Control and Ownership of Assets Within Rural Ethiopian Households

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Abstract

This paper investigates how the control and devolution of productive assets are allocated among husband and wife. Theory predicts that bargaining power within marriage depends on the division of assets upon divorce and on control over assets during marriage. Using detailed household data from rural Ethiopia, we show that assets brought to marriage, ownership of assets, control within marriage, and disposition upon death or divorce are only partly related. Productive resources are controlled by thehousehold head. Disposition upon death or divorce only loosely depends on individual ownership during marriage but control is associated with larger claims upon divorce. Assets brought into marriage have little impact on disposition upon death, but matter in case of divorce.

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Recent years have witnessed renewed interest in the intrahousehold allocation of welfare (e.g., Haddad and Kanbur (1990), Chiappori (1988, 1992), McElroy (1990)). Interest has been particularly strong among economists working on poor countries, where even slight differences in the intrahousehold allocation of scarce resources can have dramatic consequences on child and female nutrition, morbidity, and ultimately, mortality (e.g., Haddad and Bouis (1991), Haddad and Hoddinott (1994), Dercon and Krishnan (2000), Rose (1999)). The empirical evidence collected so far tends to reject the so-called unitary household hypothesis and to demonstrate that the allocation of consumption and leisure among household members varies systematically with their relative contributions to household total income (e.g., Thomas (1990), Alderman et al. (1995), Bourguignon, Browning and Chiappori (1995), Chiappori (1997)).[1] By themselves, however, these results provide no guidance as to which policies may affect intrahousehold outcomes.

Various theoretical efforts have sought to fill this lacunae by focusing on the determinants of intrahousehold resource allocation. Casting allocation among household members as a bargaining problem, Manser and Brown (1980) and McElroy and Horney (1981) have emphasized the influence that threat points are likely to have on spouses' bargaining power and hence on intrahousehold welfare. If this approach were correct, one may hope to affect intrahousehold welfare by improving the threat points of disadvantaged groups. To be successful, however, one must first identify the relevant threat points. Two main categories of threat points have been proposed by the literature, namely, non-cooperation within an existing household -- the so-called 'separate spheres' hypothesis of Lundberg and Pollack (1993) -- and separation from the household -- the exit option that forms the basis of the work of Manser and Brown (1980) and McElroy

and Horney (1981).[2] Alternatively, one could consider noncooperation within the marriage as an inside option, and that of leaving it an outside option.[3]

Support for the exit option hypothesis can be found in empirical work documenting the role that individual asset ownership and norms regarding the devolution of assets upon divorce and death plays in intrahousehold allocation (e.g., Hoddinott and Adam (1997), Dercon and Krishnan (2000), Quisumbing (1994), Agarwal (1997), Thomas, Contreras, and Frankenberg (1997), Frankenberg and Thomas (2001), Quisumbing and Otsuka (2001a), Kevane and Gray (1998)). Some empirical support for the 'separate spheres' hypothesis of Lundberg and Pollak (1993) has also been found. Control over assets during marriage, including the right to decide how to allocate one's own labor effort, has been shown to affect the individual income of African women (e.g., Jones (1986), Lilja et al. (1996), von Braun and Webb (1989)). Some success has also been achieved in demonstrating that the attribution of welfare funds to specific household members affects consumption patterns (e.g., Lundberg, Pollack and Wales (1997)).

Unfortunately, progress has been hampered by the lack of hard evidence on the non-cooperative options open to women and, *a fortiori,* other dependents in developing countries. Contrary to advanced economies where patrimonial laws regarding the control and ownership of assets within households are relatively uniform and well known, poor countries are characterized by a mix of state and customary legal systems which singularly complicate analysis.[4] This is particularly true of patrimonial law where legal principles inherited from colonial times or introduced by enlightened elites often conflict with traditional practices and customs, especially in rural areas. The end result is a complex and opaque system in which the rules determining the ownership, control, and disposition of productive assets within households vary with location, ethnicity, and religion within

the same country.

In their efforts to study intrahousehold allocation in poor rural areas of the Third World, economists have had, in the best of cases, to rely on anthropological accounts of patrimonial customs and, in the worst of cases, on vague generalities about marriage and divorce practices. In many instances, researchers have even imposed upon intrahousehold allocation legal principles that, even in developed societies, only affect relationships between households. For instance, assets brought into marriage are often regarded as individually owned and controlled and as inherited or taken back upon divorce. In practice, however, patrimonial law seldom if ever functions this way: in advanced economies, assets brought to marriage are often held in common, and the management of productive assets is dissociated from ownership.[5] Rules regarding the disposition of household assets upon divorce or death often pursue multiple objectives, such as the preservation of viable economic units (e.g., primogeniture), the protection of underage children (e.g., attribution of usufruct of assets to surviving spouse), and the protection of groups who traditionally specialize in home goods (e.g., alimony payment to non-working women). Little is known, however, of how customary patrimonial law handles these issues in poor rural areas of the Third World.

This paper seeks to redress this situation by documenting how the control, ownership, and disposition of productive assets within households is *de facto* organized in rural Ethiopia. To our knowledge, this is one of the first efforts to document patrimonial customs using a large household survey and rigorous statistical analysis.[6] It complements previous efforts by legal experts and anthropologists to describe customary rules regarding marriage and assets in rural Ethiopia (e.g., Bevan and Pankhurst (1996), Gopal and Salim (1999), The World Bank (1998)). Similar work on the norms regarding the devolu-

tion of assets upon divorce has been done in Indonesia (Frankenberg and Thomas 2001). Other researchers have focused on the distribution of inheritance across siblings within a family (e.g. Quisumbing (1994) and Estudillo et al. (2001) for the Philippines, Quisumbing and Otsuka (2001b) for Sumatra, and Quisumbing, Otsuka, and Payongayong (2001) for Ghana.)

While the multiplicity of patrimonial laws and customs may complicate the job of lawyers and policy makers, it facilitates the study of the determinants of control and ownership of assets. Ethiopia constitutes the perfect place for our research because of the wide diversity of cultures and patrimonial traditions that characterize the country. Different religions, with widely divergent views regarding matrimonial issues in general, and the status of women in particular, are well represented and, in fact, tend to dominate different parts of the country -- the Orthodox church of Ethiopia in the north, Sunni Muslims in the east and west, recently converted Protestants in the south, and animist beliefs in parts of the south. Anthropological evidence seems to indicate that as one moves from north to south in Ethiopia, women's status, and therefore possibly their bargaining power, declines (e.g., Bevan and Pankhurst (1996), Gopal and Salim (1999)). Such generalizations should be viewed with caution, however, given that the ethnic and cultural makeup of the country is extremely varied and fragmented. Semitic traditions tend to dominate in the north, Cushitic traditions in the south and east, and Nilotic traditions in the west, but there is also a lot of ethnic and cultural variation within regions, especially in the South. Climatic and ecological variation is equally high, given the mountainous nature of the terrain and the fact that the country stretches from the dry Sahel to the humid equatorial zone. Finally, in spite of considerable political turmoil over the last decades, legal reform has only had a limited impact on local traditions regarding

patrimonial issues. For example, the 1960 Civil Code gave women more rights than their contemporaries in the United States or United Kingdom. However, the civil code maintained the age-old tradition of dispute settlement by personal arbitrators, normally older men within the family or community selected by the disputants. The arbitrators, unfamiliar with or unsympathetic to the new laws, continued to apply old customary laws. The *de jure* system had nothing to do with the *de facto* reality that existed for the next 30 years (Gopal 2001).[7] The major exception is the distribution and control of land for which the Ethiopian state has played a dominant role throughout the centuries.

As we have seen, theory predicts that the bargaining power of household members depends on two things: expected utility upon divorce, which is determined by the devolution of assets; and expected utility in a non-cooperative marriage, which presumably depends on control over assets within marriage (e.g., Lundberg and Pollack (1993)). In their effort to identify these factors, empirical researchers have typically used a variety of measures such as dowry and brideprice, ownership of assets at and during marriage, control during marriage, and legal rules regarding the disposition upon dissolution due to divorce or death. Due to data limitations, these measures have typically been regarded as closely related.

Very little empirical evidence, however, is available on the extent to which dowry, brideprice, and assets brought to marriage can be used to predict control during marriage and division of assets upon divorce or death -- the two processes thought to influence bargaining power.[8] The purpose of this paper is to fill this lacuna using data from Ethiopia. We show that the above mentioned variables are only loosely correlated and that the intrahousehold allocation of productive assets follows more complex patterns.

Ethiopian rural households essentially operate farms as centralized units under the

control of a single individual, irrespective of the intrahousehold division of asset ownership.[9] This is consistent with Boserup's (1965) hypothesis that as households move from hoe to plow cultivation, farm management becomes centralized because of returns to scale in management and experience. Rules regarding divorce and inheritance vary across locations, with more patriarchal rules prevalent in the Muslim and Protestant south and more egalitarian rules prevailing in the Orthodox north. Control over productive resources within the household has a strong effect on disposition rules in the sense that the spouse with greater control over an asset gets a larger share of the asset upon divorce or death. This is true even after we control for assets brought to the marriage. This finding is important because it brings to light another way by which the bargaining power of women may be affected. It is also what one would expect if households wish to provide sufficient incentives for the farm manager to take good care of land and to invest in productive assets such as oxen and livestock. This issue deserves more investigation.

