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Inheritance practices and gender differences in poverty and well-being in rural Ethiopia

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What is Chronic Poverty?

The distinguishing feature of chronic poverty is extended duration in absolute poverty.

Therefore, chronically poor people always, or usually, live below a poverty line, which is normally defined in terms of a money indicator (e.g. consumption, income, etc.), but could also be defined in terms of wider or subjective aspects of deprivation.

This is different from the transitorily poor, who move in and out of poverty, or only occasionally fall below the poverty line.



Abstract

This paper examines the role of men's and women's asset inheritance on the poverty and well-being of women and their families in rural Ethiopia. We use data from the 1997, 2004 and 2009 rounds of the Ethiopian Rural Household Survey to investigate the following issues: 1) What is the *long-term* impact of gender differentials in inheritance on household consumption, poverty and food security? 2) Are there significant differences in poverty and well-being between male- and female-headed households, as well as female spouses in male-headed households, taking into account individual and household characteristics, including individually inherited assets? Our most important finding is that it is the amounts of inheritance received, and not whether women inherit at all, that have the most profound impacts on their well-being. Our regressions suggest that whether or not a woman receives inheritance has an insignificant impact on a number of consumption and food security outcomes, but that the *value* of assets inherited and the *area* of land inherited are significant. In particular, land is an important factor in determining women's long-term wellbeing. These findings are significant from a policy perspective. Legal reforms should strive to guarantee not only that women can inherit property but also, more importantly, that they have rights to inherit *equally* with men.

Keywords: equal inheritance, gender, assets, household head,

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Executive summary

Motivation

Inheritance systems and practices comprise ways wealth is transferred from one generation to the next. Underlying these are systems of property rights and the legal framework. If property rights are weak and are contested, assets may not be transferable. Evidence also increasingly shows that assets controlled by women often result in increased investments in the next generation's health, nutrition and schooling (Quisumbing and Maluccio, 2003; Smith et al., 2003). Apart from positive impacts on the next generation, women's ability to inherit wealth also affects their own well-being. If inheritance determines women's current wealth, which in turn has positive impacts on consumption, productivity and other measures of well-being, and to the extent that inherited wealth is the result of a woman's parents' decisions regarding inheritance, inheritance decisions have an impact on the well-being of the next generation, and thus the intergenerational transmission of wealth, or of poverty.

Ethiopia is one of the poorest countries in the world, and is striving to provide for its chronically food-insecure people. There is considerable diversity in gender norms related to property ownership, inheritance and the division of assets after divorce, with men favoured in the majority of cases (Fafchamps and Quisumbing, 2002). Such gender disparities have important welfare consequences.

Questions

This paper examines the role of inheritance on the well-being of women and their families using new panel data from rural Ethiopia. It examines the role of men's and women's asset inheritance on the poverty and well-being of women. It investigates the following issues:

- (1) What is the *long-term* impact of gender differentials in inheritance on household consumption, poverty and food security?
- (2) Are there significant differences in poverty and well-being between male- and female-headed households, as well as female spouses in male-headed households, taking into account individual and household characteristics, including individually inherited assets?

Method

To analyse the impact of inheritance on household outcomes, we differentiate between whether or not women receive inheritance and the amount received. This type of analysis helps distinguish between the effect of the quantity inherited and the mere effect of any amount inherited. This information is potentially valuable to inform the argument on whether giving women rights to inherit or giving them *equal* inheritance rights makes a difference.



Data

We use data from the 1997, 2004 and 2009 rounds of the Ethiopian Rural Household Survey (ERHS) to examine the impact of inherited assets on indicators of household and women's well-being. Data collection was coordinated by the Economics Department at Addis Ababa University, in collaboration with the Centre for the Study of African Economies at Oxford University and the International Food Policy Research Institute. The ERHS is a longitudinal dataset that covers approximately 1,300 households in 15 villages all across Ethiopia.

Descriptive results

Female-headed households differ significantly from their male counterparts across a number of dimensions. Female heads are, on average, older and less educated than male heads; they have no education, whereas their male counterparts have at least two years of schooling. Female-headed households also tend to be smaller, with a larger fraction of female members.

Female-headed households are also worse-off compared with their male counterparts in terms of land and asset ownership. Male-headed households own 2.2 ha of land, on average, compared with 1.7 ha for female-headed households. Male-headed households also have 9.4 tropical livestock units (TLUs), which is significantly different from female-headed households' holdings, of 8.8 TLUs. In terms of real per capita consumption, however, there is no significant difference between male- and female-headed households.

Male heads are more likely to receive inheritance or gifts from parents and larger plots of land on average than their female counterparts. A total of 48 percent of male heads received gifts or inherited assets from their parents, compared with only 33 percent of female heads. Male household heads inherited, on average, 0.42 ha of land, whereas female household heads inherited 0.36 ha. However, a much lower percentage of wives (spouses in male-headed households) received inheritance from their parents – only 7 percent – and areas of land inherited were only 0.07 ha, much lower than those of female heads of households.

We measure food insecurity by the food gap, which is defined as the number of months the household faced difficulty satisfying its food needs. We find that female-headed households are more likely to be food-insecure compared with their male counterparts: they report that they are unable to satisfy their food needs in 3.81 months, compared with 2.63 months for male-headed households. Self-reported poverty is also significantly higher among female-headed households (25 percent compared with 18 percent), as is the inadequacy of food consumption in the month prior to the survey.

Regardless of headship status, about a quarter of women feel that most people can be trusted and that they are trustworthy. While about half of female heads and wives of male



heads alike feel their life is determined by their own actions, a higher percentage of female heads feel they have the power to make decisions that change the course of their life, and a higher percentage also feels they are usually able to protect their personal interests. Although female heads feel they have more power to change their life compared with spouses of male heads, they seem less satisfied with their life compared with spouses of male heads. Much lower percentages of female heads say their life is close to their ideal, the conditions of life are excellent, they are satisfied with their life and they have got the important things they want in life. These summary statistics suggest that female heads experience lives that are substantially different from those of spouses of male heads. Although female heads have more power to take decisions and have higher values of inherited assets compared with wives in male-headed households, as a whole they live in households that collectively command fewer resources and consequently end up with worse outcomes related to poverty, food security and general satisfaction with life compared with wives in male-headed households. Apparently, the higher values of inherited assets and greater degree of control over one's own resources are not enough to compensate for the other advantages of living in a male-headed household.

Regression results

The descriptive results suggest the relationship between inheritance, marital status and well-being is complex, so we turn to regression analysis that permits us to simultaneously examine the impact of inheritance receipts and headship on household and individual well-being, taking into account household and individual characteristics. All regressions include controls for age and sex composition of the household, livestock units held in 1997, real per capita consumption in 1997, whether the household was poor in 1997 and which land quartile the household belonged to in 2004. Standard errors are clustered at the village level. We distinguish inheritance received by the head or the wife in a male-headed household. Further, we distinguish whether it is the female head who receives the inheritance by interacting the inheritance dummy variable with the female head dummy variable.

Regression results show that amounts of inheritance received by women, not merely the fact that women inherit, have profound impacts on their well-being. That is, the *value* of assets inherited and the *area* of land inherited had significant impacts on a number of consumption and food security outcomes, whereas whether or not a woman received any inheritance had an insignificant impact on the food gap, self-reported poverty or adequacy of food consumption, housing or health care. Regardless of male or female headship, total areas of land inherited by the head and by the spouse of the head decrease the likelihood of women reporting that the household is poor or has less than adequate expenditure on food, housing and health care.

