Yamokoshi, Alexis and Lisa Keister. 2006. "The Wealth of Single Women: Marital Status and Parenthood in the Asset Accumulation of Young Baby Boomers in the United States." *Feminist Economics* 12(1-2): 167-194.

BIOGRAPHICAL SKETCH

Jennifer Twyman received her Bachelor of Science and Master of Science degrees in agricultural economics from the University of Missouri-Columbia in 2002 and 2005 respectively. During her undergraduate career she minored in Spanish and international agriculture while also taking classwork focusing on environmental issues. Her master's thesis focused on the adoption of manure management practices in the Midwest (Missouri and Iowa). She also conducted research on the adoption of integrated natural resource management technologies in western Kenya. After spending a year working for the Missouri State Auditor's Office doing economic evaluations of state programs, she pursued a PhD in the Food and Resource Economics department at the University of Florida where she specialized in international development and natural resource and environmental economics. She also obtained certificates in Latin American studies and tropical conservation and development. Jennifer's dissertation analyzes the intra-household distribution of assets and wealth in Ecuador. As part of her doctoral program, she spent the 2009-2010 academic year as a visiting scholar at FLACSO-Ecuador assisting in the fieldwork and data collection for the Poverty, Assets, and Gender Inequality project.