While making a valuable contribution to our understanding of women's status in rural Ethiopia, the present analysis does not address all the dimensions of women's welfare. Communal norms defining informal entitlements for women might substitute for weak inheritance rights (Bevan and Pankhurst 1996). For instance, the community may choose to house and feed widows and wives of villagers drafted into the army (as was observed during pre-testing of the questionnaire). Free access to communal resources (e.g., firewood, grazing land) may partly compensate the negative effect of patrimonial laws and customs on women. In this work, we chose to ignore entitlements and focus on rights because the latter are more easily identifiable. Another shortcoming of our approach is that women's rights might be constrained by norms of behavior, such as the implicit obligation for women to remarry lest they be treated as outcast. Again we have

chosen to abstract from these phenomena, not because we believe they are unimportant, but because they are harder to measure and do not easily lend themselves to statistical analysis. Besides, we cannot cover everything at once. But they should be kept in mind when interpreting our results.

The paper is organized as follows. We begin in Section 1 with a brief description of the survey and survey area. We continue in Section 2 with a descriptive analysis of the relationship between marriage and assets in rural Ethiopia. We focus particularly on the transfer of assets upon marriage, the control and ownership of assets during marriage, and the rules regarding asset devolution upon divorce or death. Section 3 examines the determinants of control and management while section 4 examines the interaction between assets brought to marriage, control during marriage, and disposition upon dissolution of the marriage.

Section 1. The Survey Area

Ethiopia ranks as one of the poorest countries in the world, in part a reflection of its tumultuous recent history. Over the past decades it has seen drought, famine, civil war, the demise of a military government, and a major military conflict with Eritrea, leading to a number of policy reversals which have affected patrimonial law. As the third most populous country in Africa, the people of Ethiopia are characterized by substantial ethnic and religious diversity; there are over 85 ethnic groups and most major world religions are represented, as well as animist belief systems (Webb, von Braun and Yohannes 1992). This diversity extends beyond the people and culture of Ethiopia to their environment since the agro-ecological zones, and consequently, farming systems vary dramatically around the country.

The 1997 Ethiopian Rural Household Survey (ERHS) was undertaken by the Department of Economics of Addis Ababa University (AAU), in collaboration with the International Food Policy Research Institute (IFPRI) and the Center for the Study of African Economies (CSAE) of Oxford University.[10] The 1997 ERHS covered approximately 1500 households in 15 villages all across Ethiopia, thus capturing much of the diversity described above. While sample households within villages were randomly selected, the villages themselves were chosen to ensure that the major farming systems are represented.[11] Thus, although the 15 villages included in the sample are not statistically representative of rural Ethiopia as a whole,[12] they are quite diverse and include all major agro-ecological, ethnic, and religious groups.

To better assess the representativeness of the sample, we compare it with the 1995/96 Household Income, Consumption, and Expenditure Survey (HICES), a nationwide survey conducted by the Central Statistical Office with a sample size of 11,687 households at the national level. Average per capita expenditures in our data turn around 1100 birr (160 US dollars) per annum, a little over the HICES figure of 1092 birr per capita, but higher than the rural average of 924 birr per capita. The discrepancy may be due to a higher imputed value for self-produced food: our sample average for the food expenditure share is 74 per cent, compared to 55 per cent for the rural HICES.

In terms of household headship, HICES reports that 75 per cent of rural households are monogamous, male-headed households, one per cent is polygamous male-headed, and five per cent are single male-headed households. In our sample, 64 per cent are monogamous, male-headed households, 7.5 per cent are polygamous male-headed, and similar to the HICES, five per cent are single-male headed. The ERHS sample has a higher proportion of female-headed households (23.8%, compared to 14% in the

HICES), but this may be due to reporting differences because we have separate categories for monogamous households living separately and polygamous households living separately. Our sample thus appears broadly representative of the Ethiopian rural population, if not in terms of regional composition, at least in terms of income and composition. The only exception is the possible overrepresentation of female-headed and polygamous households. This should not, however, affect our results because these households are excluded from most of the subsequent analysis, which focuses on married monogamous couples.

In our survey, the questionnaires for the first four rounds consist of a series of core modules on various issues such as consumption expenditures, wealth, income, and health, as well as some 9000 individual anthropometric measurements (Dercon and Krishnan 2000). Complementary to the surveys was a set of 15 village studies covering a broad range of topics elicited through rapid assessment techniques (Bevan and Pankhurst 1996). Because the early rounds were not designed to focus explicitly on intrahousehold resource allocation, detailed information on many individual outcomes is not matched by information on factors affecting allocation decisions within marriage.

The questionnaire used in the 1997 round includes the original core modules, supplemented with new modules specifically designed to address intrahousehold allocation issues. These modules were designed not only to be consistent with information gathered in the core modules, but also to complement individual-specific information. For instance, past survey rounds collected information on plots managed by the household, but did not include information on the identity of the plot manager. This information and many other individual-specific data were covered in the new modules.[13] To ensure the continued cooperation of surveyed households to a long and intrusive questionnaire,

enumerators were chosen among district residents and interviews were split into several visits spread over a period of three to four months.

In most household surveys, household headship is a self-reported status. This raises the possibility of bias -- i.e., the person who happens to answer the questions claims to be head and to make all decisions. In the case of rural Ethiopia, the situation is different. In order to be allocated land by local authorities, an individual must be recognized and registered as household head by the Peasant's Association (PA). This is the concept that was used in the survey. Enumerators were instructed to interview the household head, except for sections of the questionnaire specifically designed for spouses. Data collection took place between May and December 1997. Questionnaires were administered in several separate visits by enumerators residing in the survey villages for several months. Careful data cleaning and reconciliation across rounds were undertaken in 1998 and 1999 by Bereket Kebede and IFPRI staff.

The new modules collect information on: the parental background and marriage histories of each spouse; the circumstances surrounding the marriage (e.g., type of marriage contract, involvement in the choice of a spouse); the pre-marital human and physical capital of each spouses (e.g., age, education, experience); indicators of predisposition to domestic violence (e.g., alcohol consumption, exposure to domestic violence among parents); simple numeracy questions; gender-specific information on control and ownership of land and livestock; expectations regarding the disposition of assets upon divorce and death; and individual agricultural labor and time use data. A variety of assets brought to the marriage were recorded, as well as all transfers made at the time of marriage. The analysis presented here focuses on the two most important assets in the rural Ethiopian economy, land and livestock.[14]

The geographical location of the surveyed villages is depicted in Figure 1. Most surveyed villages are placed along a North-South axis. This ensures a good coverage of the various agro-climatic zones that characterize the Ethiopian highlands where the bulk of the population lives. Arid lowlands and other regions that are particularly hard to reach, such as the western part of the country along the Sudanese border, were excluded from the sample for cost reasons. The ethnic and religious composition of the sample is summarized in Table 1. A small number of observations with incomplete or inconsistent data are dropped from the reported sample.[15] Orthodox household heads represent 55% of the sample, followed by Muslims and Protestants. No less than 20 different ethnic groups are represented in the sample, which we have organized into five categories. The great majority of couples share the same ethnicity and religion, but 8.5% of couples are inter-ethnic and in 3% of them husband and wife have a different religion.

Section 2. Marriage and Assets in Rural Ethiopia

The sample is varied in its household composition (see Table 2). 62% of the sample is comprised of monogamous couples living together,[16] the overwhelming majority of whom are headed by a man. Single men or women living outside of marriage are the next most important category -- 22% of the sample. These tend to be older individuals who have been married before, i.e., widows and divorced women principally. Polygamous households (or parts thereof) constitute 8% of the sample. Three quarters of the polygamous households recorded in the survey live together; the rest live in separate compounds and were regarded as distinct households for the purpose of data collection. Men or women living separately from their spouse count for another 8% of the sample. There are sharp differences in household typology across ethnic and religious groupings. The proportion of single women is highest among the Tigray, a possible reflection of the

high male mortality associated with the civil war that raged in and around Tigray from 1977 until 1991. Polygamous households are virtually absent among the Tigray and Amharas; polygamy is also more frequent among non-Christians.

Most marriages recorded in the sample are celebrated traditionally. Fewer than 10% of all rural marriages are celebrated in the church or municipality. Unions are formalized using a variety of customary contracts, which can be written or oral in nature. There does not appear to be a strong difference in the type of marriage contract between male and female headed households. Marriage contracts vary systematically with ethnicity and religion, with nevertheless a lot of variation around the norm. We revisit the issue of marriage contracts in greater detail below.

Arranged marriages are the norm in rural Ethiopia. In half of marriages, the choice of a spouse is left to the head's or the spouse's parents. 30% of husbands and 56% of wives were neither consulted nor directly involved in the choice of a spouse; in 22% of couples, neither spouse was consulted. Two thirds of respondents had never spoken to their spouse before marrying them.

We find that 10% of marriages are described as 'kidnappings' by respondents. The term, however, seems to take different meanings depending on the context. In two-thirds of the reported kidnappings, the bride was not consulted or involved in the choice of spouse. These cases are likely to be associated with the kind of violent scenario that were uncovered during pre-testing.[17] The other cases, in which the bride was consulted or involved, are more likely to be a form of 'elopement' whereby the bride and groom seek to bypass their families' disapproval.

A large proportion of respondents were previously married. Of individuals living together in monogamous marriages, 35% of husbands and 22% of wives were involved in

previous marriages. One third of these previous unions ended due to the spouse's death; the rest ended in divorce or separation. Involvement in the choice of a spouse is not higher among previously married individuals. It therefore does not appear that individuals become more involved in the choice of a mate after they have escaped the direct authority of their parents.

Since marriage typically marks the beginning of a new farm production unit, the bride and groom bring with them start-up capital in the form of land, oxen, livestock, household utensils, and grain stocks. The survey recorded all transfers to and from the bride, the groom, and their respective parents, together with all assets brought to marriage. Expenses for the wedding ceremony are excluded. The available information is summarized in Table 3. All survey villages are patrilocal in the sense that the bride comes to live at the groom's place of residence. By far the most valuable asset brought to marriage is land, followed by oxen and livestock.[18] Contrary to expectations, ritual gifts -- e.g., dowry or brideprice -- only account for a small proportion of the transfers of ownership that take place at the time of marriage. On average, the groom's family spends three times as much as the bride's family in gifts to the bride's family or the bride and groom. But the amounts involved are quite small on average and the median is always zero.