Regression analysis of the impact of inheritance on outcomes such as step on the ladders of life, rights and control over one's life and how things have been going in general shows that



the total area of land always has a positive effect on all these outcomes, regardless of whether land is inherited by the head or by the spouse. This highlights the importance of land as a productive asset in Ethiopia's agrarian economy.

The impacts of inheritance practices on perceptions of trustworthiness among women show that whether or not an individual receives an inheritance has no significant impact on perceptions of trust, but the total land area and value of inheritance has significant effects. In terms of measures of long-term happiness, female heads who received inheritance or gifts are more likely to be happy about their life outcomes.

Conclusions

The preceding analysis stresses the point that amounts of inheritance received by women, not merely the fact that women inherit, have the most profound impacts on their well-being. That is, the *value* of assets inherited and the *area* of land inherited had significant impacts on a number of consumption and food security outcomes, whereas whether or not a woman received any inheritance had an insignificant impact. In rural Ethiopia, land is an important factor in determining long-term well-being among women. These findings are significant from a policy perspective. It is not enough to guarantee that women can inherit property; they must have rights to inherit *equally* with men.



1 Introduction

Inheritance systems and practices comprise ways in which wealth is transferred from one generation to the next. Unlike common perceptions of inheritance as occurring only on the death of a parent, taking the form of a bequest, the transfer of wealth from the older to the younger generation can occur at critical points over the life-cycle, including at the formation of a new household, usually at the time of marriage. A marriage's dissolution may also be regarded as a critical point in the lifetime, as divorced or separated status can significantly affect inheritance rights and responsibilities (Cooper, 2010), particularly for women. Similarly, birth of children may affect decisions to be made concerning the distribution of parents' accumulated assets, as do parents' aging and retirement from productive working capacities. These critical points are the catalysts for transferring (or not) assets from one person or household to others.

Underlying these inheritance systems and practices are systems of property rights and the legal framework. If property rights are weak and are contested, assets may not be transferable to the next generation. Often, statutory and customary law is not consistent, and poor claimants often do not have the resources or legal know-how to assert their property rights. In developing countries, formal legal systems may well be biased, not only against the poor but also against women. The difficulty in ensuring equity in intergenerational transfers is well illustrated by persistent gender disparities in inheritance, particularly of land. Gender disparities in the inheritance of natural and physical capital persist partly because the legal framework supports property rights systems that are biased against women (Gopal, 2001; Quisumbing and Meinzen-Dick, 2001). Thus, legal reform is necessary to change statutory laws to strengthen women's entitlements, and to increase the enforceability of their claims over natural and physical assets (Quisumbing, 2009).

The gender issue in asset inheritance is important not only because of equity considerations, but also because it has important implications for the transfer of wealth to the next generation. In the face of the HIV/AIDS epidemic in Sub-Saharan Africa, a widow may be forced to leave her husband's village on his death, and therefore will have no control over land and other assets used jointly. In some cultures, 'widow inheritance', in which a woman is expected to marry the brother of the deceased, is the only way she can retain rights to her husband's land. However, such practices place women at even greater risk of acquiring the disease (Drimie, 2003; Gillespie and Kadiyala, 2005; Strickland, 2004). There is also increasing evidence to show that assets controlled by women often result in increased investments in the next generation's health, nutrition and schooling (Quisumbing and Maluccio, 2003; Smith et al., 2003). Preventing the intergenerational transmission of poverty may therefore involve a two-pronged solution of making opportunities to acquire and transfer assets more equitable across households, as well as reducing inequality in the control of resources within the household (Quisumbing, 2009).



Apart from positive impacts on the next generation, women's ability to inherit wealth also affects their own well-being. Agarwal (2001, 1997, in Cooper, 2010) argues that women's ownership of land leads to improvements in women's welfare, productivity, equality and empowerment. Property ownership by women has also been found to protect them against domestic violence. In India, for example, a house is an important asset not only because it often represents a store of value and a productive investment, but also because it may protect a woman (and her family) from violence (Panda and Agarwal, 2005).¹ Cooper's (2010) review of inheritance and the intergenerational transmission of poverty in Sub-Saharan Africa argues that owning assets may give women additional bargaining power, not just in the household but also in their community and other public arenas, contributing to their social, economic and political empowerment. Other research has demonstrated that equal access, control and ownership of land has instrumental value in terms of its positive impact on consumption (increasing spending on food, children's welfare and education: see Quisumbing, 2003) and productivity (particularly in areas such as Sub-Saharan Africa, where women are responsible for the majority of land cultivation) (Bird and Pratt, 2004). If inheritance determines women's current wealth, which in turn has positive impacts on consumption, productivity and other measures of well-being, and to the extent that inherited wealth is the result of a woman's parents' decisions regarding inheritance, inheritance decisions have an impact on the well-being of the next generation, and thus the intergenerational transmission of wealth, or of poverty.

This paper examines the role of men's and women's asset inheritance on the poverty and well-being of women and their families. It investigates the following issues: 1) What is the *long-term* impact of gender differentials in inheritance on household consumption, poverty and food security? 2) Are there significant differences in poverty and well-being between male- and female-headed households, as well as female spouses in male-headed households, taking into account individual and household characteristics, including individually inherited assets?

The paper is organised as follows. Section 2 presents a simple model of the impact of inherited assets and legal reform on the well-being of individuals and their families. Section 3 describes the country context and the data. Section 4 presents the descriptive results in terms of characteristics of male- and female-headed households, inheritance patterns and well-being outcomes, and Section 5 presents the regression results of the impact of inherited assets on consumption, food security, poverty outcomes and long-term happiness and well-being among women. Section 6 concludes and discusses policy implications.

¹ A house may be a store of value that appreciates over time, but it can also be used as a productive investment if home-based enterprises are run out of it.



2 Conceptual model and empirical specification: testing the impact of inherited assets on household well-being

The objective of this study is to examine the long-term impact of gender differentials in inheritance on household consumption, poverty and food security. We hypothesise that households with lower levels of inherited assets have worse consumption, food security and poverty outcomes. Because assets controlled by men and women have been shown to have differential effects on household and individual well-being (see, e.g., Quisumbing and Maluccio 2003 and, for Ethiopia, Fafchamps et al., 2009), we want to examine the differential impact of men's and women's inherited assets on these outcomes. We would also like to investigate whether gender differentials in inheritance have implications for long-term happiness and well-being among men and women and their life aspirations and ability to take decisions that change the course of their lives.