The great majority of the new couple's assets are brought by the newlyweds themselves, with grooms bringing more than 10 times as much start-up capital as brides. Assets brought to marriage vary dramatically among couples, however, with a median of zero for most asset categories except livestock and jewelry/clothing/linen. Contrary to the preconception that marriage is the time at which parents endow their offspring with farm land, most of the land brought in by grooms was already theirs prior to marriage.

This finding may be specific to Ethiopia, given that the state nominally owns all land (e.g., Gavian and Ehui (1998), Gavian and Teklu (1996)). User rights over land are supposed to be allocated by Peasant Associations (PA), the local administrative unit in rural areas, although many regions of the country have not experienced land reallocations in recent years. Many young men may wait until the PA allocates them land before deciding to marry.

Inheritance patterns display a similar gap between assets coming from the husband's and wife's lineage. Land and livestock that are inherited after marriage come primarily from the husband's family. Daughters hardly ever inherit anything from their parents. Looking at it from a different angle, we see that, of the land user rights held by the household, two-thirds actually come directly from the PA (Table 4).[19] Family is thus not the dominant source of land for surveyed households. Of the land that comes from the family, however, most ultimately comes from the husband's parents. The same is true for female headed households, who sometimes gain access to land from their husband or husband family, but hardly ever from their own lineage. Women do, however, occasionally receive land from the PA, thereby suggesting a political willingness to depart from rural norms in the allocation of land to women (Gopal and Salim 1999).[20]

After marriage, control over finances and productive assets becomes centralized while disposition upon divorce or death generally follows equal division, except for land. Tables 4 and 5 summarize how decisions about crop production and animal husbandry are made within rural households. A distinction is drawn between decisions that the husband or the wife take on their own (exclusive control) and the decisions they take in consultation with other household members, such as their spouse (shared control). The Tables report exclusive control for both husband and wife, as well as the sum of

exclusive and shared control, that is, their total involvement in household decisions.

Decisions on what to grow are essentially the purview of the household head, be it a man or a woman. Other household members are associated with the decision process in only one quarter of the cases. This finding, however, is partly an artifact. The land reform instructs the PA to allocate land only to people who farm, whether male or female. Household members who have been allocated land are regarded as household head by the PA and, as such, have the right to participate in PA deliberations. Headship thus has a precise administrative definition that is closely associated with actual involvement in crop production. By extension, decisions to rent out land or to give it away, for instance to children, are also predominantly taken by household heads. Some respondents, however, feel that they do not have the right to alienate land, either because they only rent it or because land allocation is thought to be the exclusive responsibility of the PA.

The picture regarding livestock management is more complex, although once again the role of headship is paramount (Table 5). Most livestock is held by the husband and wife jointly and individually held livestock nearly always belongs to the head. Again, we distinguish between decisions taken exclusively by a single household member (i.e., husband alone or wife alone) from decisions taken jointly (e.g., husband either alone or in consultation with other household member). Even though most animals are owned jointly, the right to sell livestock and to keep the proceed of the sale predominantly falls in the hands of the household head. This decoupling between ownership and control is reminiscent of the Napoleon Code of Law which similarly stipulated that husbands manage all household assets, even those that belong exclusively to their wife.[21] The only exception is the right to keep money generated from the sale of dairy products such as milk, butter, cheese, and eggs, a right that more often than not goes to women. A likely

explanation for this discrepancy is that most dairy products are sold in processed form and most processing is performed by women, who may need to be given adequate incentives for their work.

Control over expenditures is also centralized in the hands of the household head (Table 6). Unlike in the coastal areas of West Africa (e.g., Doss (1996), Goldstein (2000)), only a quarter of all households hold separate finances. All aspects of control over expenditures are closely correlated, with little or no specialization across household members. In more than half of the surveyed households, the head alone administers all household finances and incurs all consumption expenditures, including food, clothes, school fees, and medical expenses. We were surprised by this finding because in other parts of the world (e.g., Japan, Europe), women often play an important role in household expenditures even when they do not participate in production decisions. The only interpretation we could think of is that centralized control over expenditures makes it easier for the household to control its spending and ensure that its most urgent needs are fulfilled.[22] This issue deserves further research. As we show in the next section, centralized control does not imply that dependents are ignored in the distribution of assets upon dissolution of the household, although it does affect distribution.

Section 3. The Determinants of Asset Disposition

The literature on women in Africa is replete with tales of widows who face destitution and of women who lose their home and land upon separation from their husband (e.g., Adams (1991), Gladwin and McMillan (1989), Jiggins (1989)). The welfare of widows and divorcees thus appears closely linked to what happens to productive assets upon divorce or death of the husband. Moreover, it is widely believed (e.g., McElroy and Horney (1981), Manser and Brown (1980), Lundberg and Pollack (1994)) that legal and

customary dispositions regulating the disposition of assets upon divorce affect the gender distribution of welfare not only after but also during marriage. The reason is that the bargaining power of married women is thought to depend on their exit option from marriage because it shapes their threat point within marriage (e.g., Fafchamps (1999)). A proper analysis of the determinants of asset disposition upon divorce or death of a spouse is thus essential to our understanding of intrahousehold welfare.

Respondents were asked how they expect various assets to be allocated in case of divorce.[23] The first panel of Table 7 depicts the distribution of assets and child custody that married households expect to happen, should a no-fault divorce take place. The table reports results for monogamous households only. In two-thirds of the cases, respondents expect the wife to receive custody over young children. Older children, in contrast, are expected either to follow their father or to choose which parent they wish to live with. Half of the surveyed monogamous households expect the land and house to go to the husband upon divorce; another 40% expect them to be divided equally between husband and wife. Regarding livestock, equal division between husband and wife is the rule, irrespective of whether the livestock is owned jointly or individually by the husband and the wife. Individually owned livestock, however, is more likely to be attributed to its owner upon divorce. Household utensils are principally divided between spouses, although one third of respondents expect them to go exclusively to the husband. The situation in polygamous households (not shown) is more male dominated in the sense that the husband is much more likely to be given all assets upon divorce. Even there, however, jointly owned livestock is expected to be divided equally in most cases.[24]

About a quarter of all respondents make a distinction between no-fault and fault-based divorce. The concept of fault-based divorce is more prevalent in the South-Central

region, especially among Protestants and Catholics. Commonly cited grounds for fault-based divorce are listed in Table 8. Drunkenness, wife-beating, adultery, and failure to support one's wife are most cited as husband faults that justify divorce, while adultery, involvement in crime, disrespect, and disposition of assets without consultation are the most commonly cited faults for wives. The allocation of assets upon fault-based divorce varies considerably depending on who is at fault. If it is the husband, the wife is slightly more likely to be granted land and livestock (second panel of Table 7). If it is the wife who is at fault (third panel of Table 7), asset distribution is dramatically changed in favor of the husband. Even her own livestock is likely to go to her husband. Fault-based divorce thus encompasses an element of punishment, which is particularly harsh for wives.

Disposition of assets upon death is summarized in Table 9. Upon the death of the household head, assets are most likely to go to the surviving spouse, together with child custody. This is even more true in case of the spouse's death. It is interesting to note that the devolution of livestock to the surviving spouse is essentially unaffected by who owns it. Children inherit in less than half the cases, and when they do, it is usually together with their mother. A similar pattern is observed among polygamous households. The inheritance system is thus primarily designed to enable the surviving spouse to continue operating the farm and taking care of the children.

There are, however, sharp differences in customs across locations, ethnic groups, and religions. These differences are illustrated in Table 10 with the help of regression analysis. The Table examines the disposition of the two main productive assets, land and jointly owned livestock, upon no-fault divorce. We focus on the three dominant modes of devolution: all to husband, all to wife, and shared equally between spouses. The

dependent variable is the wife's share, which by construction can only take three values: 0, 0.5, and 1. For this reason, ordered probit is used as estimator. Results show that location accounts for 79% of the explained variation in rules of disposition upon divorce.[25] Northern locations are in general more generous towards women. There is systematic variation across ethnic or religious groups, but the variables are jointly non-significant once we control for village effects. This suggests that the single best predictor of expected disposition of assets is the average disposition rule in the village. This is consistent with the idea that the disposition of assets is governed by location-specific norms. Moreover, communities may have their own ways of protecting women and other vulnerable groups; local councils may also mediate the distribution of assets should a dispute arise.

Part of the variation in rules of disposition can also be attributed to differences in marriage contracts, albeit the effect is jointly significant only in the case of land. The presence of a marriage contract in general protects women, but the effect becomes less significant once we control for location, ethnicity, and religion. We also investigate whether expected rules of disposition upon divorce vary systematically with assets brought into marriage, inherited assets, and individual ownership of assets at the time of the survey. To the extent that pre-marital assets and individually owned assets are earmarked to a particular spouse, we would expect this to be reflected in the disposition of assets upon divorce. This is important because, if spouses recover their pre-marital and inherited assets when they separate, exit options and thus threat points are largely determined in the marriage market. In this case, the position of women during marriage is likely to be weakened by the fact that, as we have seen, they are disadvantaged in the attribution of pre-marital assets. In contrast, if pre-marital assets fall into a common pool,

women should fare better on average. Of course, even if the woman recovers her share of assets upon divorce -- say livestock -- she may be forced to remarry to gain access to other complementary assets such as land.