To test whether the impact of inheritance differs depending on who within the household inherits it, we estimate a model in which a vector Y_i of household and individual well-being outcomes is a function of individual inherited assets, and individual, household and village characteristics, whereby the individuals are identified as the female head (in a female-headed household) or the spouse of the male head.

$$Y_i = \lambda_0 + \lambda_1 FHH + \lambda_2 A_h + \lambda_3 A_s + \lambda_4 FHH * A_h + \lambda_5 X_{hh} + \lambda_6 Z + \varepsilon, \quad (6)$$

where FHH is a dummy variable indicating that the household was female-headed in 1997; A_h , and A_s are vectors of assets inherited by the head (h) and spouse (s), respectively, as of 1997; FHH * A_h is the interaction between the assets inherited by the head and the dummy variable for a female-headed household; X_{hh} is a vector of baseline household characteristics, such as controls for age and sex composition of the household in 1997, sex of the household head in 1997, livestock units held in 1997, real per capita consumption in 1997, whether the household was poor in 1997 and which land quartile the household belonged to in 2004; z_s are dummy variables indicating characteristics such as location; ε is a stochastic error term; and λ s are parameters to be estimated.²

In specifying A_h , and A_s , we examine the effect of any inheritance or the amount of inheritance, testing a model in which inheritance is modelled as a discrete variable versus

² We do not include landholding size as a regressor because this variable could be highly correlated with inherited assets, since inherited land accounts for the greatest proportion of the value of inherited assets (Fafchamps and Quisumbing, 2005).



one in which we allow the amount of inheritance to be a continuous variable. That is, in the first case, \mathbf{A}_h and \mathbf{A}_s could be specified as 0/1 dummy variables, taking the value of 0 if the head or spouse did not receive any inheritance, and 1 if they received a positive amount of inheritance. This type of analysis will help distinguish between the effect of the quantity of assets inherited and the effect of any amount inherited. This information is potentially valuable to inform the argument on whether giving women rights to inherit or giving women *equal* inheritance rights makes a difference.

Because our vector of outcomes \mathbf{Y}_i consists of both discrete and continuous variables, the appropriate estimation techniques will differ depending on the outcome. Regressions with continuous variables are estimated using ordinary least squares; regressions with dichotomous outcome variables are estimated using probit. All standard errors are corrected for clustering within villages using the Huber-White estimator.



3 Context and data

3.1 Country context

Chronic food insecurity is a challenge for Ethiopia, one of the poorest countries in the world. The country is characterised by substantial diversity in agro-ecology and farming systems, as well as ethnic and religious diversity. With over 85 ethnic groups and most major world religions represented, including animist belief systems (Webb et al., 1992), one would expect substantial variation in gender norms and in inheritance customs. Indeed, the ethnographic literature suggests that women's status is relatively higher in the north but declines as one goes south. Consistent with anthropological evidence that women in Tigray have higher status, women in other ethnic groups inherit less relative to Tigrinians, with Amhara women and women from other/mixed ethnic groups inheriting significantly less (Fafchamps and Quisumbing, 2005).

There is also considerable diversity in gender norms related to property ownership, inheritance and the division of assets after divorce, with men favoured in the majority of cases (Fafchamps and Quisumbing, 2002). Such gender disparities have important welfare consequences. For example, Dercon and Krishnan (2000) test whether individual illness shocks affected the evolution of body mass index, controlling for a variety of confounding factors. They find that, while risk is shared efficiently in most of the Ethiopian highlands, poor women in the southern part of the country, where customary laws on settlement at divorce are biased against women, fare worst. Fafchamps et al. (2009) find that, in Ethiopia, the relative nutrition of spouses is associated with correlates of bargaining power, such as cognitive ability, independent sources of income and devolution of assets on divorce, and that several dimensions of female empowerment benefit the nutrition and education level of children. Whether received through inheritance or through settlements on marriage dissolution, the assets that women control within marriage have important implications for their families and their own well-being.

3.2 The Ethiopian Rural Household Survey

We use data from the 1997, 2004 and 2009 rounds of the Ethiopian Rural Household Survey (ERHS) to examine the long-term impact of inherited assets on poverty and well-being. Data collection was coordinated by the Economics Department at Addis Ababa University, in collaboration with the Centre for the Study of African Economies at Oxford University and the International Food Policy Research Institute. The ERHS is a longitudinal dataset that covers approximately 1,300 households in 15 villages all across Ethiopia. Although the 15 villages included in the sample are not statistically representative of rural Ethiopia, they are quite diverse and include all major agro-ecological, ethnic and religious groups. Figure 1 shows the location of the sample villages. About a third (32 percent) of sample households are female-headed, although there is wide variation across the survey villages (Figure 2). The



highest rates of female headship are found in the two Tigray sites (Haresaw and Geblen), at 59 percent and 57 percent, respectively, and the lowest is found in Yetmen, at 17 percent.

Figure 1: Map showing location of ERHS villages

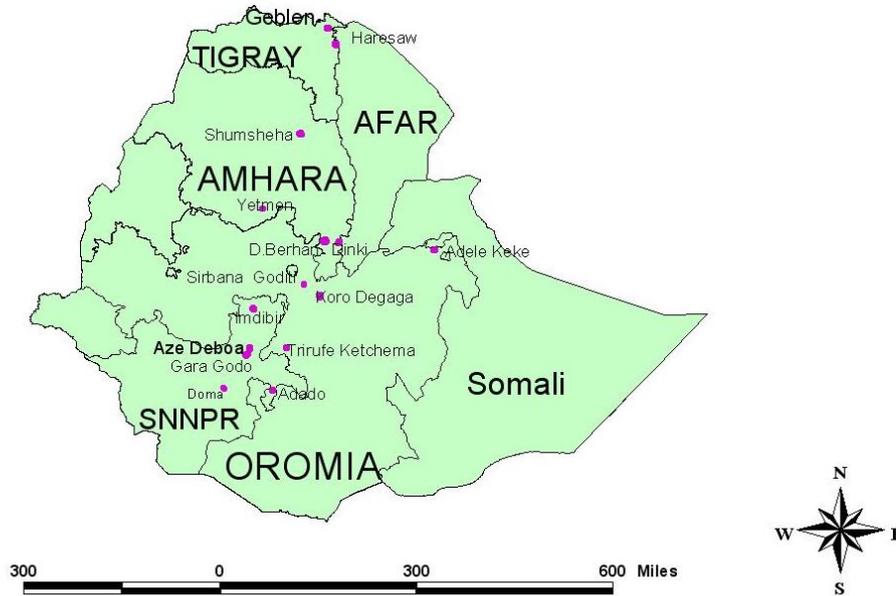
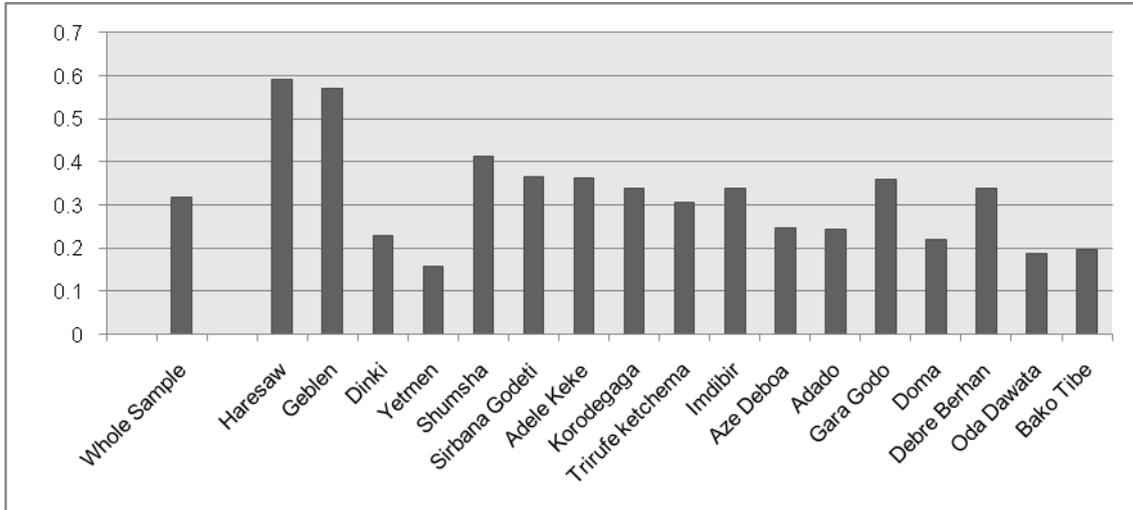


Figure 2: Proportion of female-headed households in ERHS villages



These data are well-suited to addressing the research questions outlined above. Apart from standard socioeconomic characteristics of the household, the 1997 round has information on assets inherited, pre-marriage assets, gifts at marriage disaggregated by gender and perceptions about allocation of assets on divorce and death. These data were used to construct the main variables of interest, such as whether or not the wife inherited any assets, and total value of assets inherited, reported separately for husband and wife. Data from the more recent rounds were used to construct and compare the outcomes of interest, that is, on consumption, perceptions of happiness, etc. Because information on the same set of outcomes was not collected in all rounds, we treat information from earlier rounds as



predetermined variables, rather than estimate panel data regression models. Both authors were involved in the design of key modules fielded in the 2009 survey. The first author was involved extensively in pre-testing and fieldwork for the 2009 survey round and the second author for the 1997 round.

4 Descriptive results

4.1 Characteristics of male- and female-headed households

The surveys collected information on household demographic characteristics, occupation, cropping patterns, perceptions of poverty and well-being, experience with shocks, access to credit, etc. We present, in Table 1, some of the summary statistics for our sample, disaggregated by gender of household head. Female-headed households differ significantly from their male counterparts across a number of dimensions. Female heads are, on average, older and less educated than male heads; female heads on average have no education, whereas their male counterparts have at least two years of schooling. The gender disparity in schooling is not limited to education of the head but is also true for the household at large: the highest education level within a female-headed household is 4.76 years, which is about a year and half less than that in male-headed households. Female-headed households also tend to be smaller, with a larger fraction of female members. Because household size is proportional to the amount of labour resources the household controls in a rural area, and because many farm operations (especially ploughing) are intensive in male labour, female-headed households are disadvantaged with respect to labour endowments.

Table 1: Descriptive statistics by gender of household head, ERHS 2009

	Female-headed hh	Male-headed hh	p-value
Age of head	54.28	52.53	**
Education of head	0.33	2.22	***
Highest grade obtained	4.76	6.28	***
Fraction of female members in hh	0.62	0.47	***
Fraction of dependent members in hh	0.51	0.52	
Household size	4.39	6.38	***
Total land owned (ha)	1.73	2.20	***
Total livestock owned (tropical units)	8.82	9.39	***
Fraction of households owning any oxen	0.37	0.61	***
Per capita consumption in 2004 (birr)	94	91	
Proportion of years in which consumption fell below average	0.39	0.41	
Fraction of hhs that are member of an <i>iddir</i>	0.76	0.89	***
Network size	8.61	11.41	***
Fraction of hhs that have a bank account	0.05	0.06	
Number of sources from which a household can borrow	1.32	1.57	***

Note: \$1 = 8.6 Ethiopian birr in 2004).

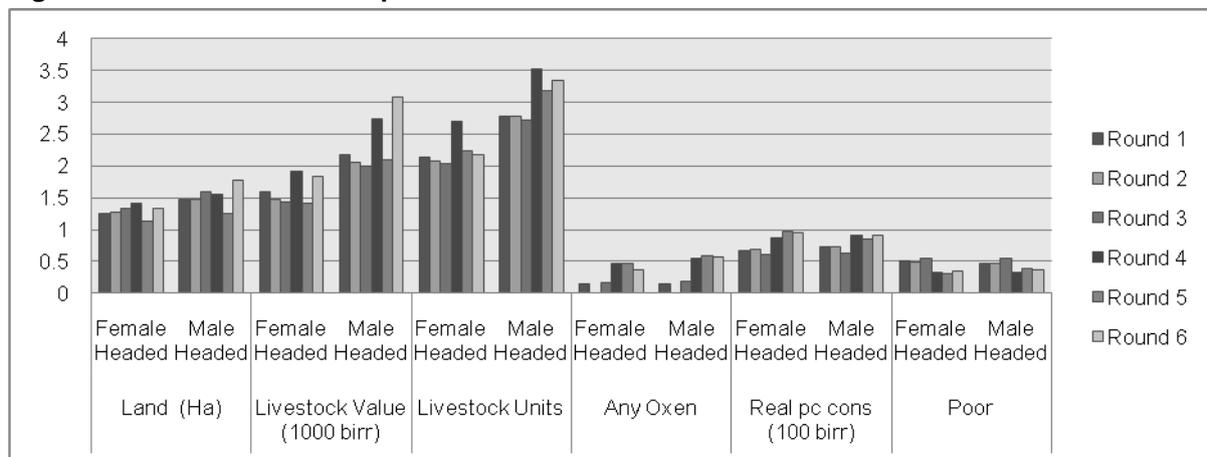
Female-headed households are also worse-off compared with their male counterparts in terms of land and asset ownership. Male-headed households own 2.2 ha of land, on average, compared with 1.7 ha for female-headed households. Male-headed households also have 9.4 tropical livestock units (TLUs), which is significantly different from female-headed households' holdings, of 8.8 TLUs. Around 60 percent of male-headed households



are much more likely to have at least some oxen compared with 37 percent of female-headed households.

In terms of real per capita consumption, however, there is no significant difference between male- and female-headed households (Table 1). Real per capita consumption per month of male-headed households in 2004 was 91 birr, and that of female-headed households 94 birr, but the difference is not statistically significant.³ We construct a measure that indicates the proportion of years the consumption of the household fell below its average consumption over six rounds. Table 1 shows that female- and male-headed households alike experience shortfalls in consumption about 40 percent of the time. Figure 3 presents data on asset holdings, real per capita consumption and whether or not a household was poor from the previous six rounds of the ERHS, disaggregated by gender of household head. It shows that, although female-headed households' real per capita consumption was about the same and even surpassed that of male-headed households in the last two rounds, their asset level has always been below that of their male counterparts. Maintaining consumption levels may have come at the cost of asset accumulation: if female-headed households dispose of assets in order to guarantee consumption, they may be at risk of falling into an asset poverty trap, which may make it more difficult for them to move out of poverty in the long run.

Figure 3: Assets and consumption over time



Next, we move on to measures of social capital, namely, network size and membership in an *iddir* (burial society or funeral association). Network size is defined as the number of people respondents say they can rely on in times of need. Table 1 shows that male-headed households on average have larger networks (11.41 persons vs. 8.61 for female-headed households), and that male-headed households are more likely to be members of an *iddir* (89 percent compared with 76 percent). In terms of access to financial institutions and credit,

³ Consumption aggregates for the 2009 round are still being computed, so we report the most recent available consumption data (2004).



the proportion of households holding a bank account is quite small (about 5 percent) and is not substantially different for the two groups. However, male-headed households have access to a greater number of sources from which they can borrow (1.57 sources vs. 1.32 sources for female-headed households).

4.2 Inheritance patterns and property rights

The 1997 round of the ERHS collected information on whether the head and the spouse received any assets or land as inheritance or as a gift from their parents. We also have the total value of assets received and the total land inherited, in hectares. These are the same data that were previously analysed in Fafchamps and Quisumbing (2005), but the emphasis in this paper is on inheritance, whereas the earlier paper focused on assets at marriage.