Results show that land inherited or brought into marriage by one of the spouses affects the disposition of land and livestock upon divorce. Women expect to receive more land and commonly held livestock upon divorce if they brought in some land. Conversely, they expect to get less if their husband brought a lot of land into the marriage. Ownership of productive assets at the time of the survey also affects rules of disposition.[26] Women who individually own more livestock and hold user rights on a larger share of the household's land expect to receive more upon divorce. Since individual ownership of productive assets during marriage is closely related to control and management of these assets, and thus to female headship in married couples, this implies that female heads of household expect to receive significantly more productive assets upon divorce than women in male headed households. Once we control for assets, personal characteristics of the spouses, such as their age and education, have little effect on disposition upon divorce, except that better educated wives expect to receive more land.

In poor agrarian societies, divorce does not result in alimony and child care payments. Financial protection is achieved by giving assets. How do rural Ethiopian households ensure that the financial needs of children are met? We have already seen that children choose the parent they wish to live with, except for young children who remain with their mother. Women with children are therefore expected to get more land or livestock if the financial needs of children are ensured by granting productive assets to the mother. To test this hypothesis, the number of children is included in the regression. We distinguish between children from different unions because we suspect that children from

other unions might be disadvantaged. Results are non-significant, suggesting that children are probably taken care of in other ways -- or that their net burden is light enough that it does not require the transfer of assets.

We also examine the determinants of inheritance. Since the surviving spouse nearly always inherits part or all of the land and livestock acquired during marriage, we focus on whether wives inherit all land and livestock or have to share with other heirs, principally children. Given that the dependent variable is dichotomous, logit is used as estimator. Coefficients are presented in the form of odds ratios: a ratio smaller than one means that the variable reduces the chance of inheritance; a ratio greater than one increases it. Because there is less variation in the dependent variable, some regressors have to be dropped.[27]

Results are less conclusive than for divorce but they nevertheless show large differences across locations and between various ethnic and religious groups, although religion dummies are not jointly significant (Table 11). Location alone accounts for 65% of the explained variation in inheritance. Women in the South, principally among the various south-central ethnic groups, are less likely to inherit land and livestock. This is partly compensated by the fact that non-Orthodox women are more likely to have exclusive inheritance rights to land and livestock.

The presence of children from previous marriages has a strong effect on inheritance expectations: women with children of their own are more likely to inherit all land and livestock while those whose husband has children of his own are less likely to inherit. This is consistent with the idea that women with children from previous unions are allocated land as a form of child care provision.[28] Ownership of assets during marriage has little effect on inheritance expectations, except that women are less likely to inherit all

household land if their husband owns more of the household livestock. Surprisingly, most marriage contracts are correlated with weaker inheritance rights for women. The effect, however, is generally not significant. One possible interpretation is that the presence of a marriage contract signals an intention to create a stable marriage and to have children, and is thus related with the expectation that a surviving wife will share household assets with children upon the death of her husband. This is consistent with the tendency for wives to outlive their husbands due to younger age at marriage and to the longer life expectancy of women relative to men.

Personal characteristics also affect inheritance. Women married to older men expect to get more land, possibly because they plan to take over the farm. Older wives anticipate getting fewer assets, perhaps because they are supposed to be taken care of by their grown up children. Educated women expect to receive fewer assets as well. The reason is unclear. Perhaps they can support themselves in other ways such as non-farm work, but this is far from certain given the very low level of non-farm activities in rural Ethiopia. This deserves more research. One should keep in mind that personal characteristics are not jointly significant, so that the results may not be robust.

Section 4. The Determinants of Control and Management

We have seen that the control and management of assets and finances is typically centralized into the hands of the household head. We also found that control over assets has an effect on asset disposition upon divorce that is distinct from asset ownership *per se*. The fate of women after marriage therefore depends on the control they have over assets during marriage. For this reason, it is important to examine the determinants of control and management over productive assets.

We investigate two important dimensions of control and management: individual ownership of livestock and land user rights; and women's participation in farming decisions. Land user rights are given by the PA to a particular individual who is typically the head of household. There nevertheless exist more complicated cases in which a woman either retains land from a previous marriage, or receives land separately from her husband after marriage. We construct a variable that represents the share of household land that was 'brought in' by the wife, either from the PA or through inheritance. The variable is computed as the area of land brought in by the wife divided by the total land area over which the household has full user rights; it varies between 0 (no land brought by wife), 1 (all land brought by wife) and any value in between. Around 12% of married women hold user rights on some or all of the household land. We construct similar variables for individually owned livestock of the husband and the wife. It is computed as the value of individually owned livestock divided by the value of all household livestock. 25% and 6% of livestock are owned by the husband and the wife, respectively; the rest is owned jointly. Given that all land is ultimately obtained from the PA, there is no concept of jointly held land, so that user rights not held by the wife are by definition held by the husband. Two-sided tobit is used as estimator to correct for censoring at 0 and 1.

Regression analysis indicates that land ownership and rental decisions depend critically on assets brought into marriage either at the time of marriage, or later through inheritance (Tables 12 and 13). The same is true for livestock ownership and sale decisions. The effect is strong and jointly significant. Gifts made at the time of marriage also decrease assets individually held by the wife during marriage. The direction of the gifts -- i.e., from the bride to the groom family (dowry) or from the groom to the bride family (bridewealth) -- does not seem to matter. The reverse is not true for livestock individu-

ally owned by husbands. One possible interpretation of these findings is that marriages in which gifts are made tend to be arranged by parents. This would suggest that women have less control in marriages that were arranged by their parents, irrespective of which family made gifts to whom. This result might be peculiar to Ethiopia, however: as we have seen in Section 2, gifts at marriage are very small in rural Ethiopia.

Among other findings of interest, older women and women who were previously married also 'own' more of the household's land and livestock. Contrary to Section 3, village effects, although jointly significant, do not account for much of the variation in female ownership during marriage (28% of the explained variation for land, 26% for livestock). Ethnicity and religion are not, in general, jointly significant -- except for religion in the case of land user rights.[29]

We also examine participation in farming decisions, such as renting land (Table 12) and selling livestock (Table 13). The dependent variable is the share of land (in area) or livestock (in value) over which the wife has a say. Other farming decision variables behave in a similar manner, except for dairy activities which appear only driven by livestock ownership and location dummies. Results indicate that women who bring more assets into the household, either at the time of marriage or through inheritance, have more say in farming decisions. Effects are as expected: bringing more land gives more say in land rentals; bringing more livestock gives more say in livestock sales. As in the case of asset ownership, gifts at marriage are associated with less female participation in decisions -- a finding that reinforces our earlier interpretation that arranged marriages give less power to women.

Personal characteristics are not, in general, significant, except that better educated women participate more in land rental decisions while older women have more say on

livestock sales. Village effects are again strong and jointly significant; by themselves, they are capable of explaining 55% and 86% of the variation in participation that is accounted for by our regression. Ethnicity and religion are not jointly significant once we control for village effects.

We also examine female headship in married couples. There are some 9% of female heads among all married households. In 70% of those, the husband is absent. Absentee headship is not observed in the sample: all married households from which the husband is absent have a female head. This suggests that the 'land to the tiller' philosophy embedded in the Ethiopian land reform is understood to sanction absentee husbands as much as absentee landlords. Regression analysis (not presented here) shows that, conditional upon marriage, a married couple is more likely to be headed by a woman if the wife brought more assets into the household, was married before, and already had children from a previous marriage. The opposite is true when it is the husband who brought in more assets or had children from a former union. The picture that emerges from these results is one by which married women have more say in household decisions and are more likely to be recognized as head of household if they bring more assets to the household, assets that they possibly obtained through previous unions. The form in which assets are brought into marriage does not seem to matter much.

Conclusion

Using household level data, we have examined the distribution of control and ownership of productive assets among husband and wife in rural Ethiopia. Contrary to what is often assumed in empirical work on intrahousehold issues, we have shown that ownership of assets, control within marriage, and disposition upon death or divorce only partially overlap. Rules regarding divorce and inheritance vary dramatically between

different locations in the same country. Disposition upon death or divorce only loosely depends on individual ownership during marriage while assets brought into marriage have little impact on disposition upon death, but matter in case of divorce. Control over productive resources tends to be centralized into the hands of the household head, be it a man or a woman, irrespective of ownership at or after marriage. Control over assets is associated with larger claims over these assets upon divorce, a finding consistent with the presence of incentive problems.

Although it would be ill-advised to offer strong policy recommendations on the basis of the work reported here, our analysis indicates that policy can matter. Findings suggests that, in their land allocation function, local administrations have been willing to grant user rights to women, albeit reluctantly perhaps (e.g., Gopal and Salim (1999), The World Bank (1998)). This is so even though in local customs women hardly ever inherit land from their lineage.[30] The government's 'land to the tiller' policy thus allowed -- or may even have facilitated -- the attribution of user rights over land to women. This attribution, however, nearly always results from conditions internal to the household, such as separation or death of the husband; in most cases, women's access to land remains conditional upon the absence of a suitable male head of household.[31]

Another indication that external intervention may have an impact on local customs is the observed link between the concept of fault-based divorce and conversion to non-Orthodox Christian faith. The spread of Catholicism and Protestantism to rural Ethiopia is indeed fairly recent, particularly in the South. Yet it seems to be correlated with a fault-based concept of divorce -- or more precisely with the perception that fault plays an important role in financial settlement upon divorce.[32] This issue deserves more investigation.

What we have *not* done in this paper is to ascertain whether control over assets and expectations regarding devolution of assets upon divorce have an effect on the intra-household distribution of welfare. The analysis presented here also takes couples as given, without raising the question of how they came to get married to each other. Finally, to get a complete picture of women's welfare in rural Ethiopia, women's individual rights which we covered here need to be combined with informal entitlements that take care of women in more roundabout (and paternalistic) ways. These issues will be the object of future research.

Endnotes

1. This view is not shared by all, however (e.g., Schultz (2000)). Empirical work is often plagued by omitted variable bias. There may also be a publication bias in the sense that regressions that show no effect of bargaining variables on intrahousehold allocation usually do not get reported.