Table 2 presents summary statistics for the fraction of heads that received inheritance or gifts, the total value of these assets and the total amount of land (in hectares) inherited, disaggregated by gender of household head and correspondingly for the spouse of the male head. Male heads are more likely to receive inheritance or gifts from their parents and larger plots of land on average than their female counterparts. A total of 48 percent of male household heads had received gifts or inherited assets from their parents, compared with only 33 percent of female heads. Male household heads inherited, on average, 0.42 ha of land, whereas female household heads inherited 0.36 ha. However, a much lower percentage of wives (spouses in male-headed households) received inheritance from their parents – only 7 percent – and areas of land inherited were only 0.07 ha, much lower than for female heads of households. For men, three-quarters of inherited wealth is land, and the rest is livestock; the opposite is true for women (Fafchamps and Quisumbing, 2005).

Interestingly, however, the total value of assets inherited or received as gifts was larger for female heads (1,300 birr) as compared with male heads (962 birr). In contrast, only 15 percent of the spouses of male heads received assets as inheritance or gifts, and the total value of inherited assets among spouses of male heads was also quite small, at 190 birr. If most marriages occur while the parents of the bride and groom are still alive, it is possible that parents use post-marital transfers (bequests) to ensure divorced women have assets with which to support their family. Indeed, previous analysis shows that most parental transfers to the husband occur at the time of marriage, in order to establish the new family and productive unit, whereas most parental transfers to the wife occur as inheritance (on the parent's death) (Fafchamps and Quisumbing, 2005) although, in terms of absolute amounts inherited, wives inherit much less than husbands. The higher values of assets inherited by female heads may therefore reflect compensatory behaviour by parents, bestowing more assets on daughters whose marriages have dissolved. Alternatively, if wealthier women – those who have substantial amounts of inherited assets – are more likely to leave marriages, we may observe higher asset levels among female heads than among male heads. Female heads in our sample are also older than spouses of male heads on average (52 years old



compared with 35 years old), which makes the former more likely to inherit as their parents are more likely to have died.

Table 2: Independent variables – summary statistics disaggregated by gender of head

	Female-headed hh	Male-headed hh	p-value of difference in means
Dummy indicating head received assets as inheritance or gifts from parents	0.33	0.48	***
Dummy indicating spouse of male head received assets as inheritance or gifts from parents		0.15	
Dummy indicating head received assets as inheritance from parents	0.20	0.28	***
Dummy indicating spouse of male head received assets as inheritance from parents		0.07	
Value of inherited/gifted assets from parents by the head (birr)	1300.14	961.86	*
Total land inherited/gifted from parents to the head (ha)	0.36	0.42	
Value of inherited/gifted assets from parents by the spouse of male head (birr)		190.22	
Total land inherited/gifted from parents to spouse of male head (ha)		0.07	

Gender differences in inheritance can be understood in the context of old age support patterns in Ethiopia: sons are traditionally responsible for care for their parents in their old age, although recently daughters who are employed have contributed increasingly as well. Brides typically do not inherit anything, since daughters inherit only in the absence of an eligible male heir, although it is possible that parents will use bequests to provide for daughters who have done poorly in the marriage market.⁴ If parents feel their daughters are well-provided for by being in intact marriages, they may not make sizeable transfers on death, which may explain the lower incidence and amount of inherited assets among wives who live in male-headed households. In the remainder of this paper, we attempt to relate differential inheritance of assets by men and women to household and individual well-being.

4 The typical inheritance practice in rural Ethiopia is as follows: if a person had land and many sons and daughters, the land would have been divided equally among all the sons. However, the brothers would have let their sisters make use of their land in cases in which the livelihood of their sisters was affected negatively. If the person had no sons, then the land would have been divided equally among all daughters. In urban areas, if a person had many properties, they would have been divided equally among the sons or among the daughters if there were no sons (Fafchamps and Quisumbing, 2005).

4.3 Household and individual well-being outcomes

We recognise that well-being is a multidimensional concept that cannot be measured solely using money-metric indicators. Just as analyses of poverty are increasingly no longer limited to income and consumption measures, but have moved towards assets and concepts of human development or well-being (see Addison et al., 2009), our analysis encompasses a number of measures of household and individual well-being, which Table 3 describes. These outcomes are meant to capture the respondent's perception of the quality of her life and that of her household. The first set of outcome variables is related to poverty at the household level, encompassing food security and food consumption, self-rated poverty, adequacy of health care and adequacy of housing. The second set of variables relates to perceptions of well-being as indicated by the step on a nine-step ladder of life and ladder of control over one's life, where Step 9 indicates the best possible outcome and Step 1 indicates the worst. Modules obtaining information on these outcome variables were administered in both 2004 and 2009. Finally, a module that asked questions relating to trust, life aspirations and power to change one's life was introduced in 2004 to measure aspirations.

Table 3: Outcome variables of interest and their description

Outcome	Type	Description
<i>Food security outcomes</i>		
Food gap in months	Continuous	Number of months in the past 12 (13 Ethiopian) months the respondent experienced problems satisfying the food needs of the hh
Food consumption less than adequate in the past months	Dichotomous (1/0)	Whether the family's food consumption over the past one month was reported as less than adequate
<i>Poverty-related outcomes</i>		
Self reported as poor	Dichotomous (1/0)	Whether the respondent describes his or her household circumstances as 'never have quite enough', 'poor' or 'destitute'
Housing less than adequate in the past months	Dichotomous (1/0)	Whether the family's housing over the past one month was reported as less than adequate
Health care less than adequate in the past months	Dichotomous (1/0)	Whether the family's health care over the past one month was reported as less than adequate
<i>Ladders of life, rights and control</i>		
Ladder of life	Continuous (Step 1 worst, Step 9 best)	Respondent's perception of present step on the ladder of life, where the top of a ladder represents the best possible life and the bottom represents the worst possible life
How have things been in the past month	Continuous (1 best, 7 worst)	This question was designed to capture respondents' perception of the general condition of her family. Responses range from 1 (going well in every possible way) to 7 (going poorly in every possible way)
Ladder of rights	Continuous (Step 1 worst, Step 9 best)	Respondent's perception of step on a nine-step ladder, where at the bottom, on the first step, stand people who are completely without rights, and on the highest step stand those who have a lot of power



Outcome	Type	Description
Ladder of control over one's life	Continuous (Step 1 worst, Step 9 best)	Respondent's perception of step on a nine-step ladder, where at the bottom, the first step, are those who are totally unable to change their lives, and on the highest step stand those who have full control over their own life
<i>Trust, control and general well-being</i>		
Most people are basically honest	Dichotomous (1/0)	Agree or strongly agree that most people are basically honest
Most people can be trusted	Dichotomous (1/0)	Agree or strongly agree that most people can be trusted
My life is determined by my own actions	Dichotomous (1/0)	Agree or strongly agree that my life is determined by my own actions
I have power to make decisions that change the course of my life	Dichotomous (1/0)	Agree or strongly agree that I have power to make decisions that change the course of my life
I am usually able to protect my personal interests	Dichotomous (1/0)	Agree or strongly agree that I am usually able to protect my personal interests
In most ways my life is close to my ideal	Dichotomous (1/0)	Agree or strongly agree that in most ways my life is close to my ideal
The conditions of my life are excellent	Dichotomous (1/0)	Agree or strongly agree that the conditions of my life are excellent
I am satisfied with my life	Dichotomous (1/0)	Agree or strongly agree that I am satisfied with my life
So far I have got the important things I want in life	Dichotomous (1/0)	Agree or strongly agree that so far I have got the important things I want in life
If I could live my life over, I would change almost nothing	Dichotomous (1/0)	Agree or strongly agree that, if I could live my life over, I would change almost nothing

Table 4 presents summary statistics of the outcome variables for male- and female-headed households. We measure food insecurity by the food gap, which is defined as the number of months in which the household faced difficulty in satisfying its food needs. Table 4 indicates that female-headed households are more likely to be food-insecure compared with their male counterparts, reporting that they are unable to satisfy their food needs in 3.81 months, compared with 2.63 months for male-headed households. Self-reported poverty is also higher among female-headed households (25 percent compared to 18 percent), as is the inadequacy of food consumption in the past month prior to the survey, with a p-value on the difference of less than 0.1. A total of 42 percent of female-headed households reported that their food consumption was less than adequate in the past month, compared with 34 percent of male-headed households. Male- and female-headed households reported fairly similar results for housing and health (differences were not statistically significant), with 27 percent of female-headed households reporting that housing was less than adequate (compared with 29 percent of male-headed households), and 34 percent of female-headed households reporting inadequate health care, compared with 31 percent of male-headed households.

Table 4: Outcome variables – summary statistics disaggregated by sex of head, 2009

Outcome	Female-headed hh	Male-headed hh	p-value of difference in means
Survey respondent	Female head	Spouse of male head	
<i>Outcomes related to consumption and food security (answered by household head)</i>			
Food gap in months	3.81	2.63	***
Self reported as poor	0.25	0.18	*
Food consumption less than adequate in the past months	0.42	0.34	*
Housing less than adequate in the past months	0.27	0.29	
Health care less than adequate in the past months	0.34	0.31	
<i>Outcomes related to ladders of life and control (answered by female head and wife in male-headed household)</i>			
Ladder of life (Step 1 worst, Step 9 best)	4.04	4.89	***
How have things been in the past month?	3.99	3.51	***
Ladder of rights	5.55	5.81	**
Ladder of control over one's life	5.09	5.59	***
<i>Perceptions of trust, satisfaction with and control over one's life</i>			
Most people are basically honest	0.29	0.27	
Most people can be trusted	0.26	0.25	
My life is determined by my own actions	0.50	0.48	
I have power to make decisions that change the course of my life	0.51	0.45	*
I am usually able to protect my personal interests	0.43	0.38	*
In most ways my life is close to my ideal	0.21	0.26	**
The conditions of my life are excellent	0.17	0.27	***
I am satisfied with my life	0.24	0.32	***
So far I have gotten the important things I want in life	0.19	0.24	**
If I could live my life over, I would change almost nothing	0.19	0.20	

Note: *, **, *** indicate significance at 10, 5 and 1 percent, respectively.

It is often argued that sex of the household head is a misleading indicator of the well-being of women in general, because focusing only on headship neglects the welfare of women in male-headed households (Quisumbing and Meinzen-Dick, 2001). In order to compare the well-being of women in female-headed households with those in male-headed households, in 2009 we asked both female heads of households and spouses of male heads about their lives – on what step they thought they would be on the ladder of life, whether they felt they had rights and how much they felt they were in control of their life. The ladder of life is an exercise meant to draw out people's perceptions of well-being, and can be administered to individuals or groups. In a typical ladder of life exercise, individuals are asked to describe where they are on a ladder, where the steps correspond to levels of overall well-being, with possible responses ranging from 1 to 9, where 1 is the worst possible situation and 9 the best. Such 'ladders' have been adapted to elicit perceptions about other issues, such as wealth, rights and happiness, in other studies (Narayan et al., 2009), as well as perceptions of control over one's life, as in this study.



The summary statistics for these variables in Table 4 show that, on average, female heads and spouses of male heads are not too far apart on the ladder of life and control, but female heads' perceptions of their position on the ladder of life and of their degree of control over their life are worse than those of wives in male-headed households.

Table 4 also examines whether there are differences in perceptions of trust and honesty, life aspirations and perceptions of power to change one's life between female heads and wives of male heads. Regardless of headship status, about a quarter of women feel that most people can be trusted and that they are trustworthy. Although this number is rather low, there is no significant difference in perception between female heads and wives in male-headed households. While about half of female heads and wives of male heads alike feel their life is determined by their own actions, a higher percentage of female heads feel they have the power to make decisions that can change the course of their lives (51 percent vs. 45 percent, with a p-value <0.1), and a higher percentage (43 percent vs. 38 percent, with a p-value <0.1) also feels they are usually able to protect their personal interests. Although female heads feel they have more power to change their lives compared with spouses of male heads, they seem less satisfied with their lives. Much lower percentages of female heads say their life is close to their ideal, that the conditions of their life are excellent, that they are satisfied with their life and that they have gotten the important things they want in life (all with p-values <0.05). These summary statistics suggest that female heads experience lives that are substantially different from those of spouses of male heads. Although female heads have more power to take decisions and have higher values of inherited assets compared with wives in male-headed households, as a whole they live in households that collectively command fewer resources (Table 1) and consequently end up with worse outcomes related to poverty, food security and general satisfaction with their lives compared with wives in male-headed households. Apparently, the higher values of inherited assets and the greater degree of control over one's own resources do not outweigh the other advantages of living in a male-headed household.



5 Examining the impact of inheritance on well-being

Given that the descriptive results suggest that the relationship between inheritance, marital status and well-being is complex, we turn to regression analysis that permits us to simultaneously examine the impact of inheritance receipts and headship on household and individual well-being, taking into account household and individual characteristics. Although not reported in the tables, all regressions include controls for age and sex composition of the household, livestock units held in 1997, real per capita consumption in 1997, whether the household was poor in 1997 and which land quartile the household belonged to in 2004. Because information on all outcomes (notably gender-differentiated asset inheritance) was not collected in all survey rounds, we do not estimate a panel data model, but use data from previous rounds (1997 and 2004) as predetermined values of variables in the regressions. Standard errors are clustered at the village level. Following the model specified in Section 2.1, we distinguish inheritance received by the head or the wife in a male-headed household. We also distinguish whether it is the female head who receives the inheritance by interacting the inheritance dummy variable with the female-head dummy variable.

Table 5 presents the regression results for the impact of alternative definitions of inheritance on food security and poverty. The top panel of the table reports the impact of whether the woman receives any gift or inheritance (Panel A). The bottom panel examines the impact of the amount of land inherited and the value of gifts/inheritance received. As the top panel of the table shows, whether or not a woman receives inheritance or gifts has no significant impact on various measures of food security, poverty or adequacy of food consumption, housing or health care. Rather, the total value of assets and the total area of land received as inheritance have significant impacts on these measures of poverty and food security (Panel B). Regardless of male or female headship, total areas of land inherited by the head and by the spouse of the head decrease the likelihood of the women reporting that the household is poor or has less than adequate expenditure on food, housing and health care. However, controlling for the value of inheritance received, female-headed households in general have worse outcomes, although the dummy for female-headed household is significant only in the regression for inadequacy of food consumption. Inheritance is especially important for female-headed households: those female-headed households that received more assets and land were less likely to report less than adequate food consumption, as indicated by the negative and significant coefficient on the interaction terms between female headship and the value of inheritance in Panel B.