2. Fafchamps (1999) argues that the two should be treated simultaneously. Indeed, the threat of non-cooperation need not be credible if the spouse can credibly retaliate by leaving the household.

3. Which option prevails may well depend on the discount rate. If the discount rate is high, the outside or exit option may be relevant and the spouse is then willing to forego possible benefits from relationship-specific capital. With a low discount rate, the relevant threat point may be the inside option.

4. For the purpose of this paper, we define patrimonial law as the laws regarding the control, ownership, and disposition of assets during marriage and upon death or divorce.

5. In most 19th century Europe, for instance, the law gave husbands the right to manage their wife's assets, even when these assets were their spouse's exclusive property. The same principle continues to apply today to assets owned by minor children.

6. Dercon and Krishnan (2000) used dummy variables regarding divorce settlements in their analysis of nutritional outcomes within marriage, namely: (1) if the wife stated she could take assets with her if she was divorced; and (2) whether it is customary to share assets equally at the time of divorce. They also included a dummy variable for living in the South, where divorce is rare, husband-initiated, and wives get no share

of assets upon divorce. Our analysis goes further by examining the determinants of divorce disposition for a number of assets, since the rules may vary depending on the type of asset as well as each spouse's asset holdings at the time of marriage.

7. This is not to say that local traditions have not changed at all -- they have, especially in areas influenced by urbanization and labor migrations. But, in our opinion, they have changed much less than in African countries previously colonized by Europeans, largely because of the lack of roads and the relative isolation of the countryside.

8. The work by Estudillo et al. (2001), Quisumbing and Otsuka (2001b), and Quisumbing et al. (2001) analyzes the distribution of assets across siblings, not between husband and wife, and is a study of intergenerational tranfers rather than of divorce outcomes.

9. Important exceptions include enset-growing areas where women seem to play a more central role in cultivation. It should be noted that, unlike cereal crops, enset cultivation does not rely on animal traction.

10. The 1997 survey built on an earlier IFPRI survey of 1989 and on three rounds of panel survey conducted by AAU and CSAE in 1994/95. These earlier rounds, however, are not used in the present analysis.

11. About 400 households in six sites were initially surveyed by IFPRI in 1989; these were selected from drought-prone areas for a famine study (Webb, von Braun and Yohannes 1992). Three more sites were added in 1994-1995 to include areas North of Debre Birhan that could not be surveyed in 1989 due to military conflict. Six other sites were also added to cover the main agro-climatic zones and farming systems of the richer parts of the country. The selection of new sites is described in

Bereket Kebede (1994).

12. The ethnic and religious mix of the sample, for instance, does not match what we know of rural Ethiopia: Oromos are underrepresented, Protestants are over-represented. The small number of Oromo sites is in part due to civil unrest at the time that the sample was drawn. Several villages from the Oromo region have been added to the 2000 survey round.

13. The new modules were pre-tested in February/March 1997 in four non-survey sites with a level of ethnic and religious diversity similar to the sample itself.

14. This is done to minimize recall error surrounding minor assets, and because productive assets are likely to be better proxies for bargaining power than, say, food brought by the newlyweds to their new home. To permit comparison, the value of assets at the time of marriage is converted to current values using the consumer price index. Given the difficulties inherent in a long recall period and in the choice of an inflation correction factor suitable for all 15 villages, these values are likely to be measured with error.

15. Around 50 observations. These are either households who could not be traced from previous rounds, or whose composition had changed so much since the first round that it was difficult to reconcile the data across survey rounds.

16. Irrespective of whether they are 'legally' married or not.

17. One pre-test respondent described how the parents of his bride-to-be refused to relinquish the bride on the marriage day, arguing that some agreed upon gifts had not been made. Out of frustration, the groom's relatives took upon themselves to kidnap a teenage girl on their way back from the bride's village. Their excuse: they did not want food prepared for the wedding to go to waste. In spite of having broken

an arm fighting her abductors, the girl was married by force to the groom that very same day. Interestingly enough, in Ethiopia neither rape nor abduction are punishable by law if the victim "freely" contracts a valid marriage with the abductor (Gopal and Salim 1999, p. 15).

18. Land values are imputed as follows. All households were asked the value of the land received at marriage (albeit not the value of the land owned before marriage). Of 262 heads who responded, 220 (84%) provided a land value. Of these 224 individuals, 156 were married prior to the land reform of 1975 which nationalized all land; the rest were married after. Of those of failed to report land value, 32 (17% of responses) were married before the land reform, 10 (13% of responses) after. It therefore appears that Ethiopian farmers are capable of putting a monetary value on land in spite of the land reform -- probably because marriage contracts take land value into consideration. After converting land units into hectares and correcting for inflation using the CPI, we computed the time-indexed median unit price of land in each village using a median regression controlling for the year of marriage. Predicted land values, which vary by village and by year of marriage, are subsequently used to value all land. This method facilitates comparison with other assets. It also has the added advantage that errors in land measurement units (villages use different units for land area) cancel out.

19. From a strict legal point of view, all land belongs to the state and user rights are ultimately controlled by the PA. This implies that transfers of land following marriage, divorce, or death must be implicitly or explicitly supported by the PA. Our data seem to indicate that, in practice, the PA often abstains from intervening, except when it is directly solicited by villagers -- e.g., if newlyweds did not receive

sufficient land from their parents. Our analysis should thus be construed as depicting the perceptions or mindset of rural Ethiopians at a time when PA's, in some regions at least, appear reluctant to pursue periodic reallocations of land.

20. It should be noted, however, that some traditional land tenure systems in Ethiopia did recognize women's right to inherit from their parents. In the case of the *rist* land tenure system, which was prevalent in the Northern part of the country, sons and daughters had an equal right to inherit land. Children of both sexes were allowed to trace their lineage through their father as well as their mother to claim land (cognatic descent). In practice, however, women's rights to land were often ignored or implicitly traded in exchange for family support.

21. This could also be interpreted as a desire to centralize control of household resources in the hands of the nominal head, usually the husband, who has legal jurisdiction over household resources. It is also conceivable that centralized control over land and livestock is an effort to manage resources efficiently in a farming system that closely integrates crop and livestock production (Webb and von Braun, 1989). This issue deserves more research.

22. This stands in contrast with West African practices where control over expenditures is shared and financial responsibilities are clearly delineated (e.g., men buy staple food, women buy ingredients for the "sauce"). One possible reason for the difference is that, contrary to West Africa, Ethiopian rural women have no independent source of income from which to feed their "separate purse".

23. Divorced respondents were asked instead how assets were actually divided when they divorced their previous spouse. Ten percent of responses are for actual divorces. A simple *t*-test shows that responses for actual and hypothetical differ.

This, however, is because households with divorcees are different from others. When we control for household characteristics, the difference is no longer significant: adding a dummy for actual divorce to the regressions presented in Table 10 below, we obtain *t* values of 0.17 for the livestock regression and 0.49 for the land regression. In the analysis presented here, we combine both responses. Results are unaffected if we drop observations for actual divorces. There are too few actual divorces to conduct a separate analysis on them.

24. Based upon interviews conducted during the pre-test, it appears that polygamous households in rural Ethiopia keep separate finances for each union. For example, a polygamous husband typically owns some livestock jointly with his first wife, some other livestock jointly with his second wife, etc. Equal distribution thus refers to the portion of the polygamous household's assets that belong to the union being dissolved.

25. Calculated as the ratio of R^2 of regression of disposition on village dummies divided by the R^2 of the regression using all the regressors included in Table 10. By coincidence, we obtain the same ratio for livestock and land.

26. Since the respondent always is the head of household, be it a man or a woman, we cannot separate the effect of headship from a possible gender bias in expectations. Because of this potential bias, headship itself is not used as regressor but rather ownership of assets during marriage. Male and female headed couples give significantly different answers to questions regarding the disposition of assets in mutually agreed-upon divorce.

27. In this case, we chose to drop the variables on assets brought to marriage as they are non-significant.

28. It is conceivable that women strategically choose to have more children -- even out of wedlock -- to guarantee support from the children's father, or a better distribution upon divorce. Investigating this possibility is beyond the scope of this paper, however.

29. Given the relatively small size of the 'other religion' group, this result may not be robust.

30. As pointed out earlier, this is true even though some traditional land tenure systems stipulate that sons and daughters have an equal right to inherit the land of their parents. In practice, this principle is often ignored, except inasmuch as it enables men to claim land, as when a husband seeks to access land by invoking his wife's inheritance rights.

31. Discussions with Ethiopians suggest that female headed households might have controlled land even before the land reform of 1975. Although it is unclear how prevalent the phenomenon was, it was seen as an oddity.

32. The idea that one of the spouses may be primarily responsible for the failure of a relationship is probably not specific to any region or culture. What is important here is that certain respondents emphasize fault and expect it to carry financial penalties.

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Table 1. Ethnic and Religious Composition of the Sample

	Tigray	Amhara	Oromo	South-Central (3)	Other	Total
Ethiopian orthodox	146	403	75	115	29	768
Muslim	6	3	232	16	56	313
Other christian (1)	7	6	13	255	4	285
Other religion (2)	0	0	0	40	0	40
Total	159	412	320	426	89	1406

Note: based on the ethnicity and religion of the household head. (1) primarily protestants.
(2) primarily animists. (3) a variety of ethnic groups residing in the South-Central highlands.

Table 2. Typology of Households in the Sample

	Number	% of sample
Monogamous households living together		
Husband and wife living together; male head	853	60.1%
Husband and wife living together, female head	24	1.7%
Monogamous households living separately		
Husband	51	3.6%
Wife	69	4.9%
Polygamous households		
Husband and wife living together	85	6.0%
Husband living separately	21	1.5%
Wife living separately	6	0.4%
Singles		
Men	72	5.1%
Women	239	16.8%
Number of observations	1420	

Table 3. Asset Brought to Marriage
(measured in 1997 Ethiopian Birr; currently married couples only).