Table 5: Impact of inheritance on food security and poverty, selected coefficients

Variable	Food gap in months	Food consumption less than adequate in the past months	Self-reported as poor	Housing less than adequate in the past months	Health care less than adequate in the past months
<i>Panel A: Any receipt of gift or inheritance</i>					
Female head	0.630*	0.070	0.068	0.045	0.044
	(0.321)	(0.076)	(0.045)	(0.069)	(0.075)
Dummy indicating head received assets as inheritance/gifts from parents * dummy for female head	0.264	-0.065	0.003	-0.050	-0.136
	(0.680)	(0.099)	(0.056)	(0.101)	(0.124)
Dummy indicating head received assets as inheritance or gifts from parents	0.508	0.060	0.068	0.066	0.065
	(0.366)	(0.062)	(0.046)	(0.048)	(0.062)
Dummy indicating spouse of male head received assets as inheritance or gifts from parents	-0.114	-0.039	0.005	-0.077**	-0.019
	(0.403)	(0.044)	(0.033)	(0.035)	(0.049)
Observations, R-squared	1035, 0.11	803, 0.11	805, 0.11	805, 0.06	801, 0.06
<i>Panel B: Amount of gifts and inheritance received</i>					
Female head	0.488	0.095*	0.082	-0.029	0.005
	(0.403)	(0.048)	(0.050)	(0.051)	(0.039)
Value of inherited/gifted assets from parents by head	0.000*	0.000***	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Total land inherited/gifted from parents to head	-0.041	-0.017**	-0.007***	-0.011***	-0.012**
	(0.030)	(0.006)	(0.002)	(0.003)	(0.004)
Value of inherited/gifted assets from parents by spouse of male head	0.000	0.000*	0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Total land inherited/gifted from parents to the spouse of male head	-0.020	-0.011***	-0.008**	-0.009***	-0.008***
	(0.031)	(0.003)	(0.003)	(0.002)	(0.002)
Value of inherited/gifted assets from parents to head * dummy for female head	0.000	-0.000***	-0.000*	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Total land inherited/gifted from parents to head * dummy for female head	-0.043	-0.135*	0.002	0.115	0.013



Variable	Food gap in months	Food consumption less than adequate in the past months	Self-reported as poor	Housing less than adequate in the past months	Health care less than adequate in the past months
	(0.140)	(0.067)	(0.040)	(0.128)	(0.107)
Observations, R-squared	1006, 0.13	779, 0.15	781, 0.11	781, 0.07	777, 0.06

*Note: Food gap estimated using ordinary least squares; all other regressions estimated as probit regressions. All standard errors are robust to clustering within villages and are reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.*

For Tables 5-8, all regressions include controls for age and sex composition of the household, livestock units held in 1997, real per capita consumption in 1997, whether poor in 1997 and which land quartile the household belonged to in 2004, and standard errors are clustered at the village level.



Table 6 presents the impact of inheritance on outcomes such as step on the ladders of life, rights and control over one's life and how things have been going in general. We first discuss the results from the ladders of life, rights and control over one's life. While female-headed households in which the head received assets as inheritance or gifts are surprisingly less likely to be on a higher step on the ladder of rights, this negative effect loses significance when we use the total value of assets as the independent variable. While the value of inherited assets given by the parents to the head or to the spouse of the head has a negative sign in some of the regressions, the signs on these variables are not consistent and are not always significant. In contrast, the total area of land always has a positive effect on all these outcomes, regardless of whether land is inherited by the head or by the spouse. This highlights the importance of land as a productive asset in Ethiopia's agrarian economy.

Because of differences in scaling, the direction of improvement for the outcome regarding how things have gone over the past month is the reverse of the previous outcomes. This means that negative coefficients in the last column of Table 6 imply positive effects. For example, total land inherited or received by the head and by the spouse of the male head improves perceptions of how things have been in the past month, and this effect is significant for female-headed households.



Table 6: Impact of inheritance on perceptions of happiness and well-being, selected coefficients from ordinary least squares regressions

Variable	Ladder of life (Step 1 worst, Step 9 best)	Ladder of rights	Ladder of control over one's life	How have things been in the past month
<i>Panel A: Any receipt of gift or inheritance</i>				
Female head	0.018 (0.298)	0.176 (0.289)	0.201 (0.225)	0.111 (0.259)
Dummy indicating head received assets as inheritance or gifts from parents * dummy for female head	-0.333 (0.372)	-0.711** (0.329)	-0.042 (0.412)	-0.134 (0.357)
Dummy indicating head received assets as inheritance or gifts from parents	0.080 (0.198)	0.177 (0.173)	-0.074 (0.208)	0.030 (0.121)
Dummy indicating spouse of male head received assets as inheritance or gifts from parents	-0.017 (0.148)	-0.136 (0.182)	-0.132 (0.132)	-0.024 (0.170)
Observations, R-squared	805, 0.14	803, 0.08	804, 0.09	803, 0.09
<i>Panel B: Amount of gifts and inheritance received</i>				
Female head	-0.106 (0.249)	-0.111 (0.199)	0.090 (0.199)	0.106 (0.213)
Value of inherited/gifted assets from parents by head	-0.000** (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000* (0.000)
Total land inherited/gifted from parents to head	0.060** (0.024)	0.066*** (0.011)	0.053*** (0.011)	-0.039*** (0.007)
Value of inherited/gifted assets from parents by spouse of male head	-0.000 (0.000)	-0.000** (0.000)	-0.000 (0.000)	0.000** (0.000)
Total land inherited/gifted from parents to spouse of male head	0.063*** (0.009)	0.035*** (0.011)	0.099*** (0.008)	-0.039*** (0.010)
Value of inherited/gifted assets from parents by head * dummy for female head	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000** (0.000)
Total land inherited/gifted from parents to head * dummy for female head	-0.163 (0.318)	-0.125 (0.466)	0.013 (0.531)	0.224 (0.284)
Observations, R-squared	781, 0.16	779, 0.10	780, 0.10	779, 0.13

Note: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.



Table 7 shows the impacts of inheritance practices on perceptions of trustworthiness among women. Similar to our earlier results, whether or not an individual receives an inheritance has no significant impact on perceptions of trust, but the total land area and value of inheritance has significant effects. Perceptions of trustworthiness are strikingly different between female heads and spouses of male heads. Spouses of male heads who inherit a greater amount of land are more likely to be trusting of others, but the opposite is true for female heads. Perhaps a single woman who possesses significant amounts of assets is justifiably wary of others. Total land inherited by the head or the spouse of a male head has positive and significant coefficients in the power regressions.



Table 7: Impact of inheritance on perceptions of trustworthiness and power, selected coefficients from probit regressions

Variable	Agree or strongly agree ...				
	Most people are basically honest	Most people can be trusted	My life is determined by my own actions	I have power to make decisions that change the course of my life	I am usually able to protect my personal interests
<i>Panel A: Any receipt of gift or inheritance</i>					
Female head	-0.019	0.006	0.100	0.133	0.060
	(0.080)	(0.075)	(0.111)	(0.095)	(0.083)
Dummy indicating head received assets as inheritance or gifts from parents * dummy for female head	-0.061	-0.033	-0.030	-0.067	-0.001
	(0.098)	(0.093)	(0.147)	(0.126)	(0.123)
Dummy indicating head received assets as inheritance or gifts from parents	-0.022	-0.015	-0.019	-0.001	-0.015
	(0.028)	(0.031)	(0.054)	(0.048)	(0.054)
Dummy indicating spouse of male head received assets as inheritance or gifts from parents	-0.004	-0.024	-0.074	-0.069	-0.003
	(0.046)	(0.056)	(0.049)	(0.054)	(0.045)
Observations, R-squared	805, 0.02	805, 0.02	805, 0.06	805, 0.06	804, 0.05
<i>Panel B: Amount of gifts and inheritance received</i>					
Female head	0.025	0.005	0.058	0.075	0.025
	(0.062)	(0.064)	(0.071)	(0.072)	(0.068)
Value of inherited/gifted assets from parents by head	0.000	-0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Total land inherited/gifted from parents to head	-0.005	-0.003	0.012***	0.009**	0.006
	(0.004)	(0.004)	(0.003)	(0.003)	(0.006)
Value of inherited/gifted assets from parents by spouse of male head	0.000	0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Total land inherited/gifted from parents to spouse of male head	0.019***	0.020***	0.016***	0.016***	0.016***
	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)
Value of inherited/gifted assets from parents by head * dummy for female head	-0.000	0.000	0.000**	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Total land inherited/gifted from parents to head * dummy for female head	-0.171***	-0.133**	-0.045	0.007	0.024



	(0.046)	(0.054)	(0.098)	(0.074)	(0.078)
Observations, R-squared	781, 0.04	781, 0.04	781, 0.06	781, 0.07	780, 0.06

Note: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.



In contrast with the earlier results, whether or not one receives any inheritance has a significant impact on perceptions of happiness. Panel A in Table 8 shows that receipt of assets as inheritance or gifts by the head has negative implications for the quality of life of the spouse. Although the mechanisms behind this are not clear, it is possible that inheritance by the head, typically occurring after marriage, alters the balance of power within the household, increasing the head's scope of control. In contrast, the coefficient on interaction of the female head dummy and the dummy variable indicating that the head received inheritance or gifts is positive and significant in the last column. This implies that receipt of inheritance by female heads has a long-term positive effect on the quality of their life. The total amount of land inherited by the spouse of the male head also positively affects her quality of life. This analysis shows that ownership of assets by women has positive implications for their own lives, which goes beyond the effect of the availability of assets within the household.



Table 8: Impact of inheritance on perceptions of happiness, selected coefficients from probit regressions

Variable	Agree or strongly agree ...				
	In most ways my life is close to my ideal	The conditions of my life are excellent	I am satisfied with my life	So far I have gotten the important things I want in life	If I could live my life over, I would change almost nothing
<i>Panel A: Any receipt of gift or inheritance</i>					
Female head	-0.001 (0.078)	0.054 (0.073)	-0.008 (0.079)	-0.048 (0.068)	-0.022 (0.069)
Dummy indicating head received assets as inheritance or gifts from parents * dummy for female head	-0.025 (0.097)	0.084 (0.091)	0.082 (0.089)	0.006 (0.079)	0.146* (0.083)
Dummy indicating head received assets as inheritance or gifts from parents	-0.049 (0.034)	-0.059* (0.031)	-0.055 (0.038)	-0.096*** (0.026)	-0.067* (0.037)
Dummy indicating spouse of male head received assets as inheritance or gifts from parents	-0.001 (0.043)	0.034 (0.053)	-0.016 (0.051)	0.002 (0.044)	-0.009 (0.024)
Observations, R-squared	804, 0.07	805, 0.08	805, 0.09	805, 0.09	804, 0.05
<i>Panel B: Amount of gifts and inheritance received</i>					
Female head	-0.009 (0.072)	0.071 (0.066)	-0.027 (0.058)	-0.045 (0.055)	0.009 (0.064)
Value of inherited/gifted assets from parents by head	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Total land inherited/gifted from parents to head	0.009 (0.008)	0.006 (0.008)	0.012 (0.009)	0.013* (0.008)	0.006 (0.007)
Value of inherited/gifted assets from parents by spouse of male head	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Total land inherited/gifted from parents to spouse of male head	0.022*** (0.003)	-0.003 (0.002)	0.020*** (0.003)	0.020*** (0.003)	-0.004 (0.004)
Value of inherited/gifted assets from parents by head * dummy for female head	-0.000	0.000	0.000*	0.000	0.000



	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Total land inherited/gifted from parents to head * dummy for female head	0.090	0.066	0.090	0.038	0.081
	(0.085)	(0.081)	(0.072)	(0.100)	(0.127)
Observations, R-squared	780, 0.07	781, 0.09	781, 0.10	781, 0.09	780, 0.05

Note: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.



6 Conclusions and policy implications

Both customary and statutory systems of property rights underlie inheritance systems that govern the transmission of wealth from one generation to the next. Deere and Doss (2006) point out that family and community norms regarding the accumulation and transmission of wealth are as important as the state in defining the ways women inherit wealth; such norms are particularly important in areas of the world where customary marital and inheritance systems still prevail and carry legal recognition. Local norms have been shown to be important in determining both inheritance and the division of assets on divorce in rural Ethiopia (Fafchamps and Quisumbing, 2002). Whether legal reform has the potential to make these norms more gender-equitable is a question that interests policymakers and development practitioners alike.

Our analysis linking data on inheritance received in the past and current measures of well-being shows that amounts of inheritance received by women, not merely the fact that women inherit, have profound impacts on their well-being. That is, the *value* of assets inherited and the *area* of land inherited had significant impacts on a number of consumption and food security outcomes, whereas whether or not a woman received any inheritance had an insignificant impact. In particular, land emerges consistently as a factor that positively affects women's long-term well-being. Inheritance is especially important for the well-being of female-headed households, which generally do worse compared with their male-headed counterparts in terms of poverty and food security outcomes.

These findings are significant from a policy perspective. It is not enough to guarantee that women can inherit property: they need rights to inherit *equally* with men. For example, while it is often argued that, under Islamic law, daughters have inheritance rights, the distribution of inheritance is biased against daughters. Under Islamic law, only one-third of an estate can be willed freely, while two-thirds is destined for the deceased's children; of this restricted portion, daughters are entitled to only half the share of sons. This same discrimination against daughters holds if the deceased dies intestate, or without leaving a will (Fay, 1998, in Doss and Deere, 2006). While this is a marginal improvement over societies in which women do not inherit land at all, the actual amounts inherited by women are still much smaller than those inherited by men.⁵ It is also not enough to rely on customary law to protect women's right to inherit. It has often been argued that communal norms defining informal entitlements for women might substitute for weak inheritance rights (Bevan and Pankhurst, 1996). For example, the community may choose to house and feed widows and wives of villagers drafted into the army (as the second author observed during pre-testing of the 1997 questionnaire). Free access to communal resources (e.g. firewood, grazing land) may partly

⁵ Legal rights may not be carried through in practice. For example, in Bangladesh it is common for sisters, who typically marry outside their natal village, to give up inheritance rights to brothers in return for financial support.



offset the negative effect of patrimonial laws and customs on women. However, our results show definitively that inheritance matters for the well-being of women and their families. As customary ties are eroded by demographic changes such as increased population pressure, urbanisation, migration, increased HIV infection and mortality, policy reforms need to evolve to guarantee women's rights to equal inheritance under the law, and to increase women's legal literacy so they are able to claim what is rightfully theirs.



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