1. Pre-Marriage Assets	**of the groom**		**of the bride**	
	Mean	Median	Mean	Median
Value of land received at marriage	500	0	29	0
Value of land already owned	1918	0	56	0
Value of oxen and livestock already owned	1140	215	281	0
Value of jewelry	268	124	14	0
Value of household utensils	140	0	14	0
Value of grain stocks	401	0	3	0
Total	4368	1779	398	0

2. Inheritance after marriage	**to the husband**		**to the wife**	
	Mean	Median	Mean	Median
Value of inherited land	995	0	100	0

3. Gifts at the time of marriage	Mean	Median
From groom family to groom	33	0
From bride family to bride	27	0
From bride/bride family to groom	18	0
From groom/groom family to bride	96	0
From bride/bride family to groom family	1	0
From groom/groom family to bride family	92	0
From groom/groom family to bride and groom	13	0
From bride/bride family to bride and groom	32	0

Number of obs. 1109

Table 4. Land ownership and management
(currently married households only)

1. Access to land:	**All households**	**Male head**	**Female head**	**t-test**	**p-value**
Land with full user rights (in hectares)	3.39	3.54	1.82	0.7309	0.4650
Rented-in land (in hectares)	0.39	0.42	0.03	0.7279	0.4669
Rented-out land (in hectares)	0.35	0.37	0.18	0.2170	0.8282
Source of land (in percent):					
Peasant Association	60.7%	60.5%	65.2%		
Husband's parents	26.3%	26.9%	13.5%		
Wife's parents	1.4%	1.3%	3.8%		
Husband or wife	1.0%	0.4%	12.3%		
Relative	3.6%	3.7%	2.4%		
Non-relative	7.0%	7.2%	2.8%		
Number of observations:	1027	935	92		
2. Management:					
In share of land for which:	**All**	**Male**	**Female**		
a. choose what to grow:	**households**	**head**	**head**	**t-test**	**p-value**
Husband alone	70.4%	76.4%	1.3%	**17.2331**	0.0000
Husband alone or with other hhold members	88.4%	94.3%	20.1%	**29.3352**	0.0000
Wife alone	5.0%	0.1%	62.5%	**-41.4053**	0.0000
Wife alone or with other hhold members	20.4%	15.0%	83.2%	**-17.0607**	0.0000
b. give away land:					
Husband alone	48.3%	52.3%	2.1%	**9.3660**	0.0000
Husband alone or with other hhold members	63.3%	66.7%	23.8%	**8.3044**	0.0000
Wife alone	3.6%	0.0%	45.2%	**-28.4655**	0.0000
Wife alone or with other hhold members	17.5%	12.9%	71.0%	**-14.7511**	0.0000
c. rent out land:					
Husband alone	60.2%	65.4%	0.0%	**13.2818**	0.0000
Husband alone or with other hhold members	79.7%	84.4%	25.3%	**15.8542**	0.0000
Wife alone	4.7%	0.0%	58.7%	**-37.9901**	0.0000
Wife alone or with other hhold members	23.5%	17.9%	88.8%	**-16.6350**	0.0000
Number of observations:	994	915	79		

Table 5. Livestock ownership and management
(Livestock aggregated by value)

1. Ownership of livestock:	**All**	**Male head**	**Female head**	**t-test**	**p-value**
Total value of livestock (in Ethiopian Birr)	2287	2324	1914	1.4511	0.1470
of which (in percent):					
Onwed jointly by husband and wife	71.3%	74.3%	33.7%		
Owned by head alone	19.1%	17.3%	41.4%		
Owned by spouse alone	2.9%	2.3%	9.8%		
Owned by head jointly with others	3.2%	2.8%	7.5%		
Owned by others	3.6%	3.3%	7.5%		
Number of observations:	1105	1007	98		

2. Management:					
In shares of animals for which:	**All**	**Male**	**Female**		
a. Sell animals	**households**	**head**	**head**	**t-test**	**p-value**
Husband alone	37.7%	41.0%	2.2%	**7.3389**	0.0000
Husband alone or with other hhold members	86.4%	92.2%	23.9%	**23.4313**	0.0000
Wife alone	6.3%	1.5%	58.9%	**-30.2222**	0.0000
Wife alone or with other hhold members	54.9%	52.2%	85.4%	**-6.0913**	0.0000
Nber. obs.	941	862	79		
b. Own offspring					
Husband alone	32.0%	34.9%	1.4%	**6.4685**	0.0000
Husband alone or with other hhold members	83.3%	88.8%	24.4%	**18.9295**	0.0000
Wife alone	6.9%	2.3%	55.8%	**-25.0546**	0.0000
Wife alone or with other hhold members	58.1%	55.7%	83.6%	**-5.1484**	0.0000
Nber. obs.	908	830	78		
c. Keep sales proceeds					
Husband alone	44.0%	47.7%	2.2%	**8.3471**	0.0000
Husband alone or with other hhold members	84.8%	90.3%	22.9%	**20.8272**	0.0000
Wife alone	7.5%	3.1%	57.0%	**-22.9420**	0.0000
Wife alone or with other hhold members	48.3%	45.2%	82.6%	**-6.7308**	0.0000
Nber. obs.	935	858	77		
d. Keep dairy money					
Husband alone	10.4%	11.2%	0.5%	**2.5799**	0.0101
Husband alone or with other hhold members	50.0%	52.2%	23.9%	**4.1705**	0.0000
Wife alone	36.2%	34.9%	52.5%	**-2.7362**	0.0064
Wife alone or with other hhold members	75.8%	75.5%	79.2%	**-0.6600**	0.5095
Nber. obs.	704	650	54		

Table 6. Control Over Household Finances

(currently married households only)	All	Male	Female
A. Joint or separate finances:	**households**	**head**	**head**
Joint finances	69.8%	69.7%	71.1%
Separate finances	30.2%	30.3%	28.9%
Number of observations	1106	1009	97
B. Control Over Finances			
Head alone	51.1%	50.7%	55.9%
Head and spouse separately	15.5%	15.9%	11.8%
Head and spouse jointly	28.2%	29.8%	11.8%
Spouse(s) alone	0.8%	0.6%	3.2%
Head with children	3.9%	3.0%	14.0%
Children alone	0.4%	0.1%	3.2%
Number of observations	1101	1008	93

Table 7. Disposition upon Divorce
(currently married monogamous households only)

1. No-Fault Divorce	Young children	Old children	Land	House	Livestock of: husband	wife	both	Household Utensils
Husband	21.8%	49.4%	52.6%	57.3%	44.3%	11.1%	23.7%	33.3%
Wife	64.0%	6.9%	2.2%	2.7%	1.7%	32.8%	2.4%	6.3%
Divided half/half	6.5%	7.4%	41.9%	38.2%	45.1%	50.0%	68.0%	57.7%
Children choose	6.3%	32.4%	0.2%	0.1%	3.4%	0.0%	0.2%	0.3%
Other	1.5%	3.9%	3.1%	1.8%	5.5%	6.1%	5.7%	2.4%
Number of valid observ.	878	815	959	967	759	594	877	965
2. Husband at fault								
Husband	18.8%	43.0%	41.2%	45.2%	34.1%	0.8%	9.3%	14.5%
Wife	65.8%	19.6%	16.5%	29.3%	16.2%	57.6%	16.9%	31.3%
Divided half/half	5.0%	3.8%	31.9%	17.8%	36.8%	25.0%	62.9%	44.5%
Children choose	8.3%	27.2%	1.5%	0.4%	0.5%	0.8%	0.4%	0.8%
Other	2.1%	6.4%	8.8%	7.3%	12.4%	15.9%	10.5%	9.0%
Number of valid observ.	240	235	260	259	185	132	248	256
3. Wife at fault								
Husband	33.8%	61.9%	78.6%	84.8%	71.9%	34.8%	59.4%	66.0%
Wife	52.1%	4.8%	0.0%	0.8%	2.7%	34.8%	0.0%	4.7%
Divided half/half	3.8%	2.6%	11.7%	6.3%	14.1%	13.0%	30.5%	20.3%
Children choose	7.5%	25.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other	2.9%	5.6%	9.7%	8.2%	11.4%	17.4%	10.0%	9.0%
Number of valid observ.	240	231	257	256	185	138	249	256

Table 8. Grounds for Fault-Based Divorce
(Percent of respondents citing following ground for divorce)

A. Sex	**Husband**	**Wife**
Adultery	58.6%	72.3%
Infertility	0.6%	1.2%
B. Money		
Failure to support spouse	35.1%	15.3%
Disposition of assets without consultation	6.9%	37.1%
Profligacy/spends too much	16.3%	6.9%
C. Work		
Laziness	15.7%	21.2%
Failure to perform household chores	7.8%	14.3%
D. Attitude		
Drunkeness	69.6%	30.8%
Spouse-beating	55.8%	6.5%
Disrespect/nagging	32.3%	37.4%
Involvement in crime	24.5%	56.4%
E. Other motive	39.2%	30.5%
Number of valid answers	319	321

Note: Other respondents do not consider that divorce settlement depends on fault.

Table 9. Disposition upon Death
(currently married monogamous households only)

	Young children	Old children	Land	House	Livestock of husband	Livestock of wife	both	Household Utensils
1. Head of the household								
Surviving spouse(s)	86.0%	80.3%	53.3%	58.5%	57.9%	66.6%	59.5%	63.4%
Head's relatives	5.6%	6.8%	3.2%	3.2%	2.6%	2.7%	2.2%	3.3%
Children	1.4%	2.5%	10.3%	6.3%	8.5%	4.0%	5.3%	4.9%
Spouse and children	6.7%	7.8%	32.3%	31.4%	28.9%	24.9%	32.4%	28.0%
Other	0.3%	2.8%	0.8%	0.5%	2.1%	1.8%	0.6%	0.3%
Number of valid observ.	871	800	959	965	729	595	861	970
2. Spouse								
Surviving spouse(s)	89.0%	88.3%	76.1%	78.4%	74.7%	69.4%	72.9%	76.8%
Head's relatives	6.0%	3.2%	1.8%	1.3%	1.9%	2.3%	1.5%	1.4%
Children	0.2%	1.7%	2.0%	1.7%	2.8%	6.3%	3.0%	3.0%
Spouse and children	4.6%	5.7%	20.0%	18.5%	19.1%	19.8%	22.1%	18.6%
Other	0.2%	1.1%	0.2%	0.1%	1.5%	2.1%	0.5%	0.2%
Number of valid observ.	872	811	961	969	723	605	864	968

Table 10. Regression Analysis of Disposition of Assets Upon Divorce
(currently married households only; estimator is ordered probit)

		Share of livestock going to wife		Share of land going to wife	
1. Assets brought to the marriage		Coef.	t stat.	Coef.	t stat.
Pre-marriage land of husband	log(value+1)	-0.023	-1.305	-0.056	**-2.732**
Pre-marriage livestock of husband	log(value+1)	0.002	0.080	0.013	0.507
Other assets brought to marriage by husband	log(value+1)	-0.003	-0.125	0.019	0.656
Inherited land of husband	log(value+1)	-0.010	-0.515	-0.016	-0.682
Pre-marriage land of wife	log(value+1)	0.100	**2.430**	0.210	**4.581**
Pre-marriage livestock of wife	log(value+1)	-0.018	-0.627	-0.031	-0.970
Other assets brought to marriage by wife	log(value+1)	-0.017	-0.383	-0.102	**-1.804**
Inherited land of wife	log(value+1)	0.094	**2.970**	0.008	0.213
2. Asset ownership during marriage					
Share of land user rights of wife	share	0.600	**1.880**	1.244	**3.488**
Share of livestock owned by husband alone	share	-0.449	**-2.618**	-0.738	**-3.392**
Share of livestock owned by wife alone	share	0.727	**1.987**	0.444	1.110
3. Marriage contract					
Samanya (always written)	dummy	0.582	**1.980**	0.236	0.635
Nika (written or verbal)	dummy	0.052	0.114	-0.271	-0.451
Cheb (written or verbal)	dummy	0.334	0.823	0.560	0.805
Kalkida (verbal)	dummy	0.619	**2.294**	1.219	**2.976**
Other contract (written or verbal)	dummy	0.490	**1.665**	0.608	1.355
4. Personal characteristics					
Husband's age	age	0.004	0.453	0.016	1.592
Wife's age	age	0.008	0.688	-0.005	-0.425
Husband's education	years	-0.015	-0.472	0.015	0.388
Wife's education	years	0.070	1.421	0.116	**2.042**
5. Children and marriage history					
Number of children from current union	number	-0.006	-0.256	0.017	0.609
Husband's children from previous union	number	-0.003	-0.149	0.028	1.022
Wife's children from previous union	number	0.007	0.132	-0.034	-0.546
Whether wife was previously married	dummy	0.026	0.156	-0.388	**-2.060**
6. Ethnicity					
Amhara	dummy	0.402	0.905	-0.304	-0.705
Oromo	dummy	0.331	0.766	-0.200	-0.488
South-Central ethnic groups	dummy	-0.190	-0.370	-0.067	-0.113
Other ethnicity	dummy	-0.111	-0.231	0.202	0.403
7. Religion					
Muslim	dummy	-0.619	-1.364	-0.799	-1.466
Catholic or protestant	dummy	-0.220	-0.905	-0.568	**-1.732**
Other religion	dummy	-0.019	-0.043	-0.254	-0.441
7. Village dummies			included but not shown		
First intercept (cut 1)		-0.410		-0.039	
Second intercept (cut 2)		3.214		4.020	
Number of observations		751		775	
Pseudo-R square		0.373		0.589	
Joint significance tests:		**test**	**p value**	**test**	**p value**
Assets brought to marriage by husband		2.15	0.7084	**8.11**	0.0876
Assets brought to marriage by wife		**14.96**	0.0048	**23.33**	0.0001
Asset ownership during marriage		**16.23**	0.0010	**25.51**	0.0000
Marriage contract		7.23	0.2038	**10.28**	0.0677
Personal characteristics		5.26	0.2619	**8.44**	0.0766
Children		0.11	0.9903	1.52	0.6786
Ethnicity		3.55	0.4706	1.85	0.7629
Religion		2.32	0.5086	4.09	0.2521
Village fixed effects		**75.81**	0.0000	**50.53**	0.0000

Note: Tigray is omitted ethnicity; Orthodox is omitted religion; 'no marriage contract' is omitted contract category.

Table 11. Regression Analysis of Disposition of Assets Upon Death of Husband
(currently married households only; estimator is logit; coefficients are reported as odds ratios.)

		Wife inherits all jointly owned livestock		Wife inherits all land	
1. Children and marriage history		Odds	t stat.	Odds	t stat.
Number of children from current union	Number	1.022	0.635	0.987	-0.376
Husband's children from previous union	Number	0.913	**-2.572**	0.907	**-2.630**
Wife's children from previous union	Number	1.318	**3.454**	1.304	**3.287**
Whether wife was previously married	Dummy	0.828	-0.804	0.744	-1.219
2. Asset ownership during marriage					
Share of land user rights of wife	share	0.812	-0.510	0.634	-1.080
Share of livestock owned by husband alone	share	0.703	-1.405	0.586	**-2.089**
Share of livestock owned by wife alone	share	0.781	-0.455	1.016	0.029
3. Marriage contract					
Samanya (always written)	dummy	1.246	0.510	0.999	-0.002
Nika (written or verbal)	dummy	0.638	-0.677	0.823	-0.288
Cheb (written or verbal)	dummy	0.197	**-2.846**	0.589	-0.922
Kalkida (verbal)	dummy	0.826	-0.502	0.557	-1.461
Other contract (written or verbal)	dummy	0.789	-0.540	0.878	-0.294
4. Personal characteristics					
Husband's age	age	1.012	0.961	1.022	**1.703**
Wife's age	age	0.977	-1.545	0.965	**-2.239**
Husband's education	years	1.008	0.172	1.043	0.886
Wife's education	years	0.896	-1.604	0.886	**-1.710**
5. Ethnicity					
Amhara	dummy	0.889	-0.186	0.713	-0.541
Oromo	dummy	0.507	-1.118	0.425	-1.398
South-Central ethnic groups	dummy	0.132	**-2.717**	0.119	**-2.810**
Other ethnicity	dummy	0.348	**-1.666**	0.306	**-1.837**
6. Religion					
Muslim	dummy	1.071	0.111	0.969	-0.049
Catholic or protestant	dummy	1.483	1.104	2.324	**2.099**
Other religion	dummy	1.491	0.638	2.526	1.287
7. Village dummies		included but not shown			
Number of observations		783		804	
Pseudo-R square		0.129		0.212	
Joint significant tests:		**test**	**p value**	**test**	**p value**
Asset ownership during marriage	chi-square	2.38	0.4977	5.56	0.1352
Marriage contract	chi-square	**10.94**	0.0526	3.14	0.6788
Personal characteristics	chi-square	4.77	0.3121	7.59	0.1076
Children	chi-square	**13.98**	0.0029	**13.78**	0.0032
Village fixed effects	chi-square	**47.34**	0.0000	**74.16**	0.0000
Ethnicity	chi-square	**11.69**	0.0198	**11.00**	0.0265
Religion	chi-square	1.29	0.7309	4.91	0.1784

Note: Tigray is omitted ethnicity; Orthodox is omitted religion; 'no marriage contract' is omitted contract category. Virtually identical results are obtained using conditional logit.

Table 12. Ownership and Right to Rent Land During Marriage
(currently married households only; estimator is two-limit tobit)

		Share of land owned' by wife		Right to rent land	
1. Assets brought to the marriage		Coef.	t stat.	Coef.	t stat.
Pre-marriage land of husband	log(value+1)	-0.067	**-1.912**	-0.349	**-3.809**
Pre-marriage livestock of husband	log(value+1)	0.014	0.340	0.082	0.883
Other assets brought to marriage by husband	log(value+1)	0.001	0.015	0.087	0.800
Inherited land of husband	log(value+1)	-0.115	**-2.776**	-0.123	-1.327
Pre-marriage land of wife	log(value+1)	0.321	**4.957**	0.426	**2.424**
Pre-marriage livestock of wife	log(value+1)	-0.013	-0.277	-0.141	-1.143
Other assets brought to marriage by wife	log(value+1)	0.465	**5.192**	0.980	**4.339**
Inherited land of wife	log(value+1)	0.144	**2.836**	0.242	**1.844**
2. Gifts at the time of marriage					
From groom family to bride/bride family	log(value+1)	-0.135	**-2.421**	-0.519	**-3.715**
From groom family to bride and groom	log(value+1)	-0.399	**-1.715**	-0.822	**-2.177**
From bride family to groom/groom family	log(value+1)	0.035	0.412	-0.061	-0.274
From bride family to bride and groom	log(value+1)	-0.296	**-2.418**	-0.230	-1.121
3. Personal characteristics					
Husband's age	age	-0.028	-1.541	0.004	0.100
Wife's age	age	0.049	**2.229**	0.025	0.558
Husband's education	years	-0.026	-0.381	-0.009	-0.057
Wife's education	years	0.125	1.142	0.400	**1.664**
Whether wife was previously married	Dummy	0.611	**2.277**	0.376	0.592
4. Ethnicity					
Amhara	dummy	-0.441	-0.502	-0.837	-0.435
Oromo	dummy	-0.197	-0.227	0.858	0.462
South-Central ethnic groups	dummy	0.055	0.047	2.619	1.059
Other ethnicity	dummy	-0.441	-0.505	-1.238	-0.602
5. Religion					
Muslim	dummy	-0.449	-0.568	-0.966	-0.652
Catholic and protestants	dummy	0.830	1.503	-0.312	-0.285
Other religion	dummy	2.772	**2.820**	0.921	0.495
6. Village dummies			included but not shown		
Intercept		-0.822	-1.269	2.935	**1.694**
Selection-term		1.836		5.583	
Number of observations		1069		1069	
of which are 0		943		799	
of which are between 0 and 1		58		45	
of which are 1		68		225	
Pseudo-R square		0.312		0.197	
Joint hypothesis tests:		F stat.	p value		
Assets brought to marriage by husband		**2.85**	0.0229	**3.90**	0.0038
Assets brought to marriage by wife		**10.81**	0.0000	**5.92**	0.0001
Gifts at the time of marriage		**3.70**	0.0054	**4.58**	0.0011
Personal characteristics		1.59	0.1738	0.91	0.4575
Village fixed effects		**1.84**	0.0287	**1.98**	0.0165
Ethnicity		0.10	0.9814	0.73	0.5691
Religion		**2.96**	0.0315	0.31	0.8171

Note: Tigray is omitted ethnicity; Orthodox is omitted religion; 'no marriage contract' is omitted contract category.

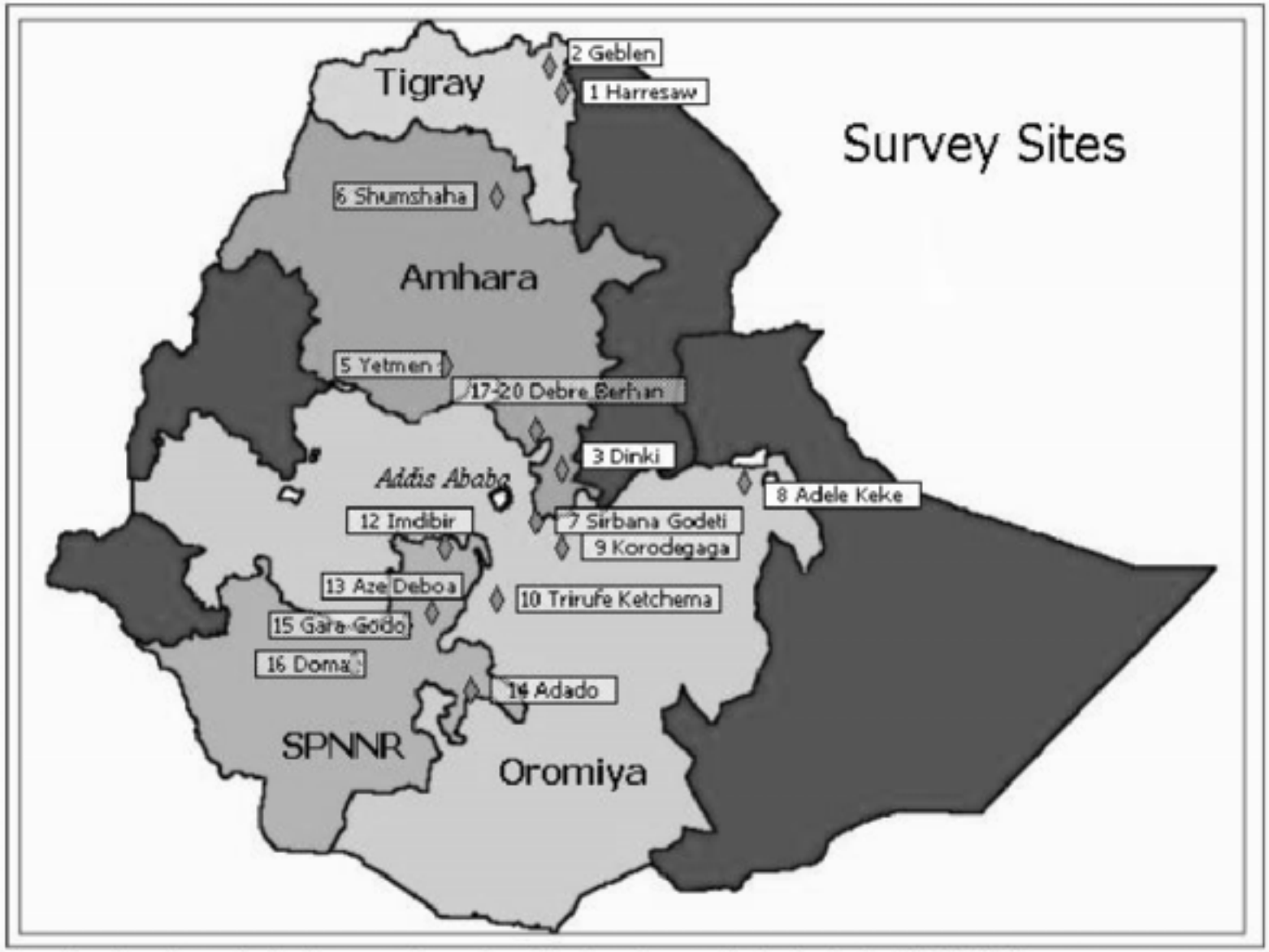
Table 13. Ownership and Management of Livestock During Marriage

(currently married households only; estimator is two-limit tobit)

		Share of livestock owned by: wife		husband		Rigth to sell livestock	
1. Assets brought to the marriage		Coef.	t stat.	Coef.	t stat.	Coef.	t stat.
Pre-marriage land of husband	log(value+1)	0.000	0.009	0.013	0.609	-0.021	-0.789
Pre-marriage livestock of husband	log(value+1)	-0.009	-0.371	0.026	1.014	-0.045	-1.418
Other assets brought to marriage by husband	log(value+1)	-0.015	-0.563	0.033	1.121	-0.015	-0.404
Inherited land of husband	log(value+1)	-0.079	**-3.054**	0.054	**2.245**	-0.050	**-1.654**
Pre-marriage land of wife	log(value+1)	0.046	1.163	0.028	0.522	-0.017	-0.281
Pre-marriage livestock of wife	log(value+1)	-0.014	-0.415	-0.013	-0.341	0.123	**2.897**
Other assets brought to marriage by wife	log(value+1)	0.161	**4.151**	-0.030	-0.588	0.147	**2.252**
Inherited land of wife	log(value+1)	0.041	1.223	-0.004	-0.085	-0.020	-0.438
2. Gifts at the time of marriage							
From groom family to bride/bride family	log(value+1)	-0.046	-1.395	-0.014	-0.431	-0.006	-0.141
From groom family to bride and groom	log(value+1)	-0.114	-1.422	0.093	1.510	-0.124	-1.459
From bride family to groom/groom family	log(value+1)	-0.170	**-1.827**	0.087	1.359	-0.075	-0.991
From bride family to bride and groom	log(value+1)	0.024	0.533	0.003	0.058	0.020	0.315
3. Personal characteristics							
Husband's age	age	-0.010	-1.007	0.014	1.377	-0.010	-0.770
Wife's age	age	0.016	1.275	-0.037	**-2.879**	0.031	**1.996**
Husband's education	years	-0.049	-1.079	0.010	0.250	0.033	0.623
Wife's education	years	0.029	0.412	-0.160	**-2.450**	0.122	1.580
Whether wife was previously married	Dummy	0.729	**4.081**	-0.023	-0.122	-0.031	-0.135
4. Ethnicity							
Amhara	dummy	-0.988	**-1.674**	-0.243	-0.424	0.688	1.070
Oromo	dummy	-0.259	-0.595	0.104	0.212	0.402	0.650
South-Central ethnic groups	dummy	-0.223	-0.354	-0.039	-0.058	0.922	1.169
Other ethnicity	dummy	-1.648	**-2.058**	0.413	0.640	0.401	0.555
5. Religion							
Muslim	dummy	0.657	**1.706**	0.025	0.067	-0.835	**-1.732**
Catholic and protestants	dummy	0.445	1.476	-0.178	-0.632	-0.286	-0.770
Other religion	dummy	-5.147	.	-1.138	**-2.047**	-0.232	-0.321
6. Village dummies				included but not shown			
Intercept		-1.880	**-3.366**	-2.499	**-3.696**	2.435	**3.721**
Selection-term		1.091		1.546		2.143	
Number of observations		939		939		935	
of which are 0		835		638		369	
of which are between 0 and 1		72		130		132	
of which are 1		32		171		434	
Pseudo-R square		0.287		0.262		0.162	
Joint hypothesis tests:		F stat.	p value	F stat.	p value		
Assets brought to marriage by husband	F	**2.51**	0.0403	**2.47**	0.0431	1.84	0.1195
Assets brought to marriage by wife	F	**5.15**	0.0004	0.16	0.9601	**3.55**	0.0070
Gifts at the time of marriage	F	1.87	0.1130	0.97	0.4249	0.75	0.5560
Personal characteristics	F	0.73	0.5736	**3.71**	0.0052	**2.11**	0.0776
Village fixed effects	F	**1.51**	0.0999	**5.05**	0.0000	**3.65**	0.0000
Ethnicity	F	1.20	0.3073	0.57	0.6876	0.49	0.7435
Religion	F	1.88	0.1527	1.46	0.2243	1.03	0.3805

Note: Tigray is omitted ethnicity; Orthodox is omitted religion; 'no marriage contract' is omitted contract category.

Figure 1. Map of Survey Sites



Note: All borders and survey site locations are approximate. Source of basic map (country and regional borders) : UNDP-EUE. 1998.
< http://www.sas.upenn.edu/African_Studies/eue_web/gpatics/newzones.gif >. Updated February 15. (accessed May 16, 1